# Personality in Panic Disorder With Agoraphobia: A Rorschach Study

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In this study, we tested several hypotheses derived from self psychology (Diamond, 1987) regarding personality features of patients suffering from panic disorder and agoraphobia (PDA). PDA patients are thought to suffer from a deficit in negative affect-regulating capacity, surrounded by defenses such as avoidance, repression, denial, and reaction formation against dependency needs. These defenses are thought to lead to a greatly impoverished affective life. The Rorschach Comprehensive System was used to assess the personality features of avoidance, restricted affective life, and reaction formation against dependency needs. We found evidence for the presence of a highly avoidant information-processing style (86% of protocols had lambda [L] > .99) and a constricted affective life (low weighted sum color [WSumC] and low affective ratio [Afr]). Our results were consistent with the hypothesis of reaction formation against dependency needs (low food content [Fd]). Findings are discussed in light of studies that found a high incidence of avoidant personality disorder in PDA patients.

The etiology of panic disorder and agoraphobia (PDA) is a subject of debate among scholars of varying theoretical orientations. Some authors have postulated that physiological imbalances such as disturbances in noradrenergic and serotonergic neuronal systems underlie the development of PDA (e.g., Charney & Heninger, 1985; Sheehan, Zak, Miller, & Fanous, 1988). However, studies investigating biological hypotheses are cross-sectional and can therefore offer no conclusive evidence on the causal role of biological imbalances in the disorder. Early learning theorists have tried to explain PDA in terms of classical and operant conditioning (Mowrer, 1960; Wolpe, 1958). However, conditioning

theory is unable to account for several aspects of the disorder, such as the lack of a traumatic-conditioning event prior to the onset of the phobia and the phenomenon of nonequivalence of associability of phobias to stimuli (Marks, 1977; Rachman, 1978; Seligman, 1970, 1971). Later, behavioral theorists, notably Goldstein and Chambless (1978), incorporated personality and interpersonal factors, such as self-sufficiency, nonassertiveness, and fear of fear, in their etiological model of agoraphobia. Contemporary behavioral scholars place greater emphasis on the premorbid personality (e.g., Barlow, 1988).

Psychodynamic formulations emphasized the role of early childhood experiences. Freud entertained two anxiety theories. His first theory, generally known as the *toxic theory*, is based on the belief that anxiety is the result of repressed or nondischarged libido (Freud, 1895/1973b). In 1926, Freud formulated his second or *signal theory* of anxiety, postulating that anxiety is triggered when threatening unconscious impulses strive toward consciousness. The adaptive function of signal anxiety is the mobilization of defenses. Freud wrote that signal anxiety has its roots in the fear of object loss, fear of castration or other bodily injury, and superego anxiety (Freud, 1926/1973a; for a concise review, see Zerbe, 1990). Agoraphobia was seen as a defense against these fears.

Psychodynamic object relations theorists have emphasized the role of real life experience with unavailable or unresponsive caretakers (Bowlby, 1973; Diamond, 1987; Frances & Dunn, 1975; Kohut, 1971, 1977). Kohut's (1971) self psychology points to the role of the caregiver-referred to by Kohut as the self-object-as a regulating agency of the child's affect. When the caregiver mirrors and merges well with the child's affect a firm and cohesive self-structure capable of regulating negative affect, including anxiety, is the result (Kohut, 1971). Diamond (1985, 1987) applied Kohut's theory of the self-object to states of self-fragmentation such as panic attacks. He postulated that "a developmental flaw in anxiety-regulatory capacity due to self-object failures in these [mirroring and merging functions is the primary disorder in this syndrome" (Diamond. 1987, p. 80). Self psychology hypothesizes that such a deficit in affect-regulating ability gives rise to the development of an elaborate system of defense mechanisms. The developmental flaw will predispose an individual to self-fragmentation in later life when, under particular stresses, a failure will occur in the structures that compensate for it. According to Diamond's (1987) view, panic is the experience of self-fragmentation, and agoraphobia is a defense against further self-fragmentation.

The role attributed to stable personality factors in the etiology of agoraphobia is different for the three theoretical orientations. Investigators writing from a biological orientation do not mention personality factors. Learning theorists have given increasingly more attention to them. For psychodynamic theorists, personality characteristics form the core in their formulations of agoraphobia. Our hypothesis is that stable personality factors are important in the development of agoraphobia.

Psychological assessment of personality factors in agoraphobia has relied extensively on the use of self-report questionnaires. For example, Arrindell and Emmelkamp (1987) found that agoraphobics scored higher on measures of interpersonal problems, seclusion, and intropunitiveness than normal controls and nonphobic psychiatric controls. Reich, Noyes, Hirschfeld, Coryell, and O'Gorman (1987) found less emotional strength and greater interpersonal dependency in recovered panic disorder patients than in normal controls. Van Zuuren (1987) found agoraphobic women, but not agoraphobic men, to be field dependent, low on self-sufficiency, high on rigidity, and somewhat high on neuroticism, femininity, and defensiveness.

In this study, we make use of a nonself-report method for the assessment of personality factors in agoraphobia patients. We used the procedures of the Comprehensive System developed by Exner (1986, 1990, 1991) for the Rorschach Inkblot Test. The Rorschach offers unique insight into a diversity of psychological features of a subject (Exner, 1986). Our choice of the Comprehensive System was determined by the fact that this system has a large empirical base with established reliability and validity. Although the Comprehensive System is not psychodynamically based, its variables can be used in personality studies in which hypotheses have been derived from psychodynamic considerations.

### HYPOTHESES

This study takes as its starting point the assertion that patients with PDA suffer from a developmental deficit in negative affect-regulating capacity, surrounded by an elaborate constellation of defenses (Diamond, 1987). These defenses are avoidance, repression, denial of negative affect, and reaction formation against dependency needs, which lead to extensive constriction and rigidity of the agoraphobic's affective life (Diamond, 1987). The Rorschach provides a method of assessing the presence and extent of some of these personality features.

Constriction of affective life is reflected in the Rorschach variables weighted sum color (WSumC) and the affective ratio (Afr). WSumC provides an estimate of a subject's resourceful affective activity. Nonpatient protocols show an average mean WSumC of 4.5. This mean is lower for patient samples, in which depressive, schizophrenic, and personality disorder patients show decreasing values (Exner, 1990). Because personality disorder patients show the kind of defenses supposedly characteristic of PDA patients, we expect the mean WSumC for PDA patients to resemble that of personality disorder patients.

The Afr is related to one's receptivity to affective stimuli. An Afr lower than .50 is seen as indicative of defensive avoidance of emotional stimuli. Reported means for patient groups are in the vicinity of .50 and are significantly lower than the mean for nonpatients (see Table 1). We expect the mean Afr for the

panic disorder patients to be lower than the nonpatient mean and, because there is little difference among patient groups, close to the mean value of the other patient groups.

Avoidance of complexity is reflected in the Rorschach variable Lambda (L), the ratio of responses based solely on pure form (F) to all other responses. L's greater than .99 are considered indicative of an information-processing style in which the subject exhibits little effort in analyzing subtleties of the stimulus environment. It can be regarded as a style in which cognitive involvement with the environment is greatly reduced. Protocols with increased L will almost necessarily show decreases in determinants other than F, such as movement and color determinants. On the basis of the understanding that PDA patients are characterized by the defense (or style) of avoidance, we hypothesized that the incidence of the so-called high L style (i.e., L > .99) is high in panic disorder patients. Because personality disorder patients exhibit a greater frequency of high L than other patient groups and because we believed that PDA patients most nearly resemble personality disorder patients, we further expected PDA patients to show an L frequency greater than of L > .99, which is more than other patient groups, except personality disorder patient groups.

We know of no variable in the Comprehensive System that directly assesses reaction formation against dependency needs. However, if reaction formation is operating against dependency needs, a lower frequency of dependency need signs on the Rorschach could be expected. In the Comprehensive System, the food (Fd) response is regarded as a signal of dependency needs and has a frequency of occurrence of approximately 20% in nonpatients as well as in most patient groups (see Table 2). A finding of fewer Fd responses in PDA patients' protocols might therefore be expected.

#### **METHOD**

# Subjects

This study made use of Rorschach protocols administered to 22 randomly selected cases in a research project on the relationship between PDA and hyperventilation syndrome involving 176 patients (de Ruiter, Garssen, Rijken, & Kraaimaat, 1989; de Ruiter, Rijken, Garssen, & Kraaimaat, 1989). Inclusion in the project was based on an initial clinical diagnosis made independently by referring psychiatrists. The Anxiety Disorders Interview Schedule (ADIS; DiNardo, O'Brien, Barlow, Waddell, & Blanchard, 1983; for Dutch version, see de Ruiter, 1989) was administered to all patients. This instrument is a semistructured interview schedule for differential diagnosis among anxiety and affective disorders. It has an interrater reliability kappa of .60 for panic disorder and .65 for panic disorder with agoraphobia (de Ruiter, Rijken, Garssen, van

Schaik, & Kraaimaat, 1989). According to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev. [DSM–III–R]; American Psychiatric Association, 1987), the final diagnosis was based on the ADIS. Diagnoses were assigned to the 27 patients to whom the Rorschach was administered as follows: 18 PDA and 4 panic disorder without agoraphobia (these 22 cases comprise the sample), 3 generalized anxiety disorder, 1 major depression, and 1 adjustment disorder.

Mean age of the sample was 32.5 years (SD = 6.9; range = 24-50). Fourteen of the 22 patients (64%) were women. Nineteen patients were either married or living with a partner, 2 patients were single, and 1 patient's marital status was unknown. The Dutch educational system is stratified, and level of intelligence is generally well represented by the level of education a person attains. Four patients had received only primary education, 7 middle level high school, 8 higher level high school, 2 highest level high school (preparatory to university), and 1 a university education. When these five levels of education are given scores from 1 to 5, the mean educational level of the sample was 2.5, which is equivalent to an American high school education. The demographic composition of this sample is nearly identical to that of the larger patient group from which they were drawn.

## Procedure

Patients were seen on three separate occasions. The ADIS was administered in the first session. The patients completed a number of personality and other self-report questionnaires in the second session. The Rorschach was administered in the third session in accordance with the procedures described in A Rorschach Workbook for the Comprehensive System (Exner, 1985). All assessment was conducted by Corine de Ruiter (the first author) and/or by assisting graduate students in clinical psychology (the Rorschach was administered only by those who had received training in the Comprehensive System).

All Rorschach protocols were scored by Corine de Ruiter (the first author) and independently by Leo Cohen (the second author), who was blind to the diagnosis obtained from the ADIS. Both scorers were trained in the Comprehensive System.

In compliance with the new editorial requirements (Weiner, 1991), interrater agreement was determined for the variables reported in the study: F (on which L is based); form-color (FC), color-form (CF), and pure color (C, on which the WSumC is based); and the Fd content response. (Interrater agreement for the Afr is not applicable.) Separate scoring data could be retrieved for 17 of the 22 protocols for a total of 328 responses. For the color determinants, interrater

<sup>&</sup>lt;sup>1</sup>To fulfill the requirement of a minimum of 20 protocols, we compared scores for an additional 5 protocols representing the last protocols commonly scored in a current research including a total of 110 responses (Cohen, de Ruiter, & Cohen-Kettenis, 1992). The color determinant agreement was 94.5%, the F determinant agreement was 92.7%, and the Fd agreement was 100%.

agreement was 95.1%. Of the 16 disagreements, 2 involved differences between CF and FC, 5 involved differences between CF and C, and 9 involved a color versus a no-color rating. For the F determinant, interrater agreement was 93.3%. The one Fd found in this study was a fried fish, with which only one of the coders was acquainted, and was initially scored by only one of us. We agreed that all other responses did not contain an Fd response.

Differences in scoring were resolved in conference, which resulted in a consensus scoring.

# Data Analysis

Exner (1990) published data for American nonpatients, inpatient depressives, outpatient personality disorders, and inpatient schizophrenics. Detailed demographic information and other characteristics concerning these samples can be found in Exner (1986, 1990). We note that, in view of our hypotheses, the personality disordered group was composed of 180 patients with diagnoses from five personality disorder categories (antisocial, schizoid, avoidant, dependent, and passive-aggressive), based on the Diagnostic and Statistical Manual of Mental Disorders (3rd ed. [DSM-III], American Psychiatric Association, 1980). Despite the fact that Rorschach data have been found to be cross-culturally consistent (Exner, 1986 [for number of responses (R) and populars]; Exner, personal communication, June 29, 1989), we included a Dutch group for further comparison. This group consisted of patients suffering from sleep disorders who were referred to a university hospital (Cohen, 1990).

For normally distributed variables (i.e., WSumC and Afr), one-way analyses of variance (ANOVAs) with Scheffé comparisons (p=.05) were conducted. L and Fd, which are not normally distributed, were dichotomized on the basis of available research findings (Exner, 1990). Protocols with L greater than .99 were considered high L protocols (indicative of a pervasive style of cognitive avoidance of complexity); protocols with L less than or equal to .99 were considered low L protocols. A protocol containing one or more Fd responses was classified as Fd positive. Protocols without Fd responses were classified as Fd negative. A 2  $\times$  6 (Categories  $\times$  Groups) contingency table was analyzed for each of these two dichotomized variables using the chi-square test of independence or Fisher's exact test.

## **RESULTS**

Table 1 presents means and standard deviations for PDA patients and comparison groups for WSumC and Afr. Ordinarily Rorschach findings for an experimental group should be examined in relation to findings from comparison groups examined as part of the particular study, rather than in relation to published normative data on large, heterogeneous samples. Nevertheless, the dramatic differences between the panic disorder group, on the one hand, and

TABLE 1
Means and Standard Deviations for WSumC and Afr for Panic Disorder Patients and
Comparison Samples

Group	Source	n	М	SD
WSumC				
Panic disorder	This study	22	1.55	1.65
Personality disorder	Exner (1990)	180	2.06	1.91
Schizophrenia	Exner (1990)	320	2.63	2.23
Sleep disorder	Cohen (1990)	42	2.17	2.14
Depression	Exner (1990)	315	3.45	2.15
Nonpatient	Exner (1990)	700	4.52	1.79
Afr				
Panic disorder	This study	22	.51	.20
Personality disorder	Exner (1990)	180	.49	.19
Schizophrenia	Exner (1990)	320	.52	.20
Sleep disorder	Cohen (1990)	42	.52	.19
Depression	Exner (1990)	315	.47	.16
Nonpatient	Jonpatient Exner (1990)		.69	.16

both another group we examined (the sleep disorder group) and the large normative comparison groups, on the other hand, seemed of sufficient interest to warrant listing all six groups in the table. A one-way ANOVA shows that there are significant differences among the means of the six groups, F(5, 1573) = 75.6, p < .001. As can be seen, the panic disorder group exhibits the lowest mean WSumC. The PDA group mean did not differ significantly from the personality disorder mean (Scheffé test F = 1.28, p > .05). The PDA mean WSumC was significantly lower than the mean of the remaining patient comparison groups (M = 2.98; Scheffé test F = 11.9, p < .05) and lower than the nonpatient sample mean (Scheffé test F = 74.4).

The Rorschach was administered prior to the publication of Exner's (1988) article on the validity of protocols with less than 14 responses. Four of our protocols had an R less than 14. The descriptive statistics for the sample, excluding the protocols of these patients, did not depart substantially from the findings for the full sample. (Results are available upon request.)

The mean Afr for all patient groups is very nearly similar (range = .47–.52; SDs = .16-.20). These means are considerably smaller than the mean Afr for the nonpatient sample (.69). A one-way ANOVA shows an overall F(5, 1573) = 100.8. Scheffé F for PDA patients versus nonpatients was 23.0, p < .05, and Scheffé F for PDA versus all other patients was 1.43, p > .05.

Table 2 presents frequencies of protocols with L greater than .99 and Fd responses for the panic and comparison samples. For L greater than .99, the nonpatient group differs significantly from the four patient comparison groups,  $\chi^2(1, N = 1,557) = 263.3$ , p < .01, as well as from the PDA group,  $\chi^2(1, N = 722) = 192.1$ , p < .01. The panic disorder group did not differ significantly

23%

21%

30%

20%

for Panic Disorder Patients and Comparison Samples										
Group	Source	ħ	L > .99		F					
			Frequency	%	Frequency	%				
Panic disorder	This study	22	19	86%	1	5%				
Personality disorder	Exner (1990)	180	122	68%	31	17%				

124

15

93

38

39%

36%

30%

5%

74

9

93

139

320

42

315

700

Exner (1990)

Cohen (1990)

Exner (1990)

Exner (1990)

Schizophrenia

Sleep disorder

Depression

Nonpatient

TABLE 2 guencies and Percentages of Protocols With L. Greater Than 99 and Ed Responses

from the personality disorder group,  $\chi^2(1, N = 202) = 1.41$ , ns, corrected for continuity, but the panic disorder group did differ significantly from the other three patient groups,  $\chi^2(1, N = 699) = 25.1$ , p < .01, whose percentage of L greater than .99 protocols were much nearer to each other.

The frequency of Fd positive protocols in the nonpatient group and in three of the four comparison groups (sleep disorder, personality disorder, and schizophrenia) is all around 20%. The frequency in the depressive sample is significantly greater (30%),  $\chi^2(1, N = 1557) = 7.8, p < .01$ . We observed only one protocol with a Fd response in the 22 protocols of panic disorder patients (5%). This frequency is significantly lower than the frequency among patients and nonpatients from all other groups (Fisher's exact-test, Tocher's modification, p  $< .05).^{2}$ 

# DISCUSSION

The mean Afr for PDA patients was significantly lower than the mean for nonpatients. It resembled means found for other patient groups which are all nearly equal. This finding suggests that as a group panic disorder patients exhibit a lower affective receptivity than nonpatients, as do other patients manifesting psychiatric disorders.

Of all groups, the panic disorder sample showed the highest proportion of

<sup>&</sup>lt;sup>2</sup>Two of our reviewers suggested that comparison with the Exner reference groups may lead to distorted results because Exner's samples are large and heterogeneous. Following their recommendation, we have made separate comparisons involving only the two Dutch samples of panic disorder and sleep disorder patients. With regard to L greater than .99, Fisher's exact test, Tocher's modification showed a significant difference (p < .001), and with regard to Fd greater than 0, a similar finding was obtained (p < .05, one-tailed). Note that even if the American samples are extremely heterogeneous and are not to be used in statistical comparisons, we consider the results striking, particularly the L finding.

Rorschach protocols characterized by a high L style (86%). This percentage was nearest to that of the personality disorder group (68%) and was significantly greater than that of the other patient groups (30%–39%) and of the nonpatient group (5%). A high L is considered to be the outcome of processing only the most obvious features of stimuli. It can be interpreted as a signal of a very low level of engagement with the environment. Almost all the panic patients in our sample exhibited high L. This may serve a defensive function of protecting the postulated fragile self-structure of panic patients (Diamond, 1987).

The panic disorder sample showed the lowest mean WSumC of all groups. This mean did not differ significantly from that of the personality disorder sample but did differ significantly from the mean value for the other patient groups and from the mean for the nonpatient group. Panic disorder patients are characterized by a constriction in resourceful affective life, certainly more so than nonpatients and more than most other patients, except those with personality disorder diagnoses.

L and WSumC are inversely related Rorschach variables. L is the ratio of the number of responses with a pure F determinant to the number of responses with one or more other determinants (e.g., those involving color, movement, or shading). Increases in L generally reflect proportionally less use of determinants other than pure F. When L reaches very high values, such as in most of the protocols in the panic sample, the WSumC is likely to be greatly reduced. In the panic sample, the extremely high incidence of patients considered to have an avoidant style of information processing, suggested by high L, corresponds to the limited resourceful affective functioning they are thought to have, suggested by very low mean WSumCs.

The proportion of protocols with a Fd response in the panic disorder sample (5%) was significantly lower than in the comparison samples (17%–30%). This finding can be seen as suggesting less expression of dependency among panic disorder patients. The finding is therefore consistent with the hypothesis that panic disorder patients are characterized by reaction formation against dependency needs. However, alternative explanations that make use of other defense mechanisms such as denial, repression, and sublimation may also account for the results.

In summary, our findings are consistent with a number of expectations derived from psychodynamic considerations concerning panic disorder and panic disorder patients. Diamond (1987) suggested that panic disorder patients show, among several other characteristics, extensive constriction and rigidity of affective life as well as defenses of avoidance and reaction formation against dependency needs. In Diamond's (1987) formulation, these characteristics are related to a developmental deficit in the capacity to regulate negative affect.

Keeping in mind that the size of our sample was modest and that caution should be exercised in generalizing, we interpret our findings as supporting the idea that panic disorder patients manifest a number of common enduring personality features. It could be argued, however, that the characteristics noted in our patients are expressions or symptoms of the psychiatric disturbance from which they are suffering and that they are therefore not enduring characteristics. The test–retest reliability findings reported by Exner (1986) indirectly support the idea that the personality features are enduring ones. Research using normal patients has shown that L is a stable Rorschach variable, with test–retest reliabilities for adults of .78 for 1 year and .82 for 3 years (Exner, 1986). Note, however, that test–retest reliabilities for L have not been reported for premorbid personality and after onset of the clinical syndrome. Furthermore, the fact that a general avoidant style of information processing does not automatically follow from the symptom profile of these patients buttresses the interpretation that the high Ls found in panic patients reflect enduring personality features.

The theoretical position, which formed the point of departure for the hypotheses of this study, suggests that certain personality features predispose to the development of PDA. Alternatively, the associated personality features could be a consequence of PDA. A correlational study such as ours cannot determine whether the personality features found to be associated with PDA are causally related to PDA. However, our findings are consistent with the theoretical position that stresses the importance of predisposing personality characteristics in panic disorder and is consistent with recent studies documenting the presence of personality disorders in patients with PDA (Alnaes & Torgersen, 1990; Green & Curtis, 1988; Mavissakalian & Hamann, 1986, 1987). The personality disorder that seems most relevant to the findings of our study is avoidant personality disorder. Individuals suffering from this disorder undergo a pervasive pattern of social discomfort and fear of criticism and disapproval. As a consequence, they withdraw from certain social and occupational activities (American Psychiatric Association, 1987). Although the defining features of this disorder are distinctly interpersonal in nature and do not entail the specific quality of cognitive avoidance of the high L style, it is conceivable that a pervasively avoidant cognitive style will decrease involvement with the social environment. We offer the suggestion that the high L style in our panic disorder patients might be related to avoidant personality disorder.

We note that the method of personality assessment may be related to the findings of personality disorder reported in various other studies. In our study, using a cognitive–perceptual task (the Rorschach test), we found an 86% incidence of a particular personality style. In the studies by Alnaes and Torgersen (1990) and Green and Curtis (1988), employing a structured interview for personality disorders, the incidence of personality disorders was 72% and 52%, respectively, with 56% and 20% manifesting avoidant personality disorder, respectively. Mavissakalian and Hamann (1986, 1987) used a self-report method

<sup>&</sup>lt;sup>3</sup>Our panic disorder patients did indeed show a low mean of pure human contents, suggesting a decreased ability to identify with the social environment.

and found a much lower incidence of personality disorders (27% and 45%, respectively). Studies employing three different methods have thus obtained differing frequencies of personality disturbance in PDA patients.

A personality disorder diagnosis has prognostic significance in the treatment of panic disorder (Mavissakalian & Hamann, 1987). In a combined pharmacological and behavioral treatment, 75% of initially low-scoring patients on a personality disorder questionnaire were treatment-responders in comparison to only 25% of high-scoring patients. Personality assessment can thus be relevant for planning treatment, even for psychotherapeutic treatment modalities (e.g., behavior therapy) that have traditionally deemphasized the importance of personality features. In view of our earlier remarks, the assessment method needs to be seriously studied. We recommend research comparing different methods of assessment and their predictive efficacy for the outcome of psychotherapeutic treatment in panic disorder.

## **ACKNOWLEDGMENTS**

Portions of this article were presented at the first European Congress of Psychology, July 3, 1989, in Amsterdam, The Netherlands.

We thank John E. Exner, Jr., Irving B. Weiner, and the two anonymous reviewers of an earlier version of this article for their helpful comments. We also thank Joseph Wiggins for editing the English text.

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Received July 23, 1991 Revised November 25, 1991