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Validation of Schizotypy Scales in a Psychotherapy Setting

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Clinical interest in the topic of borderline disorders has increased dramatically since the publication of Gunderson and Singer's (1975) review of research in this area. Few areas of clinical inquiry have generated as much discussion and theorizing. Agreement on the diagnostic criteria for this disorder has been rare and the proliferation of diagnostic labels is a clear indicator of the extent of this controversy. A variety of labels have been offered describing these individuals on a borderline between neurosis and psychosis; borderline schizophrenia, ambulatory schizophrenia, latent schizophrenia, pseudoneurotic schizophrenia, psychotic character, borderline syndrome, borderline personality disorder, and schizotypal personality disorder. Others have argued that there is no "border" between neurosis and psychosis and hence utilize different labels. Although Gunderson and Singer (1975) and others have blamed poor methodology, idiosyncratic sets of diagnostic criteria, and a lack of cooperation among investigators, there appear to be additional reasons for this diagnostic confusion.

I believe the increased usage of more narrow and rigorous diagnostic criteria for schizophrenia and primary affective disorders found in DSM-III and Research Diagnostic Criteria have probably led to a reduced number of individuals diagnosed within these categories. Those individuals who no longer fulfill the new criteria are being placed in another diagnostic category, namely borderline disorders. In other words, I am proposing that borderline disorders is the newest diagnostic wastebasket category.

It is possible that the diagnostic confusion in this literature accurately reflects the existence of a variety of borderline subtypes. Several authors have made similar suggestions (Brinkley, Beitman, & Friedel, 1979; Dickes, 1974; Grinker, Werble, & Drye, 1968; Kernberg, 1979; Kutash, 1957; Meissner, 1978; Perry & Klerman, 1978; Schmideberg, 1959; Spitzer & Endicott, 1979; Vanggaard, 1978; Wender, 1977; Zilboorg, 1957).

The works of Rado (1956, 1962) and Meehl (1962, 1964) form the theoretical basis for the study of schizotypal disorders. Their hypothesis does not view schizotypal disorders as lying on a border between neurosis and all psychoses. Rado (1956) coined the term "schizotype" as a shortening of the phrase "schizophrenic genotype" to illustrate a shared common genetic etiology with schizophrenia.

In 1962 Meehl wrote a classic article which integrated the theories of a genetic etiology of schizophrenia with Rado's theory of schizotypy. Meehl argued that a single dominant gene was a necessary but not sufficient condition for the development of schizophrenia. Meehl labelled the presence of such a gene, schizotaxia. According to Meehl, schizotaxia causes a neural integrative deficit. Through social learning, all schizotaxic individuals develop a schizotypal personality organization. Cognitive slippage (a subtle form of thought disorder), interpersonal aversiveness, anhedonia, and ambivalence are hypothesized to be the four major schizotypic signs. Meehl argued that only a small number of schizotypes, perhaps 10%, would eventually decompensate into schizophrenia, the rest would engage in some level of schizotypic adaptation.

The purpose of the present study was to validate scales used to delineate the schizotypal subtype of borderline disorders. This is the initial stage

of a two-stage process for identifying individuals at risk for psychosis or a greater degree of psychopathology. After reliable and valid indicators of schizotypy are developed the second stage would entail developing and implementing measures intended to prevent a decompensation into schizophrenia.

The present study tests the construct validity of a group of short but reliable scales developed to measure four of the schizotypic signs described by Meehl (1964). The scales include Physical Anhedonia (Chapman, Chapman, & Raulin, 1976), Perceptual Aberration (Chapman, Chapman, & Raulin, 1978), Intense Ambivalence (Raulin, 1977), and Somatic Symptoms. Initial work with the above scales suggests that they can identify individuals in a college population who demonstrate significantly more psychological dysfunction than a control group from the same population (Adamski, 1978; Chapman, Edell, & Chapman, 1980; Edell & Chapman, 1979; Haberman, Chapman, Numbers, & McFall, 1978; Raulin, 1977).

One of the strengths of the present study is that it takes place in a naturalistic rather than highly controlled experimental setting. The subjects in this study are clients participating in psychotherapy; they are not responding to an experimental task. In addition, the subjects (clients) in this study differ from subjects in the previously mentioned validation studies since they represent a wide range of ages and occupations from the local community and are not primarily a college student population. The data consist of the observations of the clients' therapists and background information provided by the clients.

Although the literature on therapy with schizotypes is quite small, the literature concerning therapy with borderlines suggested a number of hypotheses for our schizotypic clients. It was predicted that schizotypic clients would

have some knowledge of their dysfunction and rate themselves as more impaired in a variety of contexts, would have previously been in therapy more often, and would expect to be in therapy longer. In addition, it was predicted that schizotypic clients would have more first degree relatives who have received psychotherapy, would not have been brought up by their biological parents, and would live alone more often than control clients.

Meehl (1964) has suggested that schizotypic clients elicit more countertransference strain in their therapists and are intensely ambivalent. We tested these hypotheses by predicting that the therapists of schizotypic clients would indicate their countertransference in their ratings of each therapy session and that schizotypic clients would express more intensely ambivalent feelings about being in psychotherapy by coming late, changing appointments, cancelling appointments, not showing for appointments, and prematurely terminating therapy more often than control clients.

Method

Subjects

Subjects were 109 clients receiving psychotherapy at an outpatient clinical training center. Clients were eligible for the schizotypal group (N = 52) if they scored one standard deviation above the total clinic mean on any of the four scales: Physical Anhedonia, Perceptual Aberration, Intense Ambivalence, and Somatic Symptoms. Please note that the clinic means on these four scales are higher than the means for college student or normal populations. This is why a cut-off of only one standard deviation was used for selecting the schizotypic clients. Clients were eligible for the control group (N=57) if they scored no more than one-half of a standard deviation above the clinic

mean on each of the four scales. All therapists and clients were blind to clients' schizotypy scale scores and the hypotheses being tested.

Procedure

Data came from three sources; the face sheet filled out by the client prior to therapy, a session checklist filled out by the therapists after every therapy session, and a "special action" checklist filled out by the therapists on four different occasions.

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Face sheet form. This form elicits information such as: how impaired the client rates him or herself in a number of settings, how many times the client has previously been in therapy, how long the client expects to be in therapy, who in the client's family has been in psychotherapy before, whether the client was raised by their biological parents, and who the client lives with. A variety of other questions concerning demographics and personal information are also asked.

Session checklist. This form elicits information such as: date and time of the session, the client's punctuality, and therapist's ratings of how they viewed the session. Therapists rate whether the client was open or defensive, whether they felt close or distant to the client, whether they were optimistic or pessimistic about the client's prospects for change, and whether they were frustrated or pleased with the session. These four ratings were represented on a five-point scale. Techniques used by the therapist and content areas discussed in the particular session are also covered in this checklist.

Special action checklist. This checklist is filled out by the therapist whenever a client terminates therapy, cancels a session, changes an appointment time, or does not show for an appointment.

Results

There were no significant differences between male and female clients on any of the variables assessed. This allowed us to group both male and female clients together in the subsequent analyses. Please note that the number of clients in each of the following comparisons may vary due to some clients not rating themselves on each impairment index.

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The client's ratings of degree of impairment on the face sheet yielded a number of significant differences. This slide presents these data for several dimensions of impairment. In each case the schizotypic clients rated themselves as more impaired. These mean differences were significant according to one-tailed t-tests for family impairment, $t(96)=1.75$, $p < .05$; social impairment, $t(100) = 2.78$, $p < .004$; sexual impairment, $t(78) = 2.95$, $p < .002$; employment impairment, $t(85) = 2.36$, $p < .02$; chore impairment, $t(97) = 2.25$, $p < .02$; and fun impairment, $t(101) = 3.90$, $p < .0005$.

Schizotypic clients who scored highly on at least two of the schizotypy scales rated themselves as more impaired on all seven of the impairment indices. The mean differences were significant according to one-tailed t tests for social impairment, $t(35) = 2.34$, $p < .02$; sexual impairment, $t(60) = 2.67$, $p < .005$; employment impairment, $t(66) = 1.71$, $p < .05$; school impairment,

t (53) = 1.70, $p < .05$; chore impairment, t (73) = 2.63, $p < .005$; and fun impairment, t (76) = 2.91, $p < .003$. The mean difference for family impairment was significant according to a one-tailed Satterthwaite t-test; t^* (63.21) = 2.07, $p < .03$.

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This next slide presents the impairment data comparing schizotypic clients who scored highly on each of the schizotypy scales with control clients. Clients who scored highly on the Physical Anhedonia scale rated themselves as more impaired than the control clients on six of the impairment indices. The mean differences were significant according to one-tailed t-tests for only sexual impairment, t (50) = 1.92, $p < .04$; and fun impairment, t (67) = 2.40, $p < .01$.

Schizotypic clients who scored highly on the Perceptual Aberration scale rated themselves as more impaired on all seven of the impairment indices. The mean differences were significant according to one-tailed t-tests for social impairment, t (67) = 3.21, $p < .001$; sexual impairment, t (54) = 2.10, $p < .02$; employment impairment, t (56)= 1.89, $p < .04$; school impairment, t (48) = 2.49, $p < .008$; chore impairment, t (67) = 3.08, $p < .002$; and fun impairment, t (68) = 3.08, $p < .002$. The mean difference for family impairment was significant according to a one-tailed Satterthwaite t-test; t^* (47.28) = 1.92, $p < .03$.

Schizotypic clients who scored highly on the Intense Ambivalence scale rated themselves as more impaired on all seven of the impairment indices. The mean differences were significant according to one-tailed t-tests for family impairment, t (68) = 2.75, $p < .004$; social impairment, t (72) = 2.43, $p < .009$; sexual impairment, t (58) = 2.69, $p < .005$; employment impairment, t (65) = 2.46,

$p < .009$; and fun impairment, t (73) = 2.94, $p < .002$.

Schizotypic clients who scored highly on the Somatic Symptoms scale rated themselves as more impaired on all seven of the impairment indices. The mean differences were significant according to one-tailed t-tests for social impairment, t (76) = 2.32, $p < .015$; sexual impairment, t (60) = 2.30; $p < .015$; employment impairment, t (66) = 2.10, $p < .02$; school impairment, t (52) = 2.28, $p < .015$; chore impairment, t (75) = 2.56, $p < .007$; and fun impairment, t (77) = 3.22; $p < .001$.

Schizotypic clients ($\bar{X}$ = 0.865) were found to have previously been in therapy significantly more times than control clients ($\bar{X}$ = 0.386) according to a one-tailed Satterthwaite t-test; $t^*(61.01) = 1.67$, $p < .05$. An interesting, though not significant, finding was that control clients expected to be in therapy approximately six months while schizotypic clients scoring highly on one or more scales expected to be in therapy about nine months and schizotypic clients scoring highly on two or more scales expected to be in therapy for almost one year.

None of the groups significantly differed in terms of which family members were in therapy before, whether the clients were brought up by someone other than their biological parents, or whether the clients lived alone.

The therapists of the schizotypic clients did not significantly differ from the therapists of the control clients on their ratings of therapy sessions as frustrated-pleased, open-defensive, distant-close, or optimistic-pessimistic. In addition, there were no significant differences between the schizotypic and control clients on lateness, number of cancellations, number of no shows, changes of appointment time, and premature termination of therapy. These were all expected to be indications of intense ambivalence about being in therapy.

Discussion

The most significant findings were that clients who score highly on the schizotypy scales rate themselves as significantly more impaired in a variety of areas and have been in therapy more often than control clients. These findings are important for the construct validation of the schizotypy scales since they permit a link to psychological dysfunction in a nonexperimental setting. The fact that schizotypic clients report their greater impairment with generally less variability may suggest that individual schizotypic clients are impaired in many areas while control clients are impaired in only one or two. A broad constitutional dysfunction in the schizotypes versus only transitory situational impairment in the control clients might explain this difference.

Besides the schizotypic clients' own perception of their psychological dysfunction as seen on the impairment indices and their expectation to be in therapy longer, they also reported having been in therapy significantly more times than control clients. This finding yields a more objective indication of their dysfunction beyond their own perceptions.

These data did not support the hypotheses that schizotypic clients elicit greater countertransference strain in their therapists and are more ambivalent about being in psychotherapy. It may be that the measures (two brief checklists) or the therapists (clinical graduate students) were not sensitive enough to pick up differences in therapeutic interactions. Although the instructions to the therapists were to rate their clients according to the "clinic norm" on the frustrated-pleased, open-defensive, distant-close and optimistic-pessimistic dimensions, it is possible that the therapists actually made these ratings using

the individual client as the norm. It is quite likely that some of the therapists in training did not have adequate experience to have any idea of what the "clinic norm" was for any of these dimensions. This same lack of experience might also be responsible for a lack of sensitivity in rating these dimensions.

Another problem with the data is that both checklists were not filled out in every necessary instance, and procedures for their completion were not standardized. Missing information might prove crucial in testing hypotheses about countertransference strain and client ambivalence.

More sensitive measures are now being considered to remedy the above limitations in gathering data relevant to our hypotheses. If these data continue to be negative with the use of more sensitive measures, one would have to reconsider Meehl's hypotheses concerning countertransference strain and client ambivalence.

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Slide 1

Three Sources of Data from Clients

Face Sheet Form

Family impairment
Social impairment
Sexual impairment
Employment impairment
School impairment
Chore impairment
Fun impairment

Number of times previously in therap
Expected length of therapy
Who in family previously in therapy?
Raised by biological parents?
Does client live alone?

Session Checklist

Date/Time of session
Punctuality of client
Client open or defensive?
Feel close or distant to the client?
Feel optimistic or pessimistic for client's prognosis?
Feel frustrated or pleased with the session?

Special Action Checklist

When did the client terminate therapy?
When did the client cancel a session?
When did the client change an appointment time?
When did the client not show for a session?

Slide 2

Ratings on the Impairment Index
for Schizotypic Clients Scoring Highly on at
Least One or Two Scales and Control Clients

Impairment Index	Schizotypic Clients High on at Least One Scale			Schizotypic Clients High on at Least Two Scales			Control Clients		
	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.
Family impairment	49	2.86	0.842	23	2.96	0.706	49	2.51	1.102
Social impairment	51	3.24	0.929	26	3.27	0.962	51	2.69	1.068
Sexual impairment	39	3.05	0.972	21	3.14	0.964	41	2.32	1.234
Employment impairment	41	2.71	1.167	22	2.64	1.177	46	2.11	1.197
School impairment	31	3.03	1.140	17	3.24	1.033	38	2.68	1.141
Chore impairment	47	2.62	1.054	23	2.83	1.072	52	2.15	0.998
Fun impairment	51	3.24	0.929	26	3.19	0.981	52	2.46	1.075

Slide 3

Ratings on the Impairment Index for Schizotypic Clients Scoring Highly on the Separate Schizotypy Scales and Control Clients

Impairment Index	Clients High on Physical Anhedonia		Clients High on Perceptual Aberration		Clients High on Intense Ambivalence		Clients High on Somatic Symptoms		Control Clients	
	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$	N	$\bar{X}$
Family impairment	17	2.71	17	2.94	21	3.24	24	2.75	49	2.51
Social impairment	17	2.94	18	3.56	23	3.30	27	3.26	51	2.69
Sexual impairment	11	3.09	15	3.07	19	3.16	21	3.05	41	2.32
Employment impairment	15	2.27	12	2.83	21	2.86	22	2.77	46	2.11
School impairment	10	2.60	12	3.58	14	2.86	16	3.44	38	2.61
Chore impairment	15	2.40	17	3.00	20	2.50	25	2.80	52	2.13
Fun impairment	17	3.18	18	3.33	23	3.22	27	3.26	52	2.44