

Telephone versus face-to-face administration of the Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, for diagnosis of psychotic disorders

Ahmad Hajebi^a, Abbas Motevalian^b, Masoumeh Amin-Esmaeili^c, Mitra Hefazi^c,
Reza Radgoodarzi^c, Afarin Rahimi-Movaghar^d, Vandad Sharifi^{e,*}

^aMental Health Research Centre, Tehran Psychiatric Institute, Tehran University of Medical Sciences, Tehran 15745-344, Iran

^bSchool of Public Health, Tehran University of Medical Sciences, Tehran 15168-46514, Iran

^cIranian National Center for HIV/AIDS, Tehran University of Medical Sciences, Tehran, 13337, Iran

^dIranian National Center for HIV/AIDS and Psychiatry and Psychology Research Center, Tehran University of Medical Sciences, Tehran, 13337, Iran

^ePsychiatry Department and Psychiatry and Psychology Research Center, Tehran University of Medical Sciences, Tehran, 13337, Iran

Abstract

Objective: The current study aims to compare telephone vs face-to-face administration of the version of Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, (SCID) for diagnosis of “any psychotic disorder” in a clinical population in Iran.

Method: The sample consisted of 72 subjects from 2 psychiatric outpatient services in Tehran, Iran. The subjects were interviewed using face-to-face SCID for the purpose of diagnosing psychotic disorders. A second independent telephone SCID was administered to the entire sample within 5 to 10 days, and the lifetime and 12-month diagnoses were compared.

Results: The positive likelihood ratio of telephone-administered SCID for diagnosis of “any lifetime psychotic disorder” was 5.1 when compared with the face-to-face SCID. The value for the primary psychotic disorders in the past 12 months was lower (2.3).

Conclusions: The data indicate that telephone administration of the SCID is an acceptable method to differentiate between subjects with lifetime psychotic disorders and those who have had no psychotic disorders and provides a less resource-demanding alternative to face-to-face assessments.

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1. Introduction

The Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, or SCID is a semistructured diagnostic instrument that has been developed to allow the research clinician to make a diagnostic assessment regarding the needs of a particular research protocol or a particular patient [1]. The SCID is a reliable diagnostic tool for most psychiatric disorders in general and more severe mental disorders such as psychotic disorders, bipolar disorders, and major depressive disorder in particular [2]. A number of studies have used the SCID

as the “gold standard” in determining the accuracy of clinical diagnosis [3,4].

Although the SCID has been developed for use in a face-to-face format, it is worthwhile to examine the use of more convenient alternative methods of its administration, such as the telephone interview. The significance of the latter approach becomes particularly apparent in instances when face-to-face interviews are not feasible, such as in low- and middle-income countries with minimal mental health research resources [5]. Telephone interviewing has been also considered as a practical tool for routine screening programs and epidemiological surveys [6]. Nevertheless, despite the substitution of face-to-face interviews by telephone interviews in several health surveys, the latter are used to a lesser extent in the psychiatric field [7].

However, a number of studies have reported that telephone surveys have certain inherent limitations, and

* Corresponding author. Department of Psychiatry, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, 13337, Iran. Tel.: +98 21 55412222; fax: +98 21 55419113.

E-mail address: vsharifi@tums.ac.ir (V. Sharifi).

social desirability bias is more likely to occur during telephone conversations than in face-to-face interviewing [7]. On the other hand, a number of researchers believe that the telephone offers many advantages such as cost efficiency, simpler logistics, wide geographic coverage, anonymity, and arguably, facilitation of disclosure about stigma-sensitive information that could lead to a higher response rate [8–14]. In addition, the shorter duration of telephone assessment can significantly reduce the time spent on the part of clinicians, which may in turn compensate for any additional costs associated with making an extended telephone call. A further consideration is related to the reduction in resources and time that the interviewee has to dedicate to respond to the interview [10]. In general, interviews conducted by telephone are less expensive than in-person interviews [15], and in large-scale research projects, the saving can be considerable.

The use of telephone interviews for research and clinical purposes relies on the premise that the diagnosis elaborated in such conditions would be as valid as those obtained in face-to-face interviews [16,17]. Previous studies have shown diagnostic agreement between telephone and face-to-face SCID for diagnosis of nonpsychotic disorders, even when these are performed by different clinicians [6]. However, little is known about whether telephone and in-person SCID interviews are comparable for assessing patients with psychotic disorders. In addition, regarding the limitation of resources, particularly in low- and middle-income countries, a more feasible and achievable method is required to ascertain the diagnosis of patients with “any psychotic disorder,” especially in large epidemiological surveys in which instruments such as the Composite International Diagnostic Interview cannot ascertain psychotic symptoms in a valid and reliable manner.

The primary aim of the present study was to evaluate the concurrent validity of in-person and telephone assessment methods for determining the presence of “any psychotic disorders” in the lifetime or the last 12 months. We defined *any psychotic disorder* as having psychotic symptoms as assessed by SCID that have resulted in considerable distress or dysfunction. Lifetime diagnoses are those that have been present at any time in the subject’s life, and 12-month disorders are those that were present at any time during the year before the interview.

2. Materials and methods

2.1. Participants

This study was conducted in outpatient departments of 2 university-affiliated hospitals in Tehran, Iran (Iran Psychiatric Hospital and Roozbeh Psychiatric Hospital). The sample was composed of 72 subjects, who were selected from November 2009 to January 2010.

Subjects were enrolled consecutively by a research coordinator at each center after reviewing psychiatric medical

records and obtaining informed consent from the individuals and their relatives. The sampling was directed so that approximately half of the patients at each center had history of any lifetime psychotic disorder including nonaffective and affective psychoses, whereas the other half did not have such a history. The subjects had been prescribed a variety of psychotropic medications (including antipsychotics, antidepressants, mood stabilizers, etc) based on their needs. Subjects were excluded if they had severe impairments in behavior, communication, or language, which could render the interview almost impossible (eg, moderate to severe mental retardation, severe dementia, and severe agitation). The study protocol was approved in the ethics committee of the Undersecretary of Research at Tehran University of Medical Sciences.

2.2. Instruments

The Persian translation of the SCID for diagnosing Axis I disorders (SCID-I; Clinician version) was used [18]. Sharifi et al [19] reported the level of diagnostic agreement between test and retest face-to-face administration of the Persian version as fair to good for most diagnostic categories. Weighted κ was 0.52 for current diagnosis and 0.55 for lifetime diagnosis. The sensitivity and specificity for diagnosing any psychotic disorders were 0.75 and 0.87, respectively [19]. The instrument used for the telephone interview was the same as the SCID used in face-to-face interviews.

2.3. Procedure

In each center, a research assistant carried out all the necessary activities to coordinate the procedures of data collection. The research assistant would select the cases, explain research procedure, receive verbal informed consent, and then introduce subjects to the interviewers. Two psychiatric residents with sufficient experience in clinical setting were selected to conduct the interviews. The residents had attended a training workshop on administering the instrument, which included an overview of administration guidelines and description of symptom criteria. The training was supervised by one of the authors who had developed the Persian version of the SCID and had conducted several projects using this instrument. The interviewers returned to their supervisor after some pilot interviews with real patients to discuss the issues pertaining to the conduct of the SCID interview. It should be noted that they were not aware of the proportion of subjects with a probable psychotic disorder as directed by the sampling procedure (above).

A total of 72 face-to-face interviews were carried out, using psychotic disorders module of the SCID. The interviewers made diagnoses based on all available data, which included SCID interviews with the subjects and their relatives, as well as the subjects’ medical records. A quality control protocol was designed and implemented. According to the protocol, in each center, 1 experienced clinician (attending psychiatrist) supervised the procedures. The

psychiatrists had adequate experience in interviewing psychiatric patients by various instruments and were also trained for using the SCID. All completed SCID score sheets were reviewed by another supervising clinician within 72 hours of each interview, and feedbacks were given to the interviewers. In some cases in which there was disagreement between the interviewer's rating and the supervisor's opinion regarding the data, consensus diagnoses were made after discussing the subject. The other psychiatric resident who conducted the telephone interviews was blind to the face-to-face interview results and medical records, which were intensively controlled. However, relatives may have also been asked to be interviewed by telephone. The time interval between the assessments had to be minimized to reduce the amount of possible symptom changes; therefore, a maximum duration of 2 weeks between the 2 interviews was allowed.

2.4. Data analysis

Data analysis was conducted by Statistical Package for Social Sciences (version 17.0; SPSS, Chicago, IL). The face-to-face-administered SCID was used as the "gold standard" to determine the accuracy of telephone-administered SCID in diagnosis of psychotic disorders. To address the efficiency of the telephone instrument in predicting SCID diagnosis of psychotic disorder, we examined its sensitivity and specificity. We also computed the positive diagnostic likelihood ratio (DLR+), which is the ratio of the likelihood of the observed test result in case vs noncase populations, and its value is independent of the base rate of the disorder [20]. The DLR+ indicates an increase in the odds of psychotic disorder presence in face-to-face SCID, whenever a respondent was classified as having psychotic disorder in telephone-administered SCID.

3. Results

A total of 72 patients entered the study, including 36 in each center. In total, 36 subjects (50%) were female, 39 (54.2%) were married, 32 (44.4%) had a high school degree or higher, and 38 (52.8%) had a history of psychiatric hospitalization. The mean age of the participants was 35.2 years (SD, 9.9 years).

Table 1 shows the frequencies of psychotic disorders in lifetime and last 12 months for face-to-face- and telephone-administered SCID. The frequencies of lifetime primary psychosis for both methods were the same; however, telephone interviews presented higher frequency of primary psychotic disorders in the last 12 months.

The validity indices of telephone-administered vs face-to-face SCID for lifetime and any psychotic disorder were higher than last 12 months and primary psychotic disorder (Table 2). Subjects who had any psychotic disorder in lifetime in telephone interview had higher odds (5.1) of having psychotic disorder in face-to-face SCID.

Table 1
Frequency of SCID diagnoses (n = 72)

	Face-to-face SCID	Telephone SCID
Primary psychotic disorder in the past 12 months	19 (26.4%)	31 (43.1%)
Primary psychotic disorder in lifetime	36 (50.0%)	36 (50.0%)
Any psychotic disorder in lifetime	37 (51.4%)	38 (52.8%)

To carry out symptom level validation, we combined the relevant symptoms to form a category, and then validity indices of categories of symptoms in telephone instrument were calculated (Table 3). The results indicate that any lifetime delusion has the highest sensitivity: 88.2% of patients with any lifetime delusion in face-to-face interviews were also found to have lifetime delusion in telephone interviews. Disorganized/catatonic behavior in the past 12 months had the highest specificity, and 90.6% of patients without 12-month disorganized/catatonic behavior in face-to-face interviews were also found to not have these symptoms in telephone interviews. However, disorganized or catatonic behavior, whether lifetime or 12 months, had relatively low sensitivity (38.5 and 12.5, respectively).

4. Discussion

To our knowledge, this study is the first attempt to study the validation of telephone-administered SCID for diagnosing psychotic disorders. The results of this study indicate that telephone administration of the SCID is an effective method for diagnosing lifetime psychotic disorders. The telephone interview successfully distinguished nonpsychotic patients from those who met diagnostic criteria of primary or any psychotic disorders during their lifetime.

In our study, a few trends emerged that bear mentioning. The results indicate that the telephone-administered SCID overestimates the frequency of primary psychotic disorders during the last 12 months when compared with face-to-face interview. This is consistent with some previous reports that have shown that psychiatric disorders such as social anxiety disorder [6], anxiety disorders in children [11], and posttraumatic stress disorder [8] were diagnosed more often by telephone than by in-person interview. Henson et al [21] explained that, in telephone-based interviews, there

Table 2
Validity indices of telephone-administered vs face-to-face SCID for diagnosis of "psychotic disorders"

	Sensitivity	Specificity	Likelihood ratio (positive)
Primary psychotic disorder in the past 12 months	73.7	67.9	2.3
Primary psychotic disorder in lifetime	80.6	80.6	4.2
Any psychotic disorder in lifetime	86.5	82.9	5.1

Table 3
Validity indices of telephone administered vs face-to-face SCID for diagnosis of “categories of psychotic symptoms”

	Sensitivity	Specificity	Likelihood ratio (positive)
Any lifetime delusion	88.2	76.3	3.7
Any lifetime hallucination	69.2	84.8	4.6
Any lifetime disorganized or catatonic behavior	38.5	76.3	1.6
Any 12-month delusion	71.4	80.4	3.6
Any 12-month hallucination	57.1	86.2	4.1
Any 12-month disorganized or catatonic behavior	12.5	90.6	1.3

are significantly higher positive responses regarding psychiatric symptoms. Patients may feel more comfortable and honest in reporting their symptoms in a telephone interview because of relative anonymity. However, some preceding studies have shown patterns wherein subjects report fewer psychiatric symptoms on readministration of the diagnostic scales [22]. Several hypotheses have been presented for this pattern. For instance, some have suggested that respondents believe that the interviewer only seeks novel data in the second interview, as opposed to the information already reported during the first [23]. Others have attributed the pattern to either confusion on the respondent’s part about the nature of the 2 interviews, a therapeutic effect of the first interview [24], or the temporally limited nature of the symptoms being assessed [25].

In addition, because all participants completed the interviews, the study demonstrates a high compliance with telephone interviews. This may have been caused by the relative anonymity associated with the telephone interview method, rendering subjects more willing to honestly report their symptoms [6].

Symptom level validation reveals that telephone- vs face-to-face-administered SCID is a useful method to diagnose some categories of psychotic symptoms, particularly, hallucination and delusion. Hence, telephone interview can be used to distinguish these psychotic symptoms in large studies.

Telephone-administered diagnostic interviews are acceptable and at times may be even preferred to face-to-face method. This fact, together with the existing evidence of its validity, should encourage the use of telephone diagnostic interviews, particularly when face-to-face interviews are impracticable [26]. Indeed, easier methods of identifying patients with psychotic disorders could lead to the promotion of screening pathways and finally to an increase in the number of patients receiving appropriate treatment of these serious disorders.

Our investigation had a number of strengths. For example, the brief time lag between the 2 different types of interviews minimized the changes within subjects. In addition, interviewers were highly trained in the administration of SCID, and unlike some investigations, our telephone interviews did not incorporate fewer or different questions than the face-to-face version. However, there are also some limitations to this

study. First, the sample size was modest, and the subjects were selected from outpatient clinical settings to include an acceptable number of patients. The overrepresentation of psychotic disorders in the sample and high symptom levels of our participants preclude generalization to less distressed population where psychotic disorders might be less prevalent. Therefore, carrying out future studies with more heterogeneous samples seems to be necessary. Second, in the absence of multiple validation data external to the 2 instruments, our comparison of the telephone vs face-to-face interview might be better considered as a concordance rather than a validation study. Third, in-person interview was conducted first, followed by the telephone interview that results in an order effect. This procedure was preferred over a counterbalance design solely because of some practical reasons. Another drawback was our failure to perform a formal interrater reliability analysis between interviewers. Finally, we did not examine the indices for specific disorders, a matter which should be covered in future studies.

5. Conclusion

Altogether, the telephone SCID seems to be an acceptable method of interviewing for diagnosing lifetime psychotic disorders. The assessment can be carried out from any location, both for research purposes as well as clinical practice, and the need for professionals to spend significant amounts of working time traveling to different locations is reduced, which is particularly invaluable at times when face-to-face interviews are inconvenient or impossible. This is especially relevant in low- and middle-income communities, where the burden of untreated mental disorders is high [27], resources for launching and replicating complex epidemiological surveys are extremely limited, and stigma toward face-to-face interviews may be considerable [5]. Moreover, anonymity over telephone calls may confer advantage in genuine reporting of symptoms. Although telephone assessment may never fully replace face-to-face interviews, it provides a compelling alternative.

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