

# Original Research Reports

---

## Construct Validity of Rorschach Variables for Alexithymia

---

PIERO PORCELLI, PH.D.

GREGORY J. MEYER, PH.D.

*The construct validity of Rorschach Comprehensive System (CS) variables theoretically linked to alexithymia was evaluated in 92 outpatients with inflammatory bowel disease, 32 of whom were categorized as alexithymic, 15 as indeterminate-alexithymic, and 45 as nonalexithymic, on the basis of Toronto Alexithymia Scale scores. Six sets of Rorschach CS marker variables were selected for analysis: fantasy, affect, adaptive resources, cognition, social adaptation, and projection. Most variables significantly differentiated the three groups. Compared with the other groups, alexithymic subjects were more likely to show an impoverished fantasy life, poorly adapted emotional expression, poor coping resources, concrete and stereotypical thinking, and social conformity with compromised relationships. (Psychosomatics 2002; 43:360–369)*

Received Sept. 17, 2001; revision received Jan. 30, 2002; accepted Feb. 13, 2002. From the Psychosomatic Unit, Istituto di Ricovero e Cura a Carattere Scientifico, Ospedale De Bellis, Castellana Grotte, Italy; and

The TAS-20 is a well-established, empirically validated measure of alexithymia. However, it is completed by the patient and thus is dependent on the patient's ability to accurately recognize and honestly endorse face-valid items. Although the reliability and validity of the TAS-20 have been supported by many research studies, questions have been raised about the possible limitations of using a self-report measure to assess the alexithymia construct.<sup>13,14</sup> Therefore, heteromethod measures of alexithymia features have been advocated.<sup>13,14</sup> A distinct and independent method of measuring alexithymic characteristics would also serve to further the test validity of the TAS-20.

The Rorschach test has been used in prior research to evaluate alexithymia.<sup>2</sup> Studies involving patients with various medical disorders have shown some common alexithymia characteristics, such as constricted thinking, low level of imagination, absence of an inner-oriented cognitive style, poor control of emotional expression, constricted experience, and a repressive coping style.<sup>15</sup> Studies investigating alexithymia in patients with IBD have produced equivocal findings. Taylor et al.<sup>16</sup> found that alexithymic patients with IBD had less control of emotional expression than psychoneurotic comparison subjects. A heterogeneous group of patients with gastrointestinal disorders, including UC, were found to be not significantly different from patients with organic diseases on the so-called "Rorschach phantasy syndrome"<sup>17</sup> developed by Vogt et al.<sup>18</sup> However, Acklin and Alexander<sup>19</sup> found that Rorschach variables assessing psychological characteristics linked to alexithymia differentiated patients with psychosomatic disorders from healthy subjects.

Earlier Rorschach studies investigating alexithymia had methodological shortcomings that limited their interpretation and may explain some of the equivocal findings. First, they used different systems of Rorschach scoring and interpretation, so the possibility of comparing results across studies was weakened. Second, the studies did not provide data on scoring reliability. Third, clinical and comparison groups were not matched for major sociodemographic variables. Fourth, the samples were poorly defined as "psychosomatic" on the basis of the assumption that certain disorders are psychosomatic while others are organic. For instance, the "psychosomatic" gastrointestinal disorder groups often included patients with heterogeneous illnesses, such as peptic ulcer, UC, and irritable bowel syndrome. Fifth, the studies considered alexithymia to be synonymous with psychosomatic disorder rather than directly evaluating alexithymia with a sound assessment instrument. Finally, the comparison groups were often inade-

quate. For example, psychoneurotic patients were considered comparison subjects, although no definition or inclusion criteria for psychoneurosis were provided.

The study reported here was designed to address problems in previous research in several ways. We evaluated the construct validity of the Rorschach variables theoretically linked to alexithymia by using the Rorschach Comprehensive System (CS).<sup>20,21</sup> The CS is the most commonly used scoring system, is based on standard administration rules,<sup>22</sup> has shown good interrater<sup>23,24</sup> and test-retest<sup>20</sup> reliability, has generally good construct validity,<sup>23</sup> and provides data for reference samples of nonpatients and patients to facilitate interpretation.<sup>20</sup> Second, we evaluated scoring reliability in this study. Third, the IBD patients in the study were homogeneous in that they suffered from the same organic disease, but they were not a priori considered to have a psychosomatic condition. Rather, these patients were expected to vary in severity and stability of alexithymia.<sup>12</sup> Finally, alexithymia was assessed by a criterion external to the Rorschach, the TAS-20, which is the most frequently used and validated self-report scale for assessing alexithymia.

---

## METHODS

### Subjects

---

The initial sample was composed of 102 outpatients with IBD who were recruited consecutively from the Scientific Institute of Gastroenterology in Castellana Grotte, Italy. All patients had both endoscopic and histologic diagnoses of IBD. The patients were taking 5-aminosalicylate alone or in combination with steroid treatment, according to their IBD activity status. No patient had undergone surgery. The sample was homogeneous for disease, geographical area, and treatment setting. The subjects constituted 91% of a group of 112 patients previously included in an evaluation of the prevalence and stability of alexithymia.<sup>11,12</sup>

### Procedure

---

At baseline, the patients were administered the Italian translation of the TAS-20<sup>25</sup> and the Rorschach according to CS administration rules.<sup>20</sup> The Italian version of the TAS-20 has been cross-validated in a large sample of normal and clinical subjects recruited for a multicenter study



quency of developmental quality plus responses (DQ+) to assess perceptual integration, the presence of perseveration (PSV>0) to assess stereotypic ideation, anatomical and radiographic contents (An + Xy) to assess physical concerns, single animal contents (Pure A) to assess simplistic thinking, the number of content categories used at least once (Cont) to assess breadth of ideation, and the ratio of active-to-passive movements (a:p) to assess ideational flexibility (balanced a:p) or rigidity (imbalanced a:p). In subjects with alexithymia, Blends, Zf, DQ+, and Cont were expected to be low; Pure F%, PSV>0, An + Xy, and Pure A to be high; and a:p to be imbalanced. We also determined response engagement (R-Engagement), an empirically derived score evaluating the subject's engagement with the cognitive-perceptual demands of the Rorschach task and his or her ability to articulate perceptions and their determinants.<sup>30,31</sup> Lower scores indicate a more concrete and simplistic level of cognitive articulation, whereas higher scores indicate a more integrated and complex level of cognitive articulation. Alexithymic subjects were expected to have lower R-Engagement scores than nonalexithymic subjects. These hypotheses are consistent with poor psychological complexity and an externally oriented, concrete cognitive style, which are part of the alexithymia construct.

For social adaptation, popular responses (Pop) were used to assess social conventionality, whole human contents (Pure H) to assess interpersonal interest and empathy, the Coping Deficit Index (CDI) to assess social competence, the absence of texture determinants (SumT=0) to assess superficial interpersonal relationships, and contents involving human movement with ordinary or unusual form oriented,



Social adaptation	Popular responses	Social conventionality	34.1 ± 11.8	25.4 ± 9.5	33.80	<0.001	A > C, A > B	0.66
Pop (%)	Human contents	Interpersonal interest	5.4 ± 5.4	5.6 ± 5.9	0.31			0.08
Pure H (%)		and empathy						
			46.9 ± 13.3					
			4.6 ± 5.4					



concrete and simplistic thinking styles, narrowing of the perceptual field, a coping style marked by the avoidance of complexity, restricted and stereotypical ideation, and a limited ability to integrate different aspects of the stimulus field into a meaningful frame.

Social adaptation marker variables provided further data consistent with the theoretical construct of alexithymia. Two facets of social adaptation were revealed in the Rorschach: a conformist adaptation to the social environment and unempathic interpersonal relationships, as evidenced by large effect sizes found for the proportion of Pop ( $r = 0.66$ ) and SumT=0 protocols ( $r = 0.63$ ). Popular responses (Pop) are those that occur with very high frequency (in 35% to 90% of the 7,500 protocols that were used in the development of CS scoring principles<sup>41</sup>). Data on clinical and nonclinical samples strongly indicate that Pop is a highly stable variable, is not significantly affected by cross-cultural differences, is significantly more prevalent in community and nonclinical samples and less prevalent in psychotic patients, and is related to the subject's capacity to share the common conventional values of his or her social environment.<sup>21</sup> Protocols containing no texture determinants (SumT=0) have been demonstrated to occur with high frequency in foster-home children with a history of long-term institutionalization, patients with psychosomatic disorders, and subjects in social psychology experiments, suggesting avoidance of involvement in close interpersonal relationships.<sup>20</sup> Conformity is a well-described clinical feature of alexithymia<sup>1</sup> that is also observed in other clinical descriptions of psychosomatic patients.<sup>42,43</sup> It is important to note that the TAS-20 does not include any item related to social conformity. The Rorschach social adaptation marker variables were able to identify this characteristic, even though it was not included in the measure used to identify the three subject groups.

The analyses also showed two surprising results. First, contrary to expectations, significantly fewer alexithymic subjects had protocols with an imbalanced a:p ratio (ratio of active to passive movements). It may be that the rigidity in thinking assessed by this Rorschach variable is somewhat different from the cognitive style of alexithymic subjects. Also, "active-passive" is a qualification of movement responses, which were significantly less frequent in the alexithymic group than in the other subject groups. Therefore, it may be that the different base rate for movement in the three groups affected the a:p comparison across groups. Alternatively, our initial hypothesis of a higher frequency of an imbalanced a:p ratio in alexithymic subjects might have been flawed by an overly broad conceptualization.

For instance, the a:p ratio may evaluate how rigid or flexible the individual internal representations are, while the concrete thinking style of alexithymic subjects may involve greater attention to external reality than to inner thoughts and experiences. The other surprising result was the very strong effect size observed for several of the Rorschach variables. Because some of these associations were unexpectedly high, particularly in a study examining the relationship between the Rorschach and a self-report scale, replication studies are needed.

Overall, our results shed some light on the problem of defining the core features of alexithymia. They suggest that cognitive (i.e., lack of cognitive complexity), interpersonal (i.e., social conformity), and coping (i.e., low adaptive resources) features may be more central to the alexithymia construct than emotional features, which seem to be more peripheral. Further studies involving patients with other illnesses could help determine whether the TAS-20 is biased toward measuring the cognitive rather than emotional characteristics of alexithymia or whether the Rorschach is simply less able to detect the emotional characteristics of alexithymia.

Two problems limit the generalization of our findings. First, the study subjects were patients with a severe, partially disabling, and chronic inflammatory disease. Although IBD patients have been shown to have stable alexithymia Scores,<sup>12</sup> suggesting a personality trait, the subjects had a long history of disease, so that the Rorschach findings may be related to other dimensions of psychological adaptation to disease and health-related quality of life. Further investigations involving alexithymic and nonalexithymic patients with other medical and psychiatric illnesses are needed. Second, one of the methodological strengths of this study—the use of an external, well-validated measure of alexithymia for sample selection—may reveal a weakness from a clinical viewpoint. Our study was designed to examine construct validity, and stringent criteria—consistency of TAS-20 scores across two administrations over a 6-month period—were used to define subjects. This procedure led to a high level of internal validity and improved our ability to detect true differences, if they existed, between the alexithymic, indeterminate-alexithymic, and nonalexithymic groups. Nonetheless, the clinical validity of this study is reduced by the fact that clinicians rarely meet patients with such definitive and stable alexithymia traits in everyday clinical practice. Therefore, our subjects may not be representative of clinical experience. Further studies involving individuals with less extreme levels of alexithymia and with other disorders are



## Rorschach Variables

needed. Such studies should also control for other factors such as depression.

In conclusion, our study showed that a pool of Rorschach CS variables selected to be theoretically consistent with the alexithymia construct can differentiate subjects with and without established alexithymia characteristics.

38. Schmidt U, Jiwany A, Treasure J: A controlled study of alexithymia in eating disorders. *Compr Psychiatry* 1993; 34:54–58
39. Martin JB, Pihl RO: The stress-alexithymia hypothesis: theoretical and empirical considerations. *Psychother Psychosom* 1985; 43:169–176