Developing a Scale to Measure Intense Ambivalence

Michael L. Raulin

State University of New York at Buffalo

The term "ambivalence" was first coined by Bleuler in 1911. He defined ambivalence as "the tendency to endow the most diverse psychisms with both a positive and negative indicator at one and the same time." (Bleuler, 1911/1950, p. 53). For Bleuler, ambivalence was one of the fundamental symptoms of the schizophrenic disorder. A fundamental symptom can be found in every schizophrenic whereas accessory symptoms like delusions, and hallucinations are only found in some schizophrenics.

Theoretical Formulation of Ambivalence

Ambivalence plays a key role in a number of theories of schizophrenia. Freud argued that ambivalence which is normal in the infant, occurs in the schizophrenic as a result of severe psychological regression (Fenichel, 1945). Bleuler (1911/1950) argued that this ambivalence is a direct consequence of the associative disturbance characteristic of schizophrenia. Fromm-Reichmann (1954) conceptualized schizophrenic ambivalence as a defense against intensely hostile impulses. Haley (1959) argued that schizophrenics may use contradictory behavior to avoid defining any relationship.

Paul Meehl (1962, 1973) gave ambivalence a prominent role in his genetic theory of schizophrenia. Meehl believes that most people are schizotypes, that is, have a genetic predisposition for schizophrenia, than ever become schizophrenic. He suggests that the compensated schizotype can be identified by a number of distinctive characteristics which are shared by the decompensated

schizophrenic patient. Intense ambivalence is one of these characteristics. The present study was stimulated by the work of Meehl.

Past Research

The phenomenon of ambivalence is widely acknowledged but seldom discussed or studied. Most psychiatric texthooks, even those devoted exclusively to schizophrenia, mention ambivalence only in passing. (Bleuler, 1924/1930; Ewalt & Farnsworth, 1962; Freedman & Kaplan, 1967; Hoch & Zubin, 1966; Jackson, 1960; Jaspers, 1959-1962; Noyes & Hayden, 1940; Redlich & Freedman, 1966; Searles, 1960; Smith, 1960; Sullivan, 1962; Whitaker, 1958). I could find no psychiatric text and only an occasional journal article (Kimberlin & Friesen, 1977; Scagnelli, 1975) which discussed the implications of ambivalence for therapy. Given the limited interest in pursuing the theoretical implications of ambivalence in schizophrenia, it is not surprising that no scales for clinical ambivalence are listed in Buros (1975) or Chun, Cobb, and French (1975), or in the Psychological Abstracts from 1950 to the present.

The Present Study

The present study sought to develop a true-false scale to measure the ambivalence which Meehl (1964) describes as a sign of schizotypy. Particular care was taken in the development of the Ambivalence Scale to minimize the effects of social desirability and acquiescence. The scale was validated as a measure of ambivalence by interviewing college students who scored high or in the normal range on the scale.

Development of the Scale

Item writing. A two-page detailed description of ambivalence as defined by Meehl (1964) in his Manual for Use with Checklist of Schizotypic Signs was

prepared and given to the item writers for their guidance. In that description, intense ambivalence was defined as "the existence of simultaneous or rapidly interchangeable positive and negative feelings toward the same object or activity, with the added proviso that both the positive and negative feelings be strong."

Item writers were asked to try to balance the number of true-keyed and false-keyed items, and to avoid the use of simple negation to obtain false-keyed items. They were also asked to avoid complex sentence structures, or passive voice, and to make the wording as specific as possible to reduce the effects of acquiescence response sets. Item writers were also asked to word items to minimize the effects of social desirability.

Pretesting of items. From an initial pool of approximately 200 items prepared by 7 different writers, 75 items were selected which sampled widely from the content domain. These were items which looked like they would correlate minimally with social desirability and acquiescence measures. About half of the items were keyed in each direction. A single protocol was prepared by intermixing these items with the items from the Crowne-Marlowe (1964) Social Desirability Scale, Jackson and Messick's (1962) DY-3 Acquiescence Scale, and an Infrequency Scale modeled after Jackson's (1974) Infrequency Scale. Any subject who responded in the infrequent direction on more than two of the 17 Infrequency items was dropped from the samples. The subjects included 106 male and 122 female college students who were enrolled in an Introductory Psychology Course.

Item analysis and selection. Item statistics were computed separately for male and female samples. Items were retained only if they were satisfactory for both sexes. The item statistics were used to guide the creation of a scale that

would measure a very intense level of ambivalence and have a high level of internal consistency and discriminant validity.

After this first testing, some items were dropped, others were rewritten on the basis of the statistical information, and some new items were written. The process was then repeated on a second (105 males and 127 females) and a third (173 males and 226 females) sample of college students and 45 items were selected for the final version of the scale. This first slide gives the psychometric properties of this 45-item Ambivalence Scale for the third sample and for two large cross-validation samples. As can be seen in this slide, the Ambivalence Scale was relatively free of method variance for college students, with roughly 6% of the variance accounted for by acquiescence and 9% of the variance accounted for by social desirability in the cross-validation samples. Test-retest reliability over a 10 to 12 week period was .81.

Insert Slide 1 about here

Interview Validation of the Scale with College Students

College students who had taken the Ambivalence Scale were interviewed by the author to validate the scale as a measure of ambivalence. The purpose of this part of the study was to examine the relationship of the scores obtained on the Ambivalence Scale to interviewer ratings and behavioral measures of ambivalence.

Subjects

Seventy-two college students (40 males and 32 females) were interviewed. Subjects were selected from the first cross-validation sample on the basis of

their scores on three scales of schizotypy: the Ambivalence Scale, a Physical Anhedonia Scale (Chapman, Chapman, & Raulin, 1976), and a scale of Perceptual Aberration (Chapman, Chapman, & Raulin, 1978). Subjects were designated as ambivalent subjects if they scored two standard deviations or more above the mean for college students on the 45-item Ambivalence Scale. The Physical Anhedonia and Perceptual Aberration scores were not considered in the selection of ambivalent subjects. Subjects were designated as potential control subjects if they scored no more than one-half of one standard deviation above the mean on each of these three scales of schizotypy.

The author was blind to the scores of the subjects while doing the interviews and scoring the data. The interviews with ambivalent and control subjects were intermixed so that any changes in interview style over time would not systematically affect comparisons between groups. Of the 78 potential subjects identified, 72 subjects were interviewed including 32 females (16 experimental and 16 control subjects) and 40 males (18 experimental and 22 control subjects). There were no significant differences between experimental and control subjects on age, education, or social class.

The interview. A structured interview was constructed which touched briefly upon several situations in which ambivalent feelings might be displayed. These included the subject's living situation and relationships with roommates, friendships, home situation and parents, and relationships with the opposite sex. A series of open-ended questions dealing with the activities the subject enjoys were also included. At the end, the subject was asked to describe himself or herself with five adjectives. None of the interview questions asked about

ambivalent feelings directly; the questions simply provided a context in which feelings could be discussed. The interview usually took about 15 minutes to complete and all interviews were tape recorded.

Interview Rating

Immediately after the interview, each subject was rated on a five-point scale for the level of ambivalence demonstrated or spontaneously reported in the interview (Ambivalence Rating). This Ambivalence Rating Scale ranged from a score of (1) indicating that the subject was "less ambivalent than most people" to a score of (5) indicating "pathological ambivalence." Normal ambivalence was 2 on the scale. Ratings were guided by detailed behavioral descriptions of each point on the scale.

Ratings of Interview Transcripts

Verbatim transcripts were prepared from the tape recordings of the 72 interviews. The author scored the interviews blindly for three different behavioral measures: number of contradictions in reporting feelings; number of contradictions in reporting material other than feelings; and number of times the subject described himself or herself in ambivalent terms. Again, a detailed scoring manual was developed prior to any scoring. We had predicted that the number of contradictions involving feelings and the number of ambivalent self-descriptions would both be indicators of ambivalence while the number of contradictions in areas other than feelings would be more of an indicator of confusion or mild thought disorder.

A second rater, blind to the subject's Ambivalence Scale score and the author's ratings, scored 20 randomly selected transcripts of the interviews. The interrater reliabilities ranged from .71 to .75 for the three behavioral measures.

Results

Interview Rating of Ambivalence

The Ambivalence Ratings made by the interviewer showed consistent differences between groups. For the males, the mean Ambivalence Ratings were 3.17 and 1.91 for the ambivalent and control subjects respectively, a difference which is statistically significant, t (26) = 4.30, $p < .001$. For the females, the mean Ambivalence Ratings were 2.81 and 2.13 for the ambivalent and control subjects respectively, which is also statistically significant, t (30) = 2.65, $p < .02$. If a cutoff of 2 (normal ambivalence) is used, 74% of the high scorers are correctly predicted with an 18% false positive rate.

Ratings of Interview Transcripts

Behavioral measures. This next slide presents the means and standard deviations of the three behavioral measures. Since males and females performed similarly on these measures, statistical tests are reported for the combined group of males and females.

Insert Slide 2 about here

The experimental subjects contradicted themselves about their feelings more than twice as often as the control subjects, a difference which is highly significant, t (70) = 4.97, $p < .001$. There was no difference between experimental and control subjects on the number of contradictions not involving feelings, t (70) = .95. Finally, the experimental subjects were more than four times as likely as the control subjects to describe themselves as ambivalent, which was again highly significant, t (70) = 3.66, $p < .001$.

Descriptive measures. Because of the standardized format of the interview, it was possible to extract a good deal of valuable descriptive material. This slide presents a brief summary of that material. The statistical tests reported are among 26 tests performed on the interview data.

Insert Slide 3 about here

As you can see from the slide, a number of predictable differences did emerge. Ambivalent subjects had more trouble with their roommates, were less likely to have close friends, had a lot of difficulty with parents which was especially true for ambivalent male subjects, and found that their ambivalent feelings often interfered with their dating. These findings are presented as exploratory and should not be overinterpreted.

Discussion

The focus of the present study was the development of a true-false inventory to measure intense ambivalence, described by Meehl (1964) as a sign of schizotypy. The scale was developed using the procedures suggested by Jackson (1970) to minimize the effects of social desirability and acquiescence and to maximize the face validity of the scale.

The initial validation of the Ambivalence Scale using interview behavior and self-report strongly indicates that the scale is measuring a trait with some convergent validity. The test-retest data further indicate that the trait is reasonably stable over time. However, the most interesting construct validation questions involve studying the relationship of ambivalence to psychopathology and to functioning in relatively nonpathological groups.

Directions for future research. The present paper details only the first step in the study of the trait of intense ambivalence. The data thus far are encouraging. Certainly, further study in this area is warranted. Several areas of future study seem promising and should be pursued.

The relationship of various schizotypic signs to each other and to other variables may well hold the key to the development of new taxonomies within the schizotypic spectrum. Meehl (1964) suggested that schizotypy is a single disorder which is characterized by the series of signs described in his manual. However, scales for Physical Anhedonia and Perceptual Abberation developed by Chapman and his associates show a near zero correlation with each other for male schizophrenics (r = .14) and for college students (r = .19 for males and r = .-09 for females). These data are inconsistent with Meehl's suggestion of a single disorder of schizotypy. It may be that there are different subtypes of schizotypy, each distinguished by particular patterns of scores. Highly reliable scores on several measures of schizotypic signs obtained from a large sample of people would be needed to detect these subtypes, if they exist. The Ambivalence Scale can also be used to directly verify Bleuler's untested hypothesis that ambivalence is a "fundamental symptom of schizophrenia." Perhaps an even more relevent question might be whether intense ambivalence is unique to schizophrenia or characteristic of many psychopathological groups. Another critical question is whether ambivalence is characteristic of the patient both before and after as well as during the psychiatric episode. Answers to these questions could have considerable impact on several etiological theories of psychopathology.

If intense ambivalence truly indicates schizotypy, one would expect that intensely ambivalent people would have a variety of deficits. Chapman and his associates (Chapman & Chapman, 1980; Chapman, Chapman, Raulin, & Edell, 1978;

Chapman, Edell, & Chapman, 1980; Edell & Chapman, 1979; Haberman, Chapman, Numbers, & McFall, 1979) have been investigating the relationship of several symptoms to scores on Physical Anhedonia and Perceptual Aberration Scales in a college student population. This work should be extended to subjects characterized by intense ambivalence.

The Ambivalence Scale may be useful as a predictor of response to, and outcome in therapy. There are two aspects of the therapeutic encounter which seem relevant -- premature termination from therapy and counter-transference strain on the therapist. Both premature termination and counter-transference strain could occur if clients acted out their ambivalent feelings in therapy.

Finally, if intense ambivalence is a sign of schizotypy, as Meehl has suggested, then subjects who are characterized by intense ambivalence would be "at-risk" for schizophrenia. A longitudinal study is the only way to test this hypothesis directly. While this is a speculative hypothesis, if true, it would have a major impact on our understanding of the etiology of schizophrenia. It would also allow us to identify a group of individuals "at-risk" with whom we would implement preventative measures.

References

Bleuler, E. The fundamental symptoms. In E. Bleuler (Ed.) Dementia Praecox; or the group of schizophrenias. New York: International University Press, 1950. Translated by Joseph Ziskin. (First published in 1911).

Bleuler, E. Textbook of Psychiatry. (A. A. Brill, translator) New York: Macmillan, 1930. (Originally published in 1924).

Buros, O. K. (Ed.) Personality tests and reviews II. Highland Park, N. J.: Graphon Press, 1975.

Chapman, L. J., & Chapman, J. P. Scales for rating psychotic and psychotic-like experiences as continua. Schizophrenia Bulletin, 1980, 6, 476-489.

Chapman, L. J., Chapman, J. P., & Raulin, M. L. Scales for physical and social anhedonia. Journal of Abnormal Psychology, 1976, 85, 374-382.

Chapman, L. J., Chapman, J. P., & Raulin, M. L. Body-Image aberration in schizophrenia. Journal of Abnormal Psychology, 1978, 87, 399-407.

Chapman, L. J., Chapman, J. P., Raulin, M. L., & Edell, W. S. Schizotypy and thought disorder as a high risk approach to schizophrenia. In G. Serban (Ed.) Cognitive deficits in the development of mental illness. New York: Brunner-Mazel, 1978.

Chapman, L. J., Edell, W. S., & Chapman, J. P. Physical anhedonia, Perceptual aberration, and Psychosis proneness. Schizophrenia Bulletin, 1980, 6, 639-653.

Chun, K., Cobb, S., & French, R. P., Jr. Measures for psychological assessment. Ann Arbor, Michigan: Institute for Social Research, 1975.

Crowne, D. P., & Marlowe, D. The approval motive; studies in evaluative dependence. New York: Wiley, 1964.

Edell, W. S., & Chapman, L. J. Anhedonia, Perceptual Aberration, and the Rorschach. Journal of Consulting and Clinical Psychology, 1979, 47, 377-384.

Ewalt, J. R., & Farnsworth, D. L. Textbook of Psychiatry. New York: McGraw-Hill, 1963.

Fenichel, O. The psychoanalytic theory of neurosis. New York: Norton, 1945.

Freedman, A. M., & Kaplan, H. I. (Eds.) Comprehensive textbook of psychiatry. Baltimore: William and Wilkins, 1967.

Fromm-Reichmann, F. Psychotherapy of schizophrenia. American Journal of Psychiatry, 1954, 111, 410-419.

Haberman, M. C., Chapman, L. J., Numbers, J. S., & McFall, R. M. Relationship of social competence to scores on two scales of psychosis proneness. Journal of Abnormal Psychology, 1979, 88, 675-677.

Haley, J. An interactional description of schizophrenia. Psychiatry, 1959, 22, 321-332.

Hoch, P. H., & Zubin, J. (Eds.) Psychopathology of schizophrenia. New York: Grune and Stratton, 1966.

Jackson, D. D. (Ed.) The etiology of schizophrenia. New York: Basic Books, 1960.

Jackson, D. N. A sequential system for personality scale development. In C. N. Spielberger (Ed.) Current topics in clinical and community psychology, Vol. II. New York: Academic Press, 1970.

Jackson, D. N. Manual for the Personality Research Form. Goshen, N. Y.: Research Psychologists Press, 1974.

Jackson, D. N., & Messick, S. Response styles on the MMPI: Comparison of clinical and normal samples. Journal of Abnormal and Social Psychology, 1962, 65, 285-299.

Jaspers, K. General psychopathology. Seventh Edition. (J. Hoenig and M. Hamilton, translators). Chicago: University of Chicago Press, 1962. (Originally published in 1959).

Kimberlin, C., & Friesen, D. Effects of client ambivalence, trainee conceptual level, and empathy training condition on empathic responding. Journal of Counseling Psychology, 1977, 24, 354-358.

Meehl, P. E. Schizotaxia, schizotypy, schizophrenia. American Psychologist, 1962, 17, 827-838.

Meehl, P. E. Manual for use with checklist of schizotypic signs. Minneapolis: Psychiatric Research Unit, University of Minnesota Medical School, 1964.

Meehl, P. E. Psychodiagnosis: Selected papers. Minneapolis: University of Minnesota Press, 1973.

Noyes, A. P., & Haydon, E. M. A textbook of psychiatry. Third edition. New York: MacMillan, 1940.

Redlich, F. C., & Freedman, D. X. The theory and practice of psychiatry. New York: Basic Books, 1966.

Scagnelli, J. Therapy with eight schizophrenic and borderline patients: Summary of a therapy approach that employs a semi-symbiotic bond between patient and therapist. Journal of Clinical Psychology, 1975, 31, 519-525.

Searles, H. F. The nonhuman environment in normal development and in schizophrenia. New York: International Universities Press, 1960.

Smith, J. A. Psychiatry: Descriptive and dynamic. Baltimore: Williams and Wilkins, 1960.

Sullivan, H. S. Schizophrenia as a human process. New York: Norton, 1962.

Whitaker, C. (Ed.) Psychotherapy of chronic schizophrenic patients. Boston: Little, Brown and Co., 1958.

Slide 1

Psychometric Properties of a 45-item Test for Intense Ambivalence for both Standardization and Cross-Validation Samples of College Students

	Standardization Sample	Cross-Validation Samples First	Second
Sample Size	394	1177	1349
Coefficient Alpha	.87	.87	.87
Mean Score	8.52	10.35	10.20
Correlation with Social Desirability	-.25		-.30
Correlation with Acquiescence	.21		.25

Slide 2

Mean Scores for the three Behavioral Measures of Ambivalence obtained from the Interviews

	Ambivalent	Control	t
Sample size	34	38	
Contradict feelings	5.79	2.37	4.97
Other contradictions	.53	.32	.95
Describe ambivalent feelings	.71	.16	3.66

Slide 3

Significant Findings on the Descriptive Data
Available from the Interviews of
Ambivalent and Control Subjects

(1) ambivalent subjects got along with their roommates less (χ^2 (1) = 5.47, $p < .02$)

(2) ambivalent subjects were less likely to report having many close friends ($p = .04$)

(3) male (but not female) ambivalent subjects got along with their parents less well than control subjects (χ^2 (1) = 9.96, $p < .005$)

(4) male (but not female) ambivalent subjects trusted their parents less than control subjects (χ^2 (1) = 4.10, $p < .05$)

(5) ambivalent subjects tended to doubt that they could always depend on their parents more than control subjects ($p = .054$)

(6) ambivalent subjects reported more often than control subjects that their parents often upset them (χ^2 (1) = 3.95, $p < .05$)

(7) ambivalent subjects spontaneously reported ambivalent feelings as the most difficult aspect of dating for them more often than control subjects ($p = .01$)