
Validity and Reliability of Structured Interview for Competency Incompetency Assessment Testing and Ranking Inventory



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The Structured Interview for Competency and Incompetency Assessment Testing and Ranking Inventory (SICIATRI) is a structured interview guide to assess the competency for giving informed consent to treatment among psychiatric and medical patients. The competency levels of 48 psychiatric and medical inpatients were assessed by SICIATRI. A relatively high inter-rater reliability of the SICIATRI items (over half of the items had kappa \geq .60) and concurrent validity (sensitivity = .83, specificity = .67 as measured against the global judgement of competency rating by the attending physician) were obtained. In addition to its brevity (it takes about 20 minutes to complete), these findings may warrant application of this instrument in a clinical setting. © 1997 John Wiley & Sons, Inc. *J Clin Psychol* **53**: 443-450, 1997.

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The doctrine of informed consent has been developed through an accumulation of court decisions (Appelbaum, Lidz, & Meisel, 1987). This reflects the increasingly universal understanding that if a person receives a specified type of medical examination, treatment, care, or other procedures, it should be carried out in a collaborative manner between the patient (the user/consumer of the medical service) and the physician (provider of the service). This notion is based on respect for individual autonomy. For informed consent to be justified, it is essential to confirm that all necessary information for patient decision making is conveyed to him/her and that he/she has the capacity to understand and use the information in such a way that his/her decision is based on rational reasoning and corresponds to the value system that he/she has cherished. Thus, the assessment of the patient's capacity to understand specific information is of vital importance. If, for example, the patient is not capable of dealing with the medical information (i.e., incompetent), a proxy's decision based on the patient's best interests should be applied. To regard an incompetent patient's decision as legitimate may, in reality, be a form of neglect (e.g., *de facto* detention); they are deprived of due safeguards. On the other hand, forced treatment for a competent patient is a violation of the patient's autonomy.

In clinical settings, particularly in psychiatry, the clinical assessment of competency is occasionally difficult. It seems that competency lies on a continuum of cognitive capacity with full competency on one pole and full incompetency on the other with a wide range of "gray" zones in between. Since arbitrary judgement of the patient's competency level by a clinician cannot be justified, mental health professionals face a difficult question—how to assess the patient's competency level reliably and validly.

As with others areas of legal competency assessment, the last decade or two have seen the development of measures of competency to give consent to treatment (for review, Grisso, 1986). Appelbaum, Mirkin, and Bateman (1981) developed the Competency Questionnaire which assesses the competency level of patients for consenting to voluntary admission, and they reported that a majority of patients appeared to have severe impairment of competency. However, the reliability and validity of this measure have not been reported. Roth, Lidz, Meisel, et al. (1982) developed a Two-part Consent Form to assess whether patients who would undergo electroconvulsive treatment (ECT) had competency to consent to the treatment. Immediately following patient consent or refusal, patients were assessed for their understanding of the information given about the treatment. However, there may be a high probability that the performances of the patients depended only on their memorization ability. Furthermore, this measurement does not include a rationale for deciding adequate information. Weithorn and Campbell (1982) developed the Measure of Competency to Render Informed Treatment Decision (MOC) to assess the competency of children and adolescents to make informed treatment decisions. The measure included four hypothetical treatment dilemmas all in a structured interview protocol. This measure makes it possible to give the subjects the same information concerning treatment. However, it was difficult to adapt various illnesses to this measure. Grisso and Appelbaum (1991) developed the Measuring Understanding of Disclosure (MUD) to assess the patients' competency to understand information relevant to decision-making. Their study is the first work to examine the difference in competency to consent to treatment between mentally and physically ill individuals. The instrument is, however, limited to patients with schizophrenia, major depression, and heart diseases. More recently, Bean, Nishisato, Rector, and Glancy (1994) developed a rating instrument to assess competency of psychiatric patients to consent to ECT which showed good reliability and validity.

A review of the literature on the measures of competency of psychiatric patients and non-patients indicates that most of them are limited to a few conditions such as schizophrenia (Grisso et al., 1991; Weithorn et al., 1982), specific circumstances (Appelbaum et al., 1981), or special treatment (Bean et al., 1994; Roth et al., 1982). These measures may be of value for research, but they are not applicable to a routine clinical setting. Kitamura and Kitamura (1993)

developed a structured interview, the Structured Interview for Competency and Incompetency Assessment Testing and Ranking Inventory (SICIATRI) for assessing the competency level of psychiatric patients upon their admission to hospital or upon the commencement of proposed treatment. This was designed to be applicable to a variety of clinical decision-making settings (e.g., admission, medication, operation, and examination) within a short time period. We will report here the reliability and validity of this instrument using psychiatric and medical patients recently admitted to a hospital.

METHOD

Subjects

The subjects were 25 psychiatric and 23 medical inpatients at Kohnodai Hospital, at the National Center of Neurology and Psychiatry in Japan. All the psychiatric patients were admitted on a voluntary basis. Of these, 22 were male and 26 were female. Since patients under 20 years old were excluded, the age range was between 21 and 80 with a mean age of 50.9 ($SD = 17.0$). The diagnoses of the psychiatric patients for a conventional diagnosis made by the attending psychiatrist were 11 affective disorder, 10 schizophrenia, 2 senile psychosis, 1 anxiety neurosis, and 1 epilepsy. The diagnoses of the medical patients were 11 diabetes, 4 pneumonia, 2 spontaneous pneumothorax, 2 bronchial asthma, 1 hyperthyroidism, 1 pleuritis, 1 pyelitis, and 1 virus infection.

Measures

Structured Interview for Competency Incompetency Assessment Testing and Ranking Inventory. Based on the theories of Martin and Bean (1992), the Structured Interview for Competency Incompetency Assessment Testing and Ranking Inventory (SICIATRI) was developed to assess the competency level of psychiatric and medical patients upon their admission to hospital or prior to the commencement of treatment. The SICIATRI consists of 12 items measuring the patient's capacity to give informed consent to a variety of clinical procedures. These items measure different aspects of competency and are ordered in such a way that both the interviewer and the patient can feel it to be as natural as possible (Table 1).

Most items are rated on a 3 point scale; the subject is rated 1 if there is evidence that he/she performs poorly on the item, 2 if he/she performs fairly but not completely, and 3 if he/she

Table 1. *Items of SICIATRI and Interrater Reliabilities*

Items	<i>n</i>	kappa
Is aware that he/she was informed	48	.78
Understands that he/she has a right to decide	47	.40
Evidences own choice	47	.14
Does not waive the right to decide	47	.71
Understands the expected benefits	46	.57
Understands the expected risks	46	.65
Understands the alternative treatments	45	.68
Understands benefits expected from no treatment	43	.54
Understands risks expected from no treatment	45	.82
Wants to get better	48	.60
Pathological determinants do not exist	47	—
Insight	48	.22

Note.—Number of the subjects differs because of missing value.

performs as well as expected. The rating is adjusted for the amount of medical information provided by the physician or otherwise (this will be rated later). Thus, for example, the patient will be rated 3 ("performs as well as expected") for the item "understands expected risks" if he/she reports almost all of the side effects that the physician has explained, regardless of other side effects which were not explained. After completing the interview, the rater classifies the patient's competency into five categories according to "Ranking Inventory for Competency"; level 0, completely incompetent, to level 4, completely competent. This algorithm was based on the assumption that the competency level can be plotted on a continuum of the patient's cognitive capacity (Martin & Bean, 1992) (Table 2). Our basic assumption is that SICIATRI items tap different levels of competency (e.g., "is aware he/she was informed" reflects the lowest cognitive capacity while "insight" reflects the highest cognitive capacity) and the patient

Table 2. *Ranking Inventory for Competency*

Level 0
A. At least one of the following
(1) 2 or 3 in "Is aware that he/she was informed"
(2) 1 in "Understands that he/she has a right to decide"
(3) 1 in "Evidences own choice"
B. Does not meet the criteria of levels 1 to 4
Level 1
A. 2 or more in "Understands that he/she has a right to decide"
B. 2 or more in "Evidences own choice"
C. Does not meet the criteria of levels 2 to 4
Level 2
A. 2 or more in "Understands that he/she has a right to decide"
B. 2 or more in "Evidences own choice"
C. At least 2 of the following
(1) 2 or more in "Understands the expected benefits"
(2) 2 or more in "Understands the expected risks"
(3) 2 or more in "Understands the alternative treatments"
D. Does not meet the criteria of levels 3 and 4
Level 3
A. 2 or more in "Understands that he/she has a right to decide"
B. 2 or more in "Evidences own choice"
C. At least 2 of the following
(1) 2 or more in "Understands the expected benefits"
(2) 2 or more in "Understands the expected risks"
(3) 2 or more in "Understands the alternative treatments"
D. 2 or more in "Wants to get better"
E. 2 or more in "Pathological determinants do not exist"
F. Does not meet the criteria of level 4
Level 4
A. 2 or more in "Understands that he/she has a right to decide"
B. 2 or more in "Evidences own choice"
C. At least 2 of the following
(1) 2 or more in "Understands the expected benefits"
(2) 2 or more in "Understands the expected risks"
(3) 2 or more in "Understands the alternative treatments"
D. 2 or more in "Wants to get better"
E. 2 or more in "Pathological determinants do not exist"
F. At least one of the following
(1) 2 or more in "Understands benefits expected from no treatment"
(2) 2 or more in "Understands risks expected from no treatment"
G. 2 or more in "Insight"

should be rated lower if he/she did not “pass” the lower items even though he/she showed evidence of competency for the higher items. We excluded the item “does not waive” because a considerably high proportion of patients who waived did show competency at the items of higher level of cognitive capacity (Kitamura et al., submitted). It takes about 20 minutes to administer SICIATRI.

Disclosure Consent Check List. The Disclosure Consent Check List (DCCL; Kitamura & Kitamura, 1993), a comparison check list of the SICIATRI, was completed by the attending physician to describe the nature and the amount of knowledge disclosed to or possessed by the patient. The items are almost identical to those which are included in the SICIATRI. In the last part of the DCCL, the attending physician is required to rate the patient’s overall competency level with two anchor points: competent or incompetent. This section is called the Global Assessment of Competency. This was used as the external criterion against which to examine the concurrent validity of the SICIATRI.

Procedure

When admitted, the patients were informed about the purpose and nature of the hospitalization and the proposed treatment by the attending physician. There were no guidelines about what medical information the physician should or should not disclose. Thus, this was carried out at the discretion of the physician. The physician filled in the DCCL. Within a week after their admission, the subjects were interviewed by a pair of researchers using the SICIATRI. The interviewers were two pairs of researchers who had majored in either psychology or law. The interviews were conducted in an interview room of the ward, albeit with some exceptions in the patient’s private bedroom. The nature and purpose of the SICIATRI interview was explained to the patient prior to the interview; every patient gave written consent to the interview.

After the interview session, the interviewers independently filled in the SICIATRI items and rated the competency level of the patients from 0 to 4 according to the Ranking Inventory for Competency.

The current psychiatric symptoms were rated with the Oxford University version of Brief Psychiatric Rating Scale (BPRS; Kolakowska, 1976; Kitamura et al., 1985, for Japanese version) by an attending physician.

The present study was approved by the Ethical Committee of the National Center of Neurology and Psychiatry (Kohndai Campus).

Statistical Methods

To assess the interrater reliabilities of SICIATRI, the kappa coefficients (Cohen, 1960) between the two interviewers were calculated for the 12 items of the SICIATRI. Concurrent validity of SICIATRI was assessed by calculating the sensitivity and specificity between the score of the Ranking Inventory for Competency, as rated by the interviewer, and that of the Global Assessment of Competency, as rated by the attending physician. For this analysis, Ranking Inventory for Competency level 0 was recoded as “absence of competency” and levels 1 to 4 were recoded as “presence of competency.” The Statistical Package for Social Sciences (SPSS-X; SPSS Inc., 1986) was used to perform the statistical analyses.

RESULTS

Inter-rater Reliability

The kappa coefficients calculated between the interviewers and the observers, for the items of SICIATRI, are shown in Table 1. The item “pathological determinants do not exist” was excluded

Table 3. *Concurrent Validity of SICIATRI*

	Ranking Inventory for Competency		
		-	+
Global assessment of competency	-	4	2
	+	7	35

(-: incompetent; +: competent)
sensitivity = .83; specificity = .67

from the calculation because of an extremely high base rate. All the subjects were rated as having no pathological determinants by at least one rater. The items for which the kappa coefficients were relatively high are as follows: “understands risks expected from no treatment” (kappa = .82), “is aware that he/she was informed” (.78), “does not waive” (.71), “understands the expected risks” (.65), and “understands the alternative treatments” (.68). The items with low kappa were as follows: “evidences own choice” (.14) and “insight” (.22).

Concurrent Validity

A total of 81.3% of the ratings were consistent between the interviewers and the attending physician (Table 3). The sensitivity between the score of the Ranking Inventory for Competency, as rated by the interviewers, and that of the Global Assessment of Competency, as rated by the attending physician, was .83, while that of specificity was .67.

DISCUSSION

Most items of the SICIATRI showed good kappa coefficients. As for “evidences own choice,” both the interviewers and observers rated either “decides to undergo the treatment (3)” or “almost decides to undergo the treatment (2)” for each subject. Similarly, concerning “insight,” both of them rated either “has insight (3)” or “has a little insight (2)” for all the subjects except one. For these reasons, it may be thought that the interrater reliability of these items is not really so low, even though the kappa coefficients were low.

As for concurrent validity, fairly good sensitivity and specificity were shown between the score of the Ranking Inventory for Competency, as rated by the interviewers, and that of the Global Assessment of Competency, as rated by the attending physician. Thus, the algorithms of the ranking of competency of the SICIATRI corresponds to the physician’s global judgement fairly well.

It may be argued that it is not desirable for the patients’ competency to be decided only by the attending physician’s conventional judgements because they do not have any points of agreement with which to decide whether or not a patient is competent for treatment/admission. Therefore, discrepancies for treatment, including admission types, among attending physicians may easily appear. Furthermore, in many cases, the attending physicians might judge patients’ competency levels according to their psychiatric diagnoses. Illustrations from our interviews may be informative.

Although the following case is not included in this analysis, but in a progressing study, it may help us understand such discrepancies. Ms. A was a 37-year-old single woman with a past history of psychiatric admission. Her school education was up to high school level. She had given birth to twin boys three weeks prior to our interview. She had been admitted to a psy-

chiatric locked ward a week prior to our interview. She was diagnosed as suffering from schizophrenia. Her predominant symptoms according to the BPRS were “anxiety,” suspiciousness,” and “unusual thought content.” She was judged to be “incompetent” according to the Global Assessment of Competency as rated by the attending physician. In the SICIATRI interview, it was revealed that she was aware that she had been given medical information by the attending physician; she was aware that she had a right to decide the treatment plan; she had decided she would refuse the treatment plan that her attending physician had made. As to “Does not waive,” she stated, “most people, with some exceptions, should decide for themselves whether they accept the given treatment plan or not. Of course, I do.” She knew the medicines which she had taken; she pointed out the benefits of the treatment (“good sleep, calming down”); although she understood the medicine had side effects, she could not list examples; she understood neither the alternative treatments nor the benefits expected from no treatment; she knew the risks expected from no treatment (“getting worse because of sleeplessness”); she stated that she wanted to get better; pathological determinants were not identified; she did not recognize that she was suffering from schizophrenia in spite of her attending physician’s disclosure. She accepted neither treatment nor admission, but she said she was forced to be admitted by her father under the Mental Health Law section on involuntary admission. She said that she had accepted her admission by the time of the interview because of insomnia. Contrary to the attending physician’s assessment of her incompetency, the Ranking Inventory for Competency according to the items of SICIATRI was “level 2,” a middle level of the five levels. As described before, level 2 indicated “presence of competency.”

Mr. B. was a 56-year-old married man with two children. His educational background was up to college level. He had been admitted to a medical ward a week prior to our interview. His symptom was festering between the lungs and pleurae. The attending physician rated him as “competent” according to the Global Assessment of Competency. In the interview, he was aware that he had been given the medical information by the attending physician but he did not understand that he had a right to decide the treatment plan; he had decided he would completely accept the treatment plan that his attending physician had made; he completely waived his right of decision making to his attending physician, as he believed that his attending physician knew the treatment far better than he; he knew the medicines which he had taken; he did not understand any of the expected risks from the treatment, alternative treatments, expected benefits from no treatment, or expected risks from no treatment; he stated that he wanted to get better; pathological determinants were not observed; he had insight into his disease. Contrary to the attending physician’s assessment of his competency, the Ranking Inventory for Competency according to the items of SICIATRI was “level 0,” the lowest level of the five levels, which indicated “incompetent.”

These case illustrations show that attending physicians may tend to pay undue attention to patients’ diagnoses, symptoms, educational backgrounds, and so on. Thus, they may give more emphasis to the general competency than to the patient’s capacity specific to the current illness and the proposed treatment. We believe that, in a medical setting, specific competency is more relevant for informed consent. When a patient does not understand the necessity of informed consent, despite having sufficient ability to understand complicated matters such as side effects of treatment, he would be regarded as unable to exercise his right of self-determination and hence “incompetent.” The SICIATRI will help to maintain objectivity in the judgement of patients’ competency. Furthermore, it takes only 20 minutes to conduct the SICIATRI. Thus, it can be easily adopted to a routine medical practice.

In summary, relatively high interrater reliability and concurrent validity were obtained for our study using the Structured Interview for Competency Incompetency Assessment Testing and Ranking Inventory. It can therefore be thought that the assessment scale SICIATRI may be an effective instrument for measuring competency. In the future, whether this instrument can be

adapted to involuntary patients in closed wards should be examined. Furthermore, content validity should be examined.

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