THE STRUCTURAL INTERVIEW METHOD FOR DIAGNOSING BORDERLINE DISORDERS: A CRITIQUE

James Reich, M.D.
Allen Frances, M.D.

The authors discuss difficulties in the assumptions that underlie Kernberg's Structural Interview method for diagnosing borderline personality organization and demonstrate methodological limitations in the studies that have reported results from its use. Further data analysis leads to the conclusion that, in the population studied, the Structural Interview diagnosis of borderline personality disorders is essentially equivalent to the clinical diagnosis of the presence of any personality disorder. A predictive formula to determine the presence or absence of clinically diagnosed personality disorder is derived using logistic regression.

Kernberg[1] has developed a complex and influential theoretical system which posits three levels of declining differentiation in personality organization: the neurotic; the borderline; and the psychotic. In this system the borderline personality organization shares the following characteristics with the neurotic: self representations that are sharply delimited, psychologic defenses sufficiently sophisticated so that interpretation improves functioning, and the capacity to test reality. The borderline personality organization shares with the psychotic the following characteristics: poor self cohesion and identity, low level of defensive operations (splitting, projective identification, etc.); and alterations in their relationship with reality and feelings of reality. Kernberg has developed and tested what he calls the Structural Interview in order to distinguish these three specific types of intrapsychic structures which he assumes to be categorically distinct and enduring.

The Structural Interview has commonalities and differences from the standard psychiatric interview. It is similar to standard practice in that the interview

is conducted in a fairly unstructured manner to collect information on the patient's symptoms, functioning, and interpersonal relations. The Structural Interview is unique in its reliance on confrontation and interpretation during the interview as the primary method of data gathering for making diagnostic decisions. During the Structural Interview careful attention is paid to apparent inconsistencies in the information the patient presents. These inconsistencies are pointed out to the patient (confrontation) and explanations are offered by the interviewer for them (interpretation). The interviewer's evaluation of the patient's response to an interpretation is key to Structural Interview diagnostic decision making. Specific (and cross-sectional) responses within the interview situation are crucial to the diagnostic process within the framework of the structural interviewing technique. Patients who become more integrated in response to confrontations and interpretations receive a neurotic or borderline diagnosis; those who disorganize further are diagnosed psychotic.[2]

In several papers, 3-5 Kernberg and associates have attempted to test his theoretical assumptions and to determine the performance of the Structural Interview in comparison with other measurement methods (the clinical interview, the DIB, psychological tests, and retrospective DSM III diagnosis). In this paper we will re-examine these data to: (1) determine whether results of the Structural Interview add significantly to the results generated by the clinical interview; and (2) if not, to investigate whether a predictive model for clinically diagnosed personality disorder can be developed from other variables measured in these studies.

METHOD

Results of Structural Interview

Carr et al.[3] studied 32 psychiatric inpatients using the Structural Interview, DIB, WAIS and Rorschach. They found DIB agreement with Structural Interview in 25 of 32 cases (78%) for whom unequivocal diagnoses were available for both methods, and agreement between the Structural Interview diagnosis and WAIS/Rorschach combination diagnosis in 24 of 29 cases (83%) for whom unequivocal diagnoses were present for both measures (both results significant of the .004 level). Kernberg et al.[4] expanded the sample to forty-eight psychiatric patients. The structural diagnosis agreed with the DIB in 34 of the 46 cases where unequivocal diagnoses were available from both methods (74%), with psychological test reports in 32 of 43 cases where unequivocal diagnoses were present in both methods (74%) and with the WAIS/Rorschach combination in 36 of 46 cases (78%) were unequivocal diagnoses were available from both methods. These results are all significant at the .001 level.

Blumenthal, Carr, and Goldstein[5] returned to the clinical charts of these same 48 patients in order to make retrospective DSM III diagnoses. Overall there was agreement between Structural and DSM III diagnosis in 61% of cases. In 5 of the 18 discrepant cases, the structural diagnosis was "borderline" and the patient's DSM III diagnosis was other personality disorder. Seven cases diagnosed as affective disorder by DSM III were diagnosed about equally as psychotic or borderline by structural interview. In 4 cases there was direct discrepancy between structural and DSM III diagnosis—i.e., a DSM III borderline getting a structural psychotic diagnosis or vice versa.

We have performed further analysis of the data reported by Kernberg et al.[4] in order to provide a clearer view of its meaning. In order to analyze the clinical diagnoses, the following scoring system was used. For the Structural Interview a diagnosis of psychotic was given a score of 0, a diagnosis of borderline was given a score of 1, and those cases where Kernberg et al.[3] could not decide on a structural diagnosis were not analyzed. For clinical diagnoses, the presence of a schizophrenic or manic depressive disorder was scored 0, the presence of any personality disorder was scored 1, and those cases where the clinician could not decide between a personality disorder and non-personality disorder (i.e., infantile personality vs. paranoid or process schizophrenia) were not analyzed. The WAIS/Rorschach was scored 0 if psychotic, 1 if borderline and not analyzed if neither of these two were diagnosed.

The agreement between Structural Interview and clinical diagnoses was 95.8%. ($\chi^2 = 37.32$ pχ.0001). Considering that Structural Interview diagnoses do not achieve 100% reliability and that the clinical diagnoses were not standardized, this is a remarkably high level of agreement (even accepting that structural diagnoses were not made blind to clinical diagnosis). This high level of agreement reported in these studies would seem to indicate that these are identical measures. In effect, the structural diagnosis of borderline personality disorder did not add information to that already provided by the clinical diagnosis.

This conclusion must be modified somewhat based on the additional report comparing structural and retrospective DSM III diagnoses.[5] Here, of the 15 patients diagnosed as DSM III borderline personality 13 (87%) were diagnosed as borderline by Structural Interview. However of 23 diagnosed as borderline by Structural Interview only 13 (57%) were diagnosed as DSM III borderline personality disorder. The others most often received DSM III diagnoses of other personality or affective disorders. This indicates that the structural diagnosis of borderline personality organization casts a wider net than the DSM III borderline personality disorder diagnosis, but the implications of this remain unclear.

One means of validating a diagnostic construct is to predict reliably its presence or

TABLE I

Structural Diagnosis of Borderline Personality Disorders
Compared to Clinical Diagnosis of Presence of
any Personality Disorder[1]

		Structural Diagnosis	
		0	1
	0	20	1
Clinical Diagnosis			
	1	1	23

$X^2 = 37.32$
p < .0001

[1] Data from Kernberg et al.[3]

absence by use of other standard psychological or psychiatric tests. An example taken from medicine would be the ability to confirm the clinical diagnosis of diabetes by use of the glucose tolerance test. A positive glucose tolerance test in a large number of patients clinically diagnosed as diabetic validates the concept of diabetes. Psychiatry, especially in the area of personality disorders, has often been criticized for not achieving this type of validity.

In an attempt to validate the clinical diagnosis of personality disorder (which in this data set was equivalent to structurally diagnosed borderline disorder) we analyzed Kernberg's data further and performed a logistic regression. A logistic regression is a mathematical method of deriving a good predictive formula for one variable from a set of other variables. In this instance a computer program named LOGIST contained in the SAS package[6] was used. Clinical diagnosis of personality disorder was the variable to be predicted and DIB, WAIS/Rorschach, sex and psychologic test report were possible predictors.

The computer program generated the following formula: Clinical Diagnosis of Personality Disorder = $-5.93 + 0.90$ DIB score $+ 3.35$ WAIS/Rorschach score. Any score above 0 would be diagnosed as a personality disorder. For example, if a patient had a DIB score of 8 and the WAIS/Rorschach test was judged as borderline (where borderline = 0) then his score would be $-5.93 + 8 (.9) + 3.35 (1)$ which equals 4.62. This would be judged by the formula as personality disorder since it is greater than 0. The variables of sex and psychological test report did not add enough additional information to warrant their inclusion in the formula. What this tells us about the WAIS/Rorschach and the DIB is that they both contribute significantly to the prediction of clinical diagnosis of personality disorder in Kernberg's sample and that each provided a significant amount of predictive power beyond what the other could predict by itself. It also tells that any predictive power provided by sex and psychological test reports has already been provided by the DIB and the WAIS/Rorschach combination.

This formula for the given data set accounted for 46.2% of the variance and predicted personality disorder with a sensitivity of 88% and a specificity of 83.3%. Total correct predictions were 86%. Of course the comparison group in this study (mostly inpatient schizophrenics) may not be a particularly challenging one for discrimination from personality disorder.

DISCUSSION

Kernberg's goal of differentiating hierarchic levels of intrapsychic personality configuration by use of Structural Interview is ambitious and based on a number of tenuous assumptions. First, the method attempts to categorize what are believed to be longstanding personality structures on the basis of data acquired in one cross sectional interview which is likely to be contaminated by the more transient features that influence the patient's behavior on any given day.[7] Indeed, the report by Blumenthal et al.,[5] indicates that such diagnostic disagreements as occurred between the Structural Interview and DSM III diagnosis were most often accounted for by patients meeting DSM III criteria for affective disorder. Because Structural Interview diagnosis relies on here and now interview responses and is not sensitive to affective symptoms, it seems prone to confuse personality with affective disorder. Beyond the practical diagnostic problem this entails lies an interesting theoretical question. There is evidence suggesting that, at least in some patients, borderline personality pathology may

be a manifestation of chronic affective disorder. It seems likely that what Kernberg assumes to be a longstanding borderline personality organization, structured in early life may, in some patients, represent an affective state perhaps more amenable to pharmacological intervention.

Second, the structural interviewer follows a diagnostic algorhythm that is not tied closely to specific overt features in the patient's presentation and course and instead relies heavily on interview behavior. Such behavior may be influenced by the patient's specific reaction to a given interviewer or to the interviewer's particular bias in framing confrontations and interpretations. Role factors that make one person react more or less favorably to another person (i.e., age, sex, attractiveness) may well contaminate responses in the Structural Interview. For instance, a patient who doesn't like older people (for transference reasons) may be less inclined to accept interpretations from an older interviewer. Thus a negative response to the interviewer's interventions may be more related to interpersonal attitudes and conflicts than to the presumed level of intrapsychic organization. Moreover the method places great faith in the interviewer's ability to assess correctly the social reality of the patient's functioning and to present such interpretations tactfully and non-provocatively. It allows the interviewer to assume that the patient's behaviors are a direct result of the content of interpretations and ignores the possibility that interpretations might be provocative by virtue of poor timing or phrasing. This is a technique which would be safe only in the hands of an expert.

Finally, Kernberg's theoretical approach and the method of the Structural Interview assume clear-cut boundaries separating psychotic, borderline, and neurotic levels of personality organization. It is possible that aspects of intrapsychic integration and differentiations follow a continuous rather than trichotomous distribution. If boundaries between ^{1} ls are not sharply delineated, the task of the interview becomes much difficult and the chances of achieving acceptable reliability are reduced.

There are also several methodologic flaws in the way the data from these studies were collected and reported. A major limitation of the studies is their failure to report inter-rater reliability for the diagnosis arrived at by the Structural Interview. Establishing the reliability of the Structural Interview is a necessary first step that must precede other study of the method since reliability places an upper limit on conclusions that can be drawn about validity and generalizability. Data that are highly reliable may or may not be valid, but data that are not reliable cannot be deemed valid. If reliability cannot be documented within Kernberg's own group then the Structural Interview format is unlikely to be useful elsewhere.

A second methodological problem results from the fact that the prospective clinical diagnoses were not based on DSM III or on any other diagnostic method with clear exclusion and inclusion criteria. Examples of undefined and idiosyncratic diagnoses are: acute, undifferentiated, incipient or borderline schizophrenia and oral, "as if" and infantile personalities. Moreover, in neither Carr et al.[2] nor in Kernberg et al.[3] were clinical diagnoses derived blindly and independently from other measures. In Carr et al., clinical diagnoses were taken from the psychological reports, while in Kernberg et al. they were not derived independent of the Structural Interview diagnosis. The one report in which DSM III diagnoses are reported relies on retrospective chart review.

The problem of definition is also manifest in the vague and overly inclusive way in which Kernberg and associates use the term "psychotic personality organization" and their failure to define its clinical boundaries and equivalents. Kernberg's hypothesis that a psychotic personality organization underlies disorders which are not characterized by the traditional clinical features of psychosis (e.g., hallucinations and delusions) may or may not be tenable. It can be tested adequately only if patients discriminated as psychotic on structural, but not clinical, interview differ in other important measurable ways from those diagnosed as nonpsychotic on structural interview. Because clinical and structural diagnosis overlapped so completely in Kernberg's studies, such testing was not possible.

In order for an interview to be a useful addition to the clinician's or researcher's armamentarium, there are several criteria which must be met. First, it must be demonstrated that the interview is related to other measures that purport to measure the same phenomena. Secondly, the interview must add to what is offered by these other measures. For example, if a measure has low correlation to another measure of the same phenomenon, one wonders whether it is truly measuring that phenomenon. On the other hand, if the results of a test are identical to those of an existing test, the new test is redundant unless it can be shown to shed light on an additional facet not covered by the existing test.

It would seem that the available data are most consistent with the interpretation that the Structural Interview does not add significantly to the clinical diagnosis of personality disorder. Several criteria must be met to demonstrate that the Structural Interview adds significantly to the clinical diagnosis. First, the interview must be shown to be reliable. Second, it must select a different subset of patients than does the clinical diagnosis of personality disorder. Third, these two groups must be demonstrated to have different psychological properties by external measures (course of illness, treatment response, established psychological test, etc.). It may be that the subject populations studied by Kernberg compromised his ability to demonstrate the utility of the Structural Interview. The Structural Interview may conceivably be capable of finer distinctions that are lost because the discrimination between schizophrenia and borderline personality is too easy. A population consisting of predominantly personality disordered patients might allow less congruence between structured and clinical diagnosis.

The logical regression program provided a reasonable predictive formula to determine the presence or absence of personality disorder in this sample as measured by other standardized tests in the data set. This formula had good sensitivity and specificity and accounted for a reasonable amount of the variance. This result is not important for its immediate clinical applications, but for its implications. The fact that a predictive formula can be developed at all for a disorder suggests that a meaningful distinction is being made. It must be remembered that our particular formula was limited in that it was derived from a small sample size, in one particular inpatient sample, and with clinical diagnoses that were not totally blind to other diagnostic methods. It would need replication on another population. Support for this approach is derived from the work of Hymowitz et al.[8] who used subtests of the WAIS and Rorschach to derive

a predictive formula for predicting Structural Diagnosis and were able to predict fifty percent of the variance. However, they utilized only the 36 cases in Kernberg's sample for whom the diagnoses were especially clear cut—and so performed a less difficult discrimination.

Few investigators have attempted the difficult task of operationalizing, making reliable, and validating psychoanalytic concepts. Those who try are pursuing a worthy goal which is likely to bear fruit with the improvement of the methodology for such endeavors. Although Kernberg's data do not inspire confidence in the Structural Interview, it is encouraging that psychoanalytic constructs are being subjected to scientific scrutiny.

REFERENCES

1. Kernberg OF: Structural interviewing. *Psychiatric Clinics of North America 4:* 169-195, 1981.
2. Bauer SF, Hunt HF, Gould M et al.: Borderline personality organization, structural diagnosis and the structural interview. *Psychiatry 43:* 224-233, 1980.
3. Carr AC, Goldstein EG, Hunt HF et al.: Psychological tests and borderline patients. *J Pers Assess 43:* 582-590, 1979.
4. Kernberg OF, Goldstein EG, Carr AC et al.: Diagnosing borderline personality: a pilot study using multiple diagnostic methods. *J Nerv Ment Dis 169:* 225-231, 1981.
5. Blumenthal R, Carr AC, Goldstein EG: DSM III and structural diagnosis of borderline patients. *Psych Hosp 13:* 142-148, 1980.
6. ———, *SAS Supplemental Library User's Guide, 1980 Edition,* PS Reinhardt (*ed.*), SAS Institute Inc., Box 8000, Gary, North Carolina, 27511, 1980.
7. Frances A: The DSM III personality disorders section. A commentary. *Amer J Psych 137:* 1050-1054, 198-
8. Hymowitz P, Hunt HF, Carr AC et al.: The WAIS and Rorschach test in diagnosing borderline personality. *J Pers Assess* (In press).