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Assessment of Emotionally Disturbed Adolescents Using the Rorschach: an Analysis of the Ea/es Relationship

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ASSESSMENT OF EMOTIONALLY DISTURBED ADOLESCENTS USING THE RORSCHACH: AN ANALYSIS OF THE EA/ES RELATIONSHIP

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ABSTRACT

There is a long history of debate regarding the validity of the Rorschach Inkblot test. Much of the previous research has involved adult subjects within clinical settings. This study investigates the validity of the Rorschach with adolescents classified as being emotionally disturbed according to the educational definition. School personnel and, particularly, school psychologists have the difficult task of identifying individuals who are emotionally disturbed (ED). It appears that a valid measure of covert processes may be helpful in making these determinations. Due to the vast number of scores and codes generated from the Rorschach using Exner's (1978) Comprehensive Scoring System, this study is limited to analysis of the Experience Actual (EA), experience stimulus (es) and codes that comprise them.

Forty-nine adolescents classified as ED were used for the experimental sample. Sample data were compared to normative data published in Exner's workbook (Exner, 1990). The findings show ED adolescents have lower EA and es scores than non-ED individuals. Nearly two thirds of the ED sample had EA scores that were lower than their es scores. Results support that interpretation of the EA and es provides

information regarding emotional functioning. Analysis of the codes that comprise the EA and es, perhaps, raised more questions than found answers. However, there was evidence that achromatic and shading responses are associated with emotional disturbance.

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Chapter 1

INTRODUCTION

Controversy has surrounded Rorschach's inkblot test following its publication in 1921. This problem-solving technique assesses personality and psychopathology by analyzing and interpreting an individual's responses to inkblots (Exner, 1974). Much of the controversy centers on the interpretative validity of the Rorschach. Although there have been periods during the past sixty years when the Rorschach's popularity has faded, there has been a resurgence of interest within the past decade (Kleiger, 1992).

Increased interest in the Rorschach may be due to more recent empirical support. Much of this support appears to be related to the development of scoring systems and, perhaps, the most widely used is Exner's Comprehensive System (Exner, 1974). The Comprehensive Scoring System is similar to other scoring systems in that responses are coded

and then entered into a scoring summary for interpretation. Exner has compiled normative data for his scoring system that allows comparison of individuals to group data and, in turn, aids in assessing the validity of this instrument. Much of the earlier work with the Rorschach had an emphasis on adult populations; however, Exner also provided normative data for children and adolescents (Exner, 1978).

Exner published updated child and adolescent norms during the 1980's and his revised Rorschach workbook (1990) contains the most updated and expanded norms. In addition, recent research has focused more on adolescent and child populations. While many of the study samples are composed of inpatient and outpatient children and adolescents, emotionally disturbed (ED) adolescents in the public schools have received little attention.

Knoff (1986) has delineated the difficulties in classifying students as ED within the educational system. In addition to definitional shortcomings, there is a need for refined assessment tools that aid in this determination. Projective techniques are commonly used by school psychologists, including the Rorschach (Prout, 1983). Although school psychologists currently use the Rorschach, some authors state that this technique is not as useful in

the public schools as in other settings (Koppitz, 1982). The complexity of Exner's coding system appears to be the basis of this assertion.

The Comprehensive Scoring System is multifarious and scoring is time consuming. Furthermore, some have challenged the validity offered by various proponents of the Rorschach test. Two particular scores that are central to Rorschach interpretation and that have received attention in past and current literature are the Experience Actual (EA) and Experience Stimulation (es). The EA/es relationship has been useful in diagnostic and treatment outcome research of adults (Exner, Wylie, and Kline, 1977); however, with adolescents the research results have been equivocal. In addition, some authors have questioned the validity of the factors that constitute the EA and es.

Due to the difficulty of identifying ED students and the perceived limitations of the Rorschach, additional research is needed to determine the utility of the Rorschach in the assessment of ED adolescents. Of particular interest is the role the EA/es relationship can play in this process. Evaluation of the EA/es relationship of ED students may help answer questions regarding the validity of the Rorschach as

an assessment tool for identifying psychopathology in adolescent populations.

BACKGROUND OF THE PROBLEM

In 1947, Louttit and Browne (1947) found the Rorschach to be the fourth most frequently used test by clinicians. By 1955, publication of Rorschach articles exceeded 3000 (Exner, 1974). By 1959 it had become the most widely used assessment technique in clinical practice (Sundberg, 1961). However, during the 1960's and into the 70's clinical training programs placed less emphasis on the Rorschach (Biederman and Cerbus, 1971). Within the last decade there has been a resurgence of interest in the Rorschach and, perhaps, this is in part due to Exner's scoring system (Kleiger, 1992).

Although interest in the Rorschach is most apparent in clinical settings, there are psychologists working in the schools who have shown interest in this assessment tool. Prout (1983) found that nearly sixty percent of school psychologists have used the Rorschach in the schools and of this sixty percent, nearly twenty-nine percent use it frequently. However, how school psychologists use the Rorschach has received little attention in the literature.

The question of utility of the Rorschach is of particular importance within educational settings.

Worchel (1990) states, "Of all the personality tests used to assess children and adolescents, the Rorschach is probably the most controversial." Koppitz (1982) remarks that the Rorschach is not a useful tool in the schools due to the time and effort involved. Worchel (1990) comments that the legitimacy of such a time-intensive test should be judged on the information gathered and should not be rejected because of its length. In addition, some reluctance to use the Rorschach may be due to less emphasis placed on the Rorschach in training programs (Prout, 1983). With limited Rorschach training, school psychologists may lack confidence in using it and, therefore, use it sparingly.

The complexity of the Rorschach scoring system is a related factor that appears to have deterred use in the schools and hindered research. Exner's (1974) Comprehensive Scoring System involves a process of scoring subject responses according to five categories: location, determinants, content, popularity, and organizational activity. Although interpretation of Rorschach responses

also involves analysis of sequence and verbalizations, they are not included in the structural summary.

Scores derived from the subject's responses are coded for each of the five categories. Each category consists of a multitude of possible scores and each with its own code. After responses are scored according to the coding system they are entered into the structural summary. The structural summary consists of over 150 frequencies, ratios, and percentages of the coded scores. The configuration of scores on the structural summary is fundamental to Rorschach interpretation.

The vast number of scores included in the structural summary and the various meanings attached to scores are evidence of the complexity of Rorschach interpretation. Due to the complexity of the Rorschach, a considerable amount of research has been conducted and more is needed to better understand the utility of this assessment technique. In addition, there has been an ongoing controversy as to the validity of interpretation of various scores. This study confined its scope to analysis of determinants and primarily two scores composed of determinants--the Experience Actual (EA) and experience stimulus (es).

Exner (1974) alleges that the EA is an index of resources available to the individual while the es is a measure of inner-conflict. Thus, an individual with a higher EA than es is considered to be better able to cope with stress they are experiencing than the individual with a lower EA than es. Some studies have found support for the view that the EA/es relationship is an indicator of psychopathology; however, most of these studies have been with adult subjects. Adolescent research is sparse and often reports equivocal results.

The difficulty of assessing adolescents with emotional disturbance is in part due to lack of agreement on what constitutes emotional disturbance. Garber (1984) asserts that no single classification scheme for child psychopathology has been accepted nationally as reliable and valid. Different classification systems have resulted in varying percentages (DSM-III 82%, CBCL 66%, and P.L. 94-142 53% of the same sample of referred boys suspected of having behavioral/emotional problems) of children and adolescents classified as emotionally disturbed (Tharinger, Laurent, and Best, 1986). Since the purpose of this study is to gain understanding of assessment within the schools, the

educational definition of emotional disturbance will be discussed further.

Educational Definition of ED

With the enactment of Public Law 94-142, special educators and particularly school psychologists have had the obligation of determining individuals who are emotionally disturbed. One of the difficulties in determining whether an individual has an emotional handicap is that special educators have to confine the continuum of emotional disturbance into a dichotomous decision. Another difficulty is that the term emotional disturbance is ambiguous (Knoff, 1986).

The psychoeducational model emphasizes that disturbed behavior is caused by the interaction between conflicts within and external to the individual, including the individual's educational progress (Fagen, 1979; Long, Morse, and Newman, 1980). While this model emphasizes that the child's thoughts and feelings are vital in assessing emotional disturbance (Knoff, 1986), assessment of these covert processes is difficult.

Although the federal definition of children and adolescents who are emotionally disturbed integrates observable behavior and covert experience ("inappropriate

types of behavior or feelings under normal circumstances" and "a general pervasive mood of unhappiness or depression", Federal Register, 1977; Federal Register, 1992), operational definitions are left to states and districts to formulate. Terms such as "to a marked extent" and "over a long period of time" also make classification decisions difficult.

"Some psychologists value the definition's ambiguity because it allows them to make their own informed interpretations, but others find that the lack of delineated guidelines leaves them ill equipped to determine if a child meets the SED criteria" (Tharinger, Laurent, and Best, 1986). With the difficulty in making ED placement decisions in mind, Prout (1983) reports that school psychologists tend to rely more on behavioral oriented techniques and clinical judgment when making these determinations.

Behavioral Versus Projective Techniques

Although there are a number of sophisticated measures of overt behavior, they still contain error in assessing what the individual may be experiencing within. Typically behavioral assessment relies on observation by someone who is familiar with the individual. Potential weaknesses of behavioral assessment, then, are observer bias or inaccuracies (Knoff, 1986). Also, behavioral methods

generally have developed through factor analysis. The factors used in this analysis are, for the most part, theoretical or subjective (Saal, Downey, and Lahey, 1980). In addition, there may exist overlap of behaviors; for example, "irritability" is cited as being characteristic of depression and post-traumatic stress disorder or "restlessness" is symptomatic of anxiety, Attention-Deficit Hyperactivity Disorder or manic episodes (American Psychiatric Association, 1987). Furthermore, behavior ratings are limited to a finite number of factors or clusters and, in some cases, significant behaviors may go undetected (Krol and De Bruyn, 1990).

On the other hand, some theorists assert that projective techniques provide a more direct assessment of an individual's experience. However, current methods have shortcomings--behavioral methods do not provide adequate assessment of inner-conflict and projective measures may not sufficiently assess overt behavior. Furthermore, there appears to be a negative stigma surrounding subjective assessment (McConaughy, 1985). Thus, diagnosticians need a tool that assesses behavior that is closely linked to the individual's thoughts and feelings and has the empirical validity of many behavioral measures.

STATEMENT OF THE PROBLEM

A valid technique that assesses the inner experience of the adolescent who is emotionally disturbed would be helpful in offsetting the limitations of current assessment practices. Current behavioral measures are able to determine the degree to which an individual's behavior differs from his or her peers (McConaughy, 1990). Behavior scales that provide a mean and standard deviation are useful in establishing cutoffs for making special education eligibility decisions (Achenbach and McConaughy, 1987). However, behavioral measures do not provide an indication of how the individual's inner-experience compares with peers. Projective methods provide an indication of disturbed thinking and affect; however, professional judgment is often used to determine the severity of the disturbance (Armstrong, Silberg, and Parente, 1986).

The Rorschach, with the aide of Exner's scoring system, may aid in overcoming the weaknesses of current assessment practices of emotionally disturbed adolescents. Exner standardized his scoring system making it possible to not only assess cognitive-affective disturbance but to compare individual scores to age norms. Comparing individual Rorschach scores to normative data may result in effective

appraisal of the severity of disturbance. The importance of this supposition warrants empirical analysis. Exner's norms allow comparison of individual scores with group scores, but the meaning of the scores has been the foci of controversy. The validity of Rorschach scores needs further evaluation particularly when used with individuals within educational settings.

Since the Rorschach generates a large number of scores, this study will focus on the EA/es relationship. These scores are central to Rorschach interpretation. Exner (1974) has provided interpretations of the EA and es and the determinants that comprise them. Many of these interpretations have received empirical support; however, no definitive results have been found regarding determinant interpretation.

The EA is the sum of all human movement (M) responses and all color responses: pure Color response (C), Color-Form response (CF) and Form-Color response (FC). According to Exner (1974) M responses (i.e. "it could be a person ... *holding* her hands up," Exner, 1990) are associated with higher forms of conceptualization, imagination, and delay from responding to spontaneous impulses; however, when the form quality of M is poor, this may be indicative of

psychopathology (Phillips and Smith, 1953). Color responses are related to affect, while pure form (F) responses suggest affective delay or control. Thus, pure C responses (i.e., this looks like blood to me, see, it's *red,*" Exner, 1990) would suggest less affective control than would CF responses and FC responses (i.e. "a lung, it's red ... and lungs are formed like that," Exner, 1990) indicating greater affective control.

Exner (1974) explains that the EA represents the composite of resources available to the individual and emphasizes it is *organized* activity or experience that is available. The EA, according to Exner, is a representation of the individual's ability to cope with internal and external stress. Exner (1974) also points out that the EA alone does not provide as much useful information as when analyzed with the es and other scores.

The es is the summation of all animal and inanimate movement responses and all responses referring to the gray-black features of the blots (Exner, 1974). Animal movement (FM) responses represent a more "primitive" processing and are indicative of individuals with more limited impulse control--they seek immediate gratification of their impulses; however, these individuals have some awareness of

their impulses (Exner, 1974; Hertz, 1951). Inanimate movement (m) responses are interpreted as an index of forces or impulses that are beyond the control of the individual (Klopfer, Ainsworth, Klopfer, and Holt, 1954).

Achromatic color, texture, vista, and diffuse shading are determinants scored according to responses involving the black-gray and light-dark features of the blot. Achromatic color (C', C'F, and FC') code is given when the content of an individual's response is derived solely from the blot being white, gray, and black. Achromatic color responses are considered to be an index of depressive feelings (Piotrowski, 1957; Rapaport, Gill, and Schafer, 1946). When Texture (T, TF, and FT) is ascribed to the gray-black features, this suggests a need for affective interpersonal contact (Exner, 1974). Vista (V, VF, and FV) responses are those that attribute dimensionality to the shading features of the blot. According to Beck (1944), Vista responses reflect painful introspective processes. Diffuse shading (Y, YF, and FY) responses occur when the individual refers to the light-dark features of the blot. Diffuse shading responses are associated with psychological helplessness and/or withdrawal which may be accompanied by anxiety (Exner, 1974).

The es reflects the needs and emotions that act on the individual rather than being more psychologically controlled or organized (Exner, 1974). The relationship between the EA and the es provides an indication of the stress affecting the individual and how well he or she is equipped to cope with this stress. Although the EA/es relationship has received empirical support, some have questioned the theoretical premises of the concepts.

Kleiger (1992) argues, at a conceptual level, that the EA/es relationship has inconsistencies. Following his reasoning, if form dominated responses indicate emotional delay, then interpretation of the EA/es relationship is secondary to the analysis of the determinants that comprise the EA and es. For example, an adolescent with lower EA than es, but whose es is comprised of mostly form dominated determinants may be less disturbed than would be expected based on Exner's interpretation. Intuitively Kleiger's argument appears to have merit; however, his points need further analysis.

Although the validity of individual determinants may be questionable, the EA and es may provide valid information regarding coping processes. In addition, the EA/es relationship may prove to be useful in differentiating ED

from non-ED adolescents and it may provide some indication of the severity of their disturbance. The utility of the EA/es relationship needs further study, particularly with adolescents. Further study of the form dominated determinants that comprise the EA and es is imperative.

PURPOSE OF STUDY

In the most general sense, this study sought to help ascertain the validity of the Rorschach as an assessment technique of adolescent psychopathology. More specifically, this study aided in understanding the usefulness of this technique within the educational system, primarily in determining individuals who are emotionally disturbed. Due to the magnitude of a comprehensive analysis of the Rorschach, the focus of this study was confined to the EA/es relationship. These scores are two vital scores in Rorschach interpretation. This study explored the utility of the EA/es relationship in differentiating ED from non-ED adolescents according to the educational definition.

Further analysis of form dominated and movement determinants that make up the EA and es may aid in understanding the EA/es relationship. This analysis sought to validate the interpretation that the use of form is related to emotional delay or control. As will be discussed

in the literature review chapter, human movement responses of poor quality are related to psychopathology. Thus, analysis of not only the numeric values of the EA and es, but the determinants that compose them may provide insight into interpretation of emotionally disturbed adolescents Rorschach scores.

DEFINITION OF TERM

Experience Actual (EA)	An index of resources available to an individual that allows him to cope with stress. It is comprised of human movement and color responses.
Experience Stimulus (es)	An index of inner-conflict or stress affecting an individual. The es consists of animal and inanimate object movement and achromatic and shading responses.
Human Movement (M)	A response that involves a kinesthetic perception of a human, animal or human-like

	figure in human-like activity.
Color (C)	Used for responses that are based exclusively on the achromatic aspects of the inkblot.
Color-Form (CF)	Responses that are based more on the chromatic features than the form of the inkblot.
Form-Color (FC)	Used when responses reflect the percept of form more than hue.
Animal Movement (FM)	A response that involves a kinesthetic perception of an animal or animal-like figure that is congruent with that animal species.
Inanimate Object Movement (m)	Used when an inanimate object is perceived as acting.
Achromatic (C')	Used for responses that are based exclusively on the black, white, or gray features of the blot.

Achromatic-Form (C'F)	Responses that are based primarily on the black, white or gray features with form being secondary.
Form-Achromatic (FC')	Used when responses reflect the percept of form more than the black, white and gray features.
SHADING	
Texture (T)	Responses wherein the individual ascribes texture to the black/gray features of the blot. The response involves no form.
Texture-Form (TF)	Responses that are based more on the perception that the black/gray features represent texture more than the shape of the blot.
Form-Texture (FT)	The shape of the inkblot is the basis of the response with the black/gray features depicting texture.

Vista (V)	Used for responses solely based on the black/gray features of the blot and depicts dimension or depth.
Vista-Form (VF)	When the response is based more on the black/gray features as representing depth and form is secondary.
Form-Vista (FV)	Responses based primarily on the shape of the blot but also involves the black/gray aspects as dimension.
Diffuse Shading (Y)	Used for responses that are based exclusively on the light-dark or shading features of the blot. Individuals often describe responses as "the way it's shaded" or "how the colors run together."
Diffuse-Form (YF)	The response involves shading more than form.

Form-Diffuse (FY)	The response is based more on the lines or shape than the light-dark features.

DELIMITATIONS

1) Due to the magnitude of a comprehensive analysis of Exner's scoring system and interpretation, the study is limited to analysis of the EA/es relationship of adolescents. Thus, the investigation involved only the validity of this relationship and the determinants that comprise the EA and es. The results should not be generalized to other scores contained in the structural summary of Exner's scoring system or to younger children. In addition, conclusions based on the results of this study, regarding the validity of the Rorschach as a whole, are only speculative.

2) Due to the instability of the EA/es relationship of children (Exner, 1982), only adolescents were included as subjects in this study. Therefore, results cannot be generalized to children or adults.

3) This study did not address differences between other sub-populations of adolescents receiving special education services, such as individuals with learning disabilities (LD). Although individuals with learning disabilities have

been found to have more emotional maladjustment than non-LD students (Salyer, Holmstrom, and Noshpitz, 1991), emotional disturbance is not included in the criteria for determining learning disabilities.

4) Conclusions based on the results of this study are confined to adolescents who are classified as ED by the current federal definition (P.L. 101-476) and should not be applied to individuals identified using other classification systems without further investigation.

Chapter 2

LITERATURE REVIEW

DEFINITION OF EMOTIONAL DISTURBANCE

Public Law 94-142, the Education for All Handicapped Children's Act, is based on Bower's (1970) definition of "serious emotional disturbance." P.L. 101-476, the Individuals with Disabilities Education Act (1990), made minor revisions to the original federal definition of emotional disturbance. The revised definition follows:

> (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance: (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms or fears associated with personal or school problems. (ii) The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed. (Federal Register, 1992, p.44802)

Knoff (1986) states that due to political and legislative influences, this federal classification of emotional disturbance lacks clarity which weakens the reliability and validity of this category. As a result of a broad and ambiguous definition state and local interpretation frequently under or over identify individuals as emotionally disturbed. Tallmadge, Gamel, Munson, and Hanley (1985) found a large disparity between states as to the percentage of individuals classified as ED compared to the total handicapped population. They reported that in 1983-84 percentages ranged from 3-29% between states. The national averages of ED children in 1983-1984 were 8.4% of all handicapped children and .92% of the general school population. More recently, Gearheart, Weishahn, and Gearheart (1992) reported that .6% of the total school population was identified as ED.

Although state definitions are based on the federal definition, state interpretation and local definitions vary as well as the term used. States may label ED individuals as "severely emotionally disturbed," "emotionally disturbed," "socially and emotionally disturbed," "serious emotional disturbance," "emotionally handicapped," or "behavior disordered" (McConaughy and Achenbach, 1990). The

label attached has subtle implications as to the local interpretation of emotional disturbance.

The inclusion of externalizing behavior disorders in many state definitions is a point of division among states and emphasizes the need of some states to have a more operational definition (Epstein, Culligan, and Sabatino, 1977). After completing a legal analysis of P.L. 94-142 and the DSM-III diagnostic system, Slenkovich (1983) concluded that Oppositional Defiant Disorder, Conduct Disorder, and Attention Deficit Disorder do not fall under the federal definition of emotionally disturbed. Conversely Mattison, Humphrey, and Kales (1986) found that Attention Deficit Disorder and Conduct Disorder are among the most frequent diagnoses of ED children.

The conflict regarding the definition of emotional disturbance and how to diagnose it seems to revolve around the difficulty of understanding the relationship between behavior, individual variables, and environmental variables (Knoff, 1986). Bandura (1978) reconceptualized Mischel's (1977) formula for understanding personality (behavior). Bandura stated that behavior is not merely the function of the interaction between person and environmental variables, but behavior, person and environment interact and are

dependent on one another. Bandura defines person as the culmination of an individual's thoughts, beliefs, values and perspectives. Thus, a comprehensive classification definition and assessment of ED individuals would incorporate behavioral, person or individual and environmental variables (Knoff, 1986; Worchel, 1990).

ASSESSMENT OF EMOTIONAL DISTURBANCE

Psychologists in the schools report using personality assessment techniques in about half of their cases (Goh, Teslow, and Fuller, 1981; Prout, 1983). Goh et al. (1981) found that personality assessment and assessment using behavior rating scales were ranked fourth and fifth behind intellectual, achievement, and perceptual assessment. The tests or techniques most frequently used to assess personality are (in order): Bender Gestalt Test, sentence completion, human figure and other projective drawings, thematic apperception tests, the Rorschach, and self-concept scales (Goh et al., 1981).

The assumption undergirding projective techniques is that the responses made by an individual to stimuli are a representation of their thoughts and affect (Koppitz, 1983; Howes, 1981; Blatt, 1975; Goldberg, 1965; Exner, 1974). Intuitively, projective techniques have merit as direct

means of assessing an individual's personality and emotional functioning. However, many have questioned the validity of projective tests. Anastasi (1976), Martin (1983), and Lanyon and Goldstein (1982) criticized these techniques as unreliable and invalid due to the inherent subjectivity of their interpretation. Due to the difficulty in finding empirical support for projective techniques, other assessment methods have emerged.

Prout (1983) reports that recent trends show a shift away from traditional personality assessment techniques toward more behavioral oriented methods. Prout added that this shift is occurring simultaneously with the shift in training programs away from the traditional assessment techniques. The most common behavioral assessment techniques include behavioral interviews, observation, and problem checklists and rating scales (Kratochwill and Sheridan, 1990; Prout, 1983).

Worchel (1990) asserts, "the interview should serve as the cornerstone for any comprehensive evaluation." According to Edelbrock and Costello (1988), the interview serves as a flexible medium to clarify misunderstandings; resolve ambiguous responses; record the context, frequency and duration of problem behaviors; and obtain historical

information. Paget (1984) states that structured interviews seem to provide a valid assessment of overall social-emotional functioning. However, some authors question the reliability and validity of interviews. Interviewees may provide inaccurate information and interviewer bias may occur (Sattler, 1990). Nuttall and Ivey (1986) conclude that interviews are less effective in identifying specific personality traits or when discriminating between groups.

Similar to the interview, behavioral observation provides unique information (Knoff, 1986). Although observation techniques provide idiographic data within natural settings, as with interviews, the reliability and validity of observation methods is questionable (Sattler, 1990; Knoff, 1986). The subjectivity involved in assessment using interviews and observations is a potential shortcoming.

Empirically based behavior checklists and rating scales have been developed in order to improve objectivity in assessment (Edelbrock, 1983). Furthermore, Edelbrock (1983) and Anastasi (1976) purport that rating scales provide more reliable and objective data than do interview or projective techniques. Administering and scoring behavior checklists

and rating scales requires less time and expense than many traditional assessment techniques (Knoff, 1986).

McConaughy and Achenbach (1990) assert that empirically based behavioral assessment techniques are particularly useful in identifying individuals who are emotionally disturbed. They state that the norms and clinical cutoffs on the empirically based scales are particularly useful for determining whether problems exist to a marked degree. In addition, they state that intelligence and achievement tests are useful in determining if emotional disturbance is adversely affecting educational performance. They add that social maladjustment may be ruled out using the clinical range of some checklists such as the Delinquent scales of the Child Behavior Checklist (CBCL; Achenbach and Edelbrock, 1983).

Although behavioral checklists and rating scales appear to be valuable assessment tools, they have limitations. McConaughy, Achenbach, and Gent (1988) report, "Assessment of children's behavioral/emotional problems always involves human judgment since there are no objective measures of such problems independent of people's judgments." Potential rater bias, then, is the foremost weakness of checklists and rating scales (Cooper, 1981). Bias may enter through the

halo effect, leniency or severity, and central tendency or range restriction (Saal, Downey, and Lahey, 1980).

Kratochwill and Sheridan (1990) delineate several issues regarding rating scales and checklists. They state that these procedures "represent an indirect dimension of assessment." In addition, item selection is based on criteria generated by the developer. The rationale for inclusion of items may be unclear and based on subjective judgment rather than empirical evidence. Another potential weakness is that items may be ambiguous to the rater and their judgment in rating behaviors may be contrary to the developers.

Due to limitations in current methods of assessing individuals suspected of being emotionally disturbed, Knoff (1986) recommends a pragmatic approach to assessment that utilizes all available techniques. Similarly, Worchel (1990) espouses an integrated approach to personality assessment that incorporates more than a single theoretical model. In addition, Knoff (1986) recommends that researchers devote resources toward gaining a better understanding of existing techniques.

RORSCHACH

In essence the Rorschach is a perceptual-cognitive or problem-solving task that requires an individual to attach meaning to inkblots or portions of inkblots (Exner, 1974; Knoff, 1986). Exner (1983) stated that the response process consists of an interaction between three interrelated variables: "The set of the subject toward the test and the testing situation, the evaluation of the subject regarding which of several perceived responses is most appropriate or correct in light of the set, and the impact of the composite of response tendencies or styles plus the ongoing psychological operations of the subject." Exner further explains that "response styles or tendencies" are manifested through both overt and covert behaviors.

Exner also explains the potential power of the Rorschach. He asserts that judgments based on overt behavior, regardless of their accuracy, do not provide a comprehensive understanding of the person. Exner states that "much richer and more precise information is available if the covert perceptual-cognitive-affective operations of the person can be studied." Exner purports that the Rorschach has the power to tap these processes.

Conversely, some authors have vehemently criticized the Rorschach alleging that it is "a very poor test" with "no practical worth" (Jensen, 1965; Knutson, 1972). Frank (1976) declares, "As a psychometric instrument, the Rorschach is abominable." Koppitz (1982) dismisses it as an inefficient tool within school settings, implying that the time and effort expended in administering, scoring and interpreting the Rorschach out weighs the information obtained. The central issue, then, in deciding whether to use or discard the Rorschach is the validity of the interpretation of scores (Sugarman, 1991).

Much of Rorschach interpretation stems from conclusions based on clinical experience--initially Herman Rorschach's and later others' (Rorschach, 1942; Binder, 1937; Frank, 1976). Frank (1976; 1978; 1993), after a review of the literature regarding several determinants, concluded that determinant interpretation is based more on belief than on fact. Frank also noted that this is not to say the interpretations are incorrect, but that they lack definitive empirical support. He added that methodological and epistemological imperfections may have prevented past research from providing clear results.

Although Vincent and Harman (1991) admit that Exner's Comprehensive System and updated norms allow for more precise analysis of the Rorschach, they point out several limitations of studies based on Exner's system. They state that Exner's constant revisions and additions to his system make it difficult to evaluate the system. According to Vincent and Harman, the sample sizes in many of the studies conducted by Exner and others were too small for the number of variables studied which may result in "spurious random significance." They remarked that the literature lacks cross-validation studies. Their final argument is that, although Exner has demonstrated the usefulness of his system with diagnostic groups, he has not shown the power of his system within the non-research situation--when N=1.

Vincent and Harman (1991) conducted a study in which they compared Exner's 1985 and 1989 adult normative samples of nonpatients and patients with schizophrenia, depression, and character problems. A two standard deviation cut-off was used to determine which Exner variables were significant when N=1--how the Rorschach is used in non-research settings. Vincent and Harman concluded from their results, "Many of Exner's variables do not appear to be useful and, given the tedium of scoring them, probably should be

abandoned." However, they conceded that Exner's system "works very well for schizophrenia."

Weiner (1977) contends that those who purport that the Rorschach is not valid rely on "empirical" rather than "conceptual" validation procedures. According to Weiner, the empirical approach compares two or more treatment samples across random Rorschach variables to determine significant differences between samples. On the other hand, conceptual studies are based on a rationale as to why the variables being studied are different. Using Weiner's reasoning, Dana (1978) reviewed selected conceptual studies and concluded that the Rorschach is valid.

More recently, Atkinson, Quarrington, Alp, and Cyr (1986) reviewed 120 articles dated between 1930 to 1980. Studies were classified as either empirical or conceptual using a blind rater as to the outcomes. Atkinson, et al. concluded that conceptual studies were more supportive of Rorschach validity than were empirical studies. They found that 20% of the empirical studies validated the Rorschach, while 53% of the conceptual studies demonstrated the Rorschach's validity. Atkinson et al. submit, "Inadequate research methodology, rather than the Rorschach itself, is at least partly culpable for condemnation of the technique."

EXPERIENCE ACTUAL AND EXPERIENCE STIMULATION

The controversy surrounding the validity of the Rorschach is also evident when reviewing the literature regarding the validity of the EA, es, and particularly the determinants that comprise the EA and es. Rosegrant (1984) describes the determinants as the "perceptual features of Rorschach inkblots"--they are the actual stimuli to which the subject responds. According to Exner's (1974) system the determinants include: form, color, achromatic color, shading, and movement.

Form

Exner states that Form responses are more frequently given than any other determinant and that Form features are typically included in more than 95% of all responses given. Beck (1945) and Klopfer et al. (1954) postulated that Pure F responses are an indication of affect-delay and/or guardedness. Paulsen (1941) and Swift (1945) found a correlation between pure F responses and childhood intelligence in that children with mental handicaps gave fewer Pure F responses. Henry and Rotter (1956) reported that subjects aware of the purpose of the test gave higher frequencies of pure F. Prior to treatment, schizophrenics gave fewer pure F responses (Sherman, 1955) while following

discharge from treatment they gave significantly more Pure F responses (Exner and Murillo, 1973). Korchin and Larson (1977) state that form responses are related to reality contact.

Color

As discussed previously, Rorschach (1921) proposed that color responses (C) are directly related to affect and provide an index of emotional excitability or lability. According to Rorschach, responses that are dominated more by form than color indicate more affective control. In addition, Rapaport et al. (1946) suggests that pure C and CF responses are related to poor affective delay or emotional impulsivity. Shapiro (1977) offers this premise: since color is the most "perceptually immediate" feature of the blots, the manner in which the subject reacts to color represents how the individual reacts to emotional stimuli in actual experience.

Exner (1959) found that the number of responses and the content of the responses varied when Card I was presented using various colors as opposed to the standard gray-black. Subjects that were able to delay responding during a problem-solving task gave more FC answers, while subjects who were less able to delay responding gave more C and CF

responses (Gill, 1966). Gardner (1951) found a positive correlation between color scores and ratings of impulsivity. Greenwald (1990) studied the relationships between several Rorschach variables and self-report tests of personality functioning. In addition to reporting that females provide more color responses than males, she concluded that CF responses are related to impulsivity. Finney (1955) found higher CF and C responses among assaultive versus non-assaultive subjects and depressed patients provided fewer color responses (Fisher, 1951; Costello, 1958). Plesch (1951) found that subjects who displayed blushing to a significant degree tend to give more CF and C responses than FC.

Block and Caldwell (1959) failed to find a relationship between Rorschach color responses and affective states using the Manic and Depressive Scales of the MMPI. Levy (1950) used the galvanic skin response (GSR) as a measure of emotional arousal while subjects viewed the Rorschach cards and observed no unique response patterns. Young and Higginbotham (1942) correlated subject responsiveness to color with ratings of emotional lability and found no significant relationship. Frank (1976), after a review of the literature dealing with color, concludes that "although

colors do have affective value, few colors are associated with any specific and/or consistent affective value."

Achromatic Color

Klopfer (1938) and Rapaport et al. (1946) state that responses to the gray-black-white features of the blots as color (achromatic color responses or C') are an index of depressive affect. Exner (1974) retorts that C' responses have received little attention in the literature and, due to the limited research, there is less support of Klopfer and Rapaport's hypothesis. Although Colson and Hurwitz (1973) did not find a relationship between C' responses and suicide attempts, they found a relationship between color-shading responses and number of suicide attempts. Silberg and Armstrong (1992) found similar results with adolescents. They reported that color-shading blends aided in predicting suicide attempts of depressed adolescent inpatients. They state a color-shading blend occurs when both a color and shading response appear in the same percept; however, this should not be confused with an achromatic color response according to Exner (1974). Schlesinger and Fox (1980) compared Rorschach responses of uni-polar depressed inpatients and non-depressed inpatients and found that the depressed inpatients provided more C' responses. They also

found that males provide more C' responses than do females. There were no significant differences in C' responses between females of the two groups.

Shading

Initially, Rorschach (1921) did not make a separate classification for shading responses. He wrote of the 'light-dark' features of the blots that also included achromatic answers. Later, systematizers conceived shading as a separate determinant and then subcategorized shading responses (Exner, 1974; Beck, 1944; Binder, 1937; Klopfer, 1938). Study of shading responses has been hampered due to differences among systematizers as to what constitutes shading responses and shading subcategories (Frank, 1993). Exner, specifically, received criticism for how he categorizes shading responses in his Comprehensive System (Rosegrant, 1984). This criticism focuses on the minute differences between the shading responses and the overlap of interpretation that make the psychological meaning of the shading responses unclear and empirical analysis difficult (Rosegrant, 1984).

Traditionally, shading responses have been associated with anxiety (Exner, 1974; Beck, 1949; Klopfer and Kelley, 1942; Rapaport et al. 1946). Miale and Harrower-Erickson

(1940) found that although neurotic subjects had longer reaction times and lower responsiveness to more heavily shaded blots, there were no significant differences between the type of shading response or the degree of form used in the response. Studying the shading responses of children, Levitt (1957) found a relationship between the number of shading responses and the extent of emotional disturbance; however, the anxiety-shading hypothesis was not supported. Studies using test criterion of anxiety, such as the Taylor Manifest Anxiety Scale (Taylor, 1953), have had equivocal results (Goodstein and Goldberger, 1955; Waller, 1960; Kraus, 1964). Levitt and Grosz (1960) induced anxiety through hypnosis and found that subject shading responses increased.

Although Exner (1974) posited different meanings to the various shading responses, the underlying interpretation is that shading responses are indicative of "painful affective experiences" (Exner, 1974; Rosegrant, 1984). Regarding Texture responses, Exner concludes they suggest, "... needs for affective interpersonal contact." Exner interprets Vista responses as being indicative of a "painful introspective process" while diffuse shading responses provides an index of "psychological helplessness."

Rosegrant argues that these subdivisions of shading determinants are less helpful than grouping the shading responses as an overall index of affective disturbance.

Greenwald (1990) did not find a relationship between all shading responses and negative affective experience. As discussed previously, she compared self-report measures of self-concept, anxiety and affective control with several Rorschach variables. Although she did not find significant relationships between painful affective experience and Vista, diffuse shading, and Texture responses, she noted that diffuse shading responses were related to impulsivity and high emotional reactivity. Levitt (1957) found a relationship between diffuse shading responses and scores on the Children's Manifest Anxiety Scale (CMAS). Although other Rorschach variables did not produce a significant relationship, he concluded that scales such as the CMAS assess manifest anxiety and that "the Rorschach is presumed to tap a deeper level."

Weber, Meloy, and Gacono (1992) investigated constructs of attachment and anxiety in inpatient dysthymic and conduct disordered adolescents. They found that dysthymic subjects produced significantly more Texture and diffuse shading responses than the conduct disordered subjects. Silberg and

Armstrong (1992) found that the number of Vista responses in conjunction with other Rorschach factors help in differentiating between depressed suicidal, depressed non-suicidal, non-depressed suicidal, and non-depressed non-suicidal adolescent patients.

Movement

Exner (1974) differentiates movement responses as to human (M), animal (FM), and inanimate object (m) movement. He states that M responses, "... appear to involve a more sophisticated inner experience, marked by organization and reasoning, whereas the FM and m activities are less well organized and probably less controlled than M." Exner states that M responses have an "intellectual base which includes a sort of reasoning, the components of imagination, and a form of higher level conceptualization." He continues, "It is a form of delay from yielding to the more spontaneous impulses or responses, which depends on an active kind of ideation." "It is an inner experience which appears to be deliberate, and which manifests fantasies that are related to the external world."

Although Rosegrant (1984) disagrees with Exner's categorizing movement responses as determinants, he asserts that movement responses provide useful information. Abrams

(1955) and Ogdon and Allee (1959) found a positive correlation between the frequency and/or quality of M responses and measures of intelligence. Page (1957) found a direct relationship between M and daydreaming and Orlinski (1966) found a positive relationship between M and dream recall and total dream time. Schmidt and Fonda (1954) report that manic patients give more M responses.

Psychopathology has been associated with M of poor form quality (Phillips and Smith, 1953; Beck, 1965; Molish, 1965). Blatt, Brenneis, Schimek, and Glick (1976) found that psychotic inpatients gave relatively more poor quality (either poor form or lower developmental quality) M responses than normal subjects. Silberg and Armstrong (1992) found M- responses were helpful in distinguishing suicidal depressed adolescent inpatients from non-suicidal depressed adolescent inpatients. From their results, they interpreted increased M- responses as an index of distorted conception of people. They state, "Adolescents who are suicidal may profoundly misinterpret the intentions and motivations of others."

Exner (1974) asserts that the FM response is discrete from M and m responses and represents a more "primitive" operation--"impulses striving for a more immediate

gratification." Ames, Metraux, and Walker (1971) report that children give more FM than M responses, while Meili-Dworetzki (1956) indicates that adult subjects generally provide more M than FM answers. Thompson (1938) found a relationship between FM responses and MMPI measures of irresponsibility, aggressiveness, and distractibility.

Pfefferbaum, Mullins, Rhoades, and McLaughlin (1986), studying the Rorschach responses of children, found that borderline subjects provided more FM and fewer M responses than did conduct disordered subjects. Gordon and Oshman (1981) used Rorschach scores to differentiate ADHD children from non-ADHD children. They found that ADHD subjects provided fewer M responses than the control group and the ADHD subjects provided significantly more FM responses. They conclude that their findings suggest that M and FM reflect the ADHD "child's inability to delay responding and to bind impulses as well as affect."

Exner (1974) comments that m is related to frustration, particularly regarding interpersonal activities. Majumber and Roy (1962) found that juvenile delinquents give more m responses than non-delinquents. Piotrowski and Schreiber (1952) report that m answers diminish in the posttreatment protocols of patients judged to have shown improvement.

Greenwald (1990) found a positive correlation between m responses and the Multiple Affective Adjective Checklist scores for anxiety. Zgourides, Frey, Camplair, Tilson, and Ihli (1989) studied MMPI and Rorschach results of adolescents referred to a community mental health center for evaluation. They found a significant relationship between m responses and the MMPI Scale A (anxiety) scores. Their results suggest that m is associated with feelings of helplessness or loss of control.

EA and es

A section of the Comprehensive System's structural summary, called The Four Square, groups determinant scores into two ratios: the Erlebnistypus (EB, the sum of human movement on one side and the sum of weighted color responses on the other) and the Experience Base (eb, the sum of animal movement and inanimate movement on one side and the sum of all shading and responses to the gray-black features of the blots) (Exner, 1974). The Experience Actual or EA is the sum of the two sides of the EB and the Experienced Stimulation or es (previously termed the Experience Potential or ep) is the sum of the sides of the eb (Exner, 1974; 1990).

Exner (1974), basing his interpretations on the writings of Rorschach, stated that the EB represents "the underlying preferential response style of the individual." Imbalance of the ratio is an indicator of the source of gratification of needs--either internally, termed introversive by Rorschach (when the sum of human movement is greater than the sum of weighted color), or externally, termed extratensive by Rorschach (when the sum of weighted color is greater than the sum of human movement).

Exner points out that Rorschach's meaning of introversive is not congruent with introversion. According to Exner, an individual who has a more introversive style may be socially out-going, but is "prone to use inner life for the satisfaction of ... important needs." The extratensive individual tends to use "the interaction between himself and his world for gratification of his more basic needs." Exner (1978) also suggested that the EB reflects the individual's tendency toward an "ideational or emotional mode of dealing with coping situations."

The EA represents the "full volume of the organized activity available to the individual" (Exner, 1974). Exner (1978) reports that the EA "... develops gradually, so that most nonpatient adults will ultimately manifest more EA than

es." In Greenwald's (1990) correlational study of the Rorschach and self-report checklists of self-esteem, anxiety and depression, she found that EA positively correlated with the Multiple Affective Adjective Checklist (MAACL). She concluded from her results that the EA does not "appear to represent coping resources," but rather EA was related to "low self-esteem, poor coping skills, dysphoric affect, and thought disorder." Greenwald noted that subject responses were of low perceptual accuracy and may have affected the interpretative value of EA.

The es is an index of the "needs and affects which act on the individual" rather than being organized and controlled activities as depicted by the EA (Exner, 1974). Alpher, Perfetto, Henry, and Strupp (1990) state that the es "is a measure of internal distress or dyscontrol." Using a step-wise regression model with five Rorschach variables (including the es) and the Capacity for Dynamic Process Scale (an observational rating scale that assesses the potential to engage in psychodynamic psychotherapy), they conclude that the es is negatively related to interpersonal resources available to an individual. Thus, high es is related to limited or impaired ability to promote interpersonal relationships.

LaBarbera and Cornsweet (1985) compared children receiving inpatient treatment and classified as "improvers" or "decliners" with several Rorschach indices. They found that children classified as improvers had higher es and es-EA mean scores than the decliners. Conversely, Gerstle, Geary, Himelstein, and Reller-Geary (1988) found the opposite. They conducted a pre/posttreatment study of children who received inpatient treatment for twelve months and used Rorschach scores as dependent variables. They found that mean es scores significantly decreased after treatment and there was a marked decrease in es-EA; however, this did not reach statistical significance. Gerstle, et al. (1988) suggest that differences between their results and those of LaBarbera and Cornsweet are due to the degree of disturbance between samples. They imply that LaBarbera and Cornsweet's sample consisted of more disturbed subjects who may have been more resistant to change.

The EA/es relationship has been viewed as an index of psychological instability (Exner, 1978; Gerstle et al., 1988; Kleiger, 1992). When EA is less than es, the individual does not have adequate resources available to manage the stimuli acting on the person. Exner (1978) posited that the EA/es relationship may also reflect "the

individual's ability to tolerate frustration or ambiguity." Considering his research, Exner (1978) asserts that the EA/es relationship is stable for both patients and nonpatients when EA exceeds es. He also points out that a small proportion of adolescents with psychological problems will have a higher EA than es when compared to nonpatient adolescents. Concerning children with and without psychopathology below the age of twelve, Exner states that there is no consistent pattern of EA and es.

Challenging Exner, Kleiger (1992) points out the conceptual difficulties, cognitive metapsychological jargon, and internal inconsistencies that weaken the interpretative value of the EA/es relationship. Citing Exner's (1986) findings that nearly one third of schizophrenic patients show higher EA than es, Kleiger questions how patients that have deficits in "reality testing, logical thinking, regulation of affect, and interpersonal behavior draw on organized resources to direct their behavior in meaningful ways?" In addition, Kleiger illuminates the ambiguity of the Comprehensive System terminology such as: *organized resources*, *initiating and directing behavior*, *stimulus overload*, and *stimulus demands*.

Kleiger also points out that there are inconsistencies regarding the meaning attached to individual determinants and the interpretation of grouped determinants as in the EA and es. To illustrate, Kleiger restates that the EA consists of human movement (M) and all color responses (FC, CF, and C) and the sum of these determinants (the EA) is an index of coping potential. He denotes that the meaning of the EA is dependent on the frequency of the individual determinants comprising the EA. For example, Kleiger alleges that an EA that consists of primarily CF and C responses would indicate less affective control than an EA consisting of more M and FC responses. He remarks that grouping M and the sum of color responses may be erroneous. Similarly, Kleiger argues that the meaning of the es is dependent on the degree form is used with the determinants comprising the es. Kleiger does not completely discount the EA and es. He concludes, "The EA:es index is a useful concept, but it needs further refinement."

SUMMARY OF THE LITERATURE REVIEW

Ambiguity of the educational definition of ED makes it difficult for school psychologists to assess and help make classification decisions. Several authors recommend assessing individual internal variables as well as

behavioral factors. The literature supports using appropriate behavioral measures; however, controversy surrounds techniques that purport assessing internal processes. The Rorschach is, perhaps, the most controversial, has the longest history, and broadest research base. The Rorschach in essence is a problem-solving task that evokes responses to ambiguous inkblots. Individual responses are scored according to which part of the blot was used (location), how form, color and shading were used (determinants), what the person called the blot (content), and individualized responses (special scores). This study primarily gives attention to the determinants (form, color and shading) which comprise the EA and es.

The EA or Experience Actual is surmised to be an index of an individual's ability to cope. The es or experience stimulation is hypothesized to be an index of stresses affecting the individual. Thus, comparison of the EA and es should provide information regarding an individual's emotional stability. This supposition has received some empirical support. However, some authors argue that the EA and es are not valid due to the lack of validity of the scores that comprise them. The EA consists of human movement and color responses while the es is composed of

animal and inanimate object movement, achromatic, and shading responses. Furthermore, the degree form is used in responses may affect interpretation of the other determinants that are not based on the lines or contours of the inkblots.

Form has been related to affective delay. Pure F or responses that involved only the lines or contours of the inkblot have been associated with intelligence and schizophrenia. Individuals with lower intellectual ability and schizophrenia gave fewer Pure F responses than control groups. Color responses are purported to reflect an individual's emotionality. Responses that are based solely on the colors of the blot indicate less emotional control while those that also involve form suggest greater emotional control. There is some evidence that the use of color responses is reflective of impulsivity.

Achromatic color codes are given when the individual's response is based on the black, gray or white features of the blot. Achromatic color responses have been associated with depression and number of suicide attempts. Individual responses that involve reference to the light-dark aspects of the inkblots are termed shading responses. Traditionally, shading responses are reflective of anxiety.

Shading responses have been found to be related to emotional disturbance or negative emotional experience.

Responses that involve the percept of activity are categorized as human movement, animal movement, and inanimate object movement. Human movement responses are purported to be related to intellectual ability and imagination. However, human movement responses that are uncommon have been related to adolescent suicide and adult psychopathology. Animal movement responses are surmised to reflect impulsivity and responses that involve inanimate objects have been associated with frustration and anxiety.

According to Exner's system the EA consists of human movement (related to intellectual ability and imagination) and color (emotionality) responses and is an index of an individual's ability to cope. The es is proposed to indicate the stresses affecting an individual and consists of animal (impulsivity) and inanimate object (frustration and anxiety) movement responses and achromatic (depression) and shading (anxiety and emotional disturbance) responses.

Chapter 3

PROCEDURES

SUBJECTS

Clay Community Schools in Brazil, Indiana; Covered Bridge Special Education District in Terre Haute, Indiana; and other special services departments from public school districts in the United States where the Rorschach has been administered provided subject data (see Appendix C). In order to obtain additional subjects, a survey was sent to 300 randomly selected school psychologists (provided by the National Association of School Psychologists) serving in the schools throughout the United States. The survey helped locate school psychologists who administer the Rorschach, gather subject data, and obtain information about the use of the Rorschach in the schools (see Appendix A and B).

The study used a total of 49 subjects. School psychologists providing subject data selected subjects who met research criteria without knowledge of the full purpose of the study. Individuals identified as being emotionally

disturbed using their school district definition and were between the ages of 12-18 served as subjects. Subjects classified as ED primarily by the EA/es relationship of the Rorschach were excluded from the data analysis.

As practiced in other Rorschach research, Exner's nonpatient norms (1990) for each age category provided control data (Vincent and Harmon, 1991; Scott, 1985; and Champion, Doughtie, Johnson, and McCreary, 1984). Permission to collect data was obtained from the psychologists providing subject information. Student files were accessed by authorized personnel and compensation offered for the use of personnel time.

DATA COLLECTION

Rorschach data were obtained from special education files from Covered Bridge Special Education District, Clay Community Schools, and the City of Trenton (New Jersey) School District and additional data was made available through the survey. The only identifying information was age, sex and ED placement of the subject. Psychologists using Exner's Comprehensive System administered and scored all Rorschachs (Exner, 1990).

INSTRUMENTS

Rorschach

In light of the previous extensive discussion of the validity of the Rorschach, a brief review of the nature and reliability of this assessment technique follows. Exner's (1990) most recent norms include 1,390 nonpatient children, ages 5-16 (approximately n=100 for each age group by year) and 700 nonpatient adults. Child norms are partially stratified on the basis of geographic and socioeconomic distributions. Norm tables include: mean, standard deviation, minimum and maximum score, frequency, median, and mode for 114 scores, ratios, and percentages.

Weiner (1986) reports that when trained examiners administer and score the Rorschach, interrater reliability is equal to or greater than .85 for the scores contained in the structural summary. Exner, Armbruster, and Viglione (1978) found test-retest reliability coefficients of .75 or higher on 13 of 19 structural variables studied of 100 non-patient adult subjects over a three year period. Only two variables, m and sum shading and gray-black responses, had a correlation below .70. Weiner (1986) explains that these variables seem to reflect "transient or situational states that are expected to fluctuate over time."

Exner and Weiner (1982) indicate that children's Rorschach responses are less reliable over long periods of time than adults. Furthermore, they report that Rorschach scores become more stable with age. Exner and Bryant (1974) found that using a seven day retest interval and 25 eight year old subjects resulted in 18 of 19 correlation coefficients equal to or above .70 and 14 of 19 above .80. Exner and Weiner (1982) found that Rorschach variables were less stable after a nine month retest period for seven year olds than for fifteen year olds. The seven year olds had 4 of 19 variables with coefficients of .75 or higher, while the fifteen year olds had 10 of 19 variables with coefficients of .75 or higher.

HYPOTHESES

As implied by the educational definition, individuals who are emotionally disturbed are less able to meet the demands of daily living due to difficulties affecting or resulting from their emotional-cognitive-behavioral functioning. Exner's system of scoring the Rorschach produces a score that is purported to be an index of an individual's ability to cope (the EA) and another score that is an index of the stresses affecting the individual (the es).

The relationship of these scores provides information regarding the individual's emotional functioning. If these scores are valid, they should help to distinguish between individuals who are emotionally disturbed and those who are not. The hypothesis follows that adolescents who are emotionally disturbed (as defined by P.L. 94-142 and P.L. 101-476) would have higher es (an index of negative affective experience acting on an individual) than EA (an index of coping resources available to an individual).

In more operational terms: the mean of the EA minus es for adolescents, ages 12-18 years and classified as emotionally disturbed, according to the federal education definition, was hypothesized to be significantly less, at the .05 level of significance, when compared to a mean of EA minus es derived from Exner's non-patient norms. The corresponding null hypothesis was:

Ho_1: The mean of EA-es for emotionally disturbed adolescents is equal to the mean of EA-es derived from Exner's nonpatient norms.

Further analysis of the components of the EA and es would be helpful in understanding the interpretative value of the Rorschach, particularly regarding the assessment of emotional disturbance. As argued by Kleiger (1992), the

determinants that generate the EA and es may have more interpretative value than the numeric value of the EA or es.

The EA is the sum of human movement responses (M) added to the weighted sum of color responses. The computation formula of the weighted sum of color is: [(0.5)*FC+(1.0)*CF+(1.5)*C]. The use of form accompanying color is purported to indicate control or delay. Pure color responses or C (associated with poor affective control) are given a greater weight than color responses using form. Furthermore, as cited in the literature section, human movement responses of poor quality (M-) are an indicator of emotional disturbance. Thus, an EA that consists of more M- and C responses may reflect fewer resources available than would be expected by the numeric value of the EA.

To illustrate, an ED individual and a non-ED individual have an EA of 8. The non-ED individual has 5 human movement responses of good quality and 6 form dominated (FC) responses. The ED individual has 2 human movement responses of poor quality (M-), 2 human movement responses of good quality, 1 color-form response (CF) and two pure C (C) responses. Intuitively it would appear that although the ED individual and non-ED individual have an EA of 8, analysis of the scores comprising the EA indicate that the ED

individual has fewer coping resources than the non-ED subject.

Similarly, the meaning of the numeric value of the es may be secondary to the meaning associated with the use of form in the responses. Therefore, an es that is high and consists of few form dominated responses may indicate more psychopathology than a high es with many form dominated responses. Although these suppositions seem logical, they lack empirical validation.

One method of testing these premises is to analyze the determinants of the EA and es of the ED sample. The hypothesis was that emotionally disturbed adolescents with an EA equal to or greater than es, when compared to subjects with an EA less than es would have either/or:

a) More CF+C codes resulting in a significantly lower mean for FC minus CF+C.

b) More M- codes resulting in a significantly lower mean for M minus M-.

c) A significantly lower mean for form dominated achromatic color and shading codes (FC'+FT+FV+FY) minus achromatic color and shading dominated codes (C'F+C'+TF+T+VF+V+YF+Y).

The accompanying null hypothesis was:

Ho_2: Emotionally disturbed adolescents with an EA equal to or greater than es do not have significantly more human movement responses of poor quality (M-), pure color and color-form (C+CF), or non-form dominated achromatic color and shading (C'+C'F+T+TF+V+VF+Y+YF) responses than emotionally disturbed adolescents with EA less than es.

STATISTICAL ANALYSIS

A directional t-test for independent means was used to determine significant differences between the mean of the EA for Exner's norms (a composite mean across the age groups studied) and the mean EA of the treatment sample, the mean es for Exner's norms (a composite mean across the age groups studied) and the mean es of the treatment sample, and the mean EA-es for Exner's norms (a composite mean across the age groups studied) and the mean EA-es for the treatment sample.

Duncan's multiple-range test was used to determine if significant differences existed between Exner's age group norm means for EA and es. Duncan's test is preferred over other multiple-comparison procedures due to the lower probability of making a Type II error (Ferguson and Takane, 1989). If no significant differences between age means were found, then the means would be consolidated into a single mean. If significant differences were found, then

individual t-tests would have been conducted for each age group studied.

ED subjects were divided into two groups: EA=>es and EA<es. ED subjects with EA=>es and ED subjects with EA<es group means were compared using directional t-tests across the following variables: FC-FC+C; M-(M-); and Sum FC', FT, FV, FY minus Sum YF, Y, TF, T, VF, V, C'F, C'. Significance levels for all tests were p<=.05.

LIMITATIONS

1. Exner's norms were used rather than a control group selected from the population from which the treatment sample was selected.
2. Random sampling methods were not used in selecting subjects.
3. The ED sample selected may not be representative of all ED students.

ASSUMPTIONS

1. The ED subjects are appropriately classified and the sample is representative of ED students identified elsewhere.
2. The scores provided by Exner's norms are similar to the scores of non-ED students from the selected schools of

the sample subjects.

3. The reliability and validity of the instruments used will be consistent with those reported previously.

Chapter 4

RESULTS

TESTS OF THE HYPOTHESES

Hypothesis 1

It was hypothesized that the mean of EA-es of the sample would be significantly lower than the combined mean of EA-es for Exner's non-disturbed norms. The sample means for EA and es were also compared to the combined means for EA and es for Exner's norms. A more in-depth discussion of how this hypothesis was tested follows Table 1. Table 1 shows that the sample mean for EA was significantly lower than the mean EA based on Exner's norms. ED students also had a lower mean es than non-ED individuals. Although this difference between sample subjects and non-ED individuals was less dramatic it was statistically significant. The mean EA-es of the research group was also significantly lower than the comparison group. Thus, the null hypothesis was rejected.

Table 1 EA and es of the Sample and Norms

Rorschach Variable	Mean based on Exner's Norms	Standard deviation based on Exner's norms	Sample mean	Sample standard deviation	t
EA	8.59	2.42	4.75	3.28	10.74**
es	8.91	3.06	7.61	6.37	2.76**
EA-es	-0.49	10.61	-2.87	5.45	4.21**

Note. ** p < .01, critical value=2.326

Exner's norms for adolescents are reported by age for each year and include the mean and standard deviation for each variable (Exner, 1990). The experimental sample encompassed adolescents from the ages of 12 to 18; therefore, Exner's age means, if possible, needed to be combined into a single control group mean. Duncan's multiple-range test was used to determine if significant differences existed between Exner's age group norms for EA and es. Duncan's test was used rather than other multiple-comparison tests due to the lower chance of making a Type II error.

Exner's norm means for EA ranged from 8.26 (12 year olds) and standard deviation of 2.38 to 8.87 (16 year olds) and standard deviation of 2.23. Exner's norm means for es ranged from 8.21 (adults) and standard deviation of 3.00 to 9.21 (16 year olds) with a standard deviation of 3.29. Duncan's studentized range statistic Q for Exner's EA means with the greatest difference was $Q(df=60,k=6)=2.768$, $p>.05$,

critical value=4.16. For Exner's es means with the greatest difference, Q=3.45, p>.05. Since there was no significant difference between Exner's age means for EA and es, a mean was calculated for all age means. The mean for EA was 8.59, the mean for es was 8.91, and the mean for EA-es was -.49.

T-tests for independent samples were used to compare the sample EA, es and EA-es means to the means derived from Exner's norms. The mean standard deviation across Exner's age group norms for EA and es was used in computing the pooled estimate of variance used in calculating the t statistic. Exner's largest age group standard deviation for either the EA or es (15 year old es of 3.40) was used for computing the pooled estimate of variance for the analysis of EA-es since a mean of Exner's age group standard deviations for EA-es was not available. To further decrease the chance of making a Type I error, two standard deviations were added to the 15 year old standard deviation for es (SD=10.61). Thus, the error term used in computing the t-test for the EA-es means is likely to over-estimate the actual variance between Exner's age group scores for EA-es.

Hypothesis 2

The second hypothesis stated that sample subjects with EA equal to or greater than es would have a lower mean for

Form-Color (FC) minus Color-Form (CF) added to pure Color (C) than subjects with an EA less than es. In addition, subjects with EA equal to or greater than es would have a lower mean for human movement (M) minus human movement of poor quality (M-) than subjects with EA less than es. Finally, subjects with EA equal to or greater than es would have a lower mean for form dominated achromatic color and shading responses (FC'+FT+FV+FY) minus achromatic color and shading dominated codes (C'F+C'+TF+T+VF+V+YF+Y) than subjects with EA less than es. Table 2 illustrates the differences in means using a directional t statistic.

Table 2 EA and es Variables of the Sample

	n		mean		standard deviation		t
	EA=>es	EA<es	EA=>es	EA<es	EA=>es	EA<es	
FC-CF+C	18	31	-0.333	0.258	1.372	1.673	-1.270
M-(M-)	18	31	2.278	2.032	2.296	1.958	0.398
F-non F for C', T, V, & Y	18	31	0.444	1.581	0.856	2.754	-1.698*

Note. * $p < .05$, critical value=1.684

Although sample subjects with EA=>es had fewer FC responses than FC+C responses compared to subjects with EA<es, this difference did not reach statistical significance. There was no significant difference between groups for the number of human movement (M) compared to human movement of poor quality (M-). As was hypothesized,

the EA=>es group had a significantly lower ratio of achromatic color and shading responses that were form dominated to non-form dominated achromatic and shading responses than the EA<es group.

DESCRIPTIVE STATISTICS OF THE SAMPLE

This study used a total of 49 subjects, 42 male and 7 female. Subject ages ranged from 12-18 years with a mean of 14.61 and standard deviation of 1.68. Table 3 shows the location of the subjects by region of the United States. Eighteen subjects (36.7%) had an EA score that was equal to or greater than his or her es score while 31 subjects (63.3%) had an EA score that was less than his or her es score. Table 4 provides a summary of Rorschach scores for the sample.

Table 3 Subjects by Region

Region	Number of subjects	Percent of subjects
Northeast	6	12.2
Northcentral	11	22.4
South	31	63.3
West	1	2.0
TOTAL	**49**	**100.0**

Table 4 Sample Rorschach Variables

Rorschach variable	Mean	SD	Rorschach variable	Mean	SD
R	24.31	11.70	FC′	0.80	1.31
EA	4.74	3.28	C′F	0.16	0.43
es	7.61	6.37	C′	0.08	0.28
EA-es	-2.87	5.45	FT	0.49	0.79
M	2.65	2.47	TF	0.18	0.44
M-	0.53	0.98	T	0.00	0.00
FM	3.08	3.10	FV	0.27	0.49
m	1.45	1.76	VF	0.14	0.47
FC	1.31	1.50	V	0.00	0.00
CF	1.02	1.31	FY	0.61	1.04
C	0.24	0.48	YF	0.37	0.73
			Y	0.00	0.00

SURVEY

Although the survey was primarily used to find subjects, it provided interesting information that is not directly related to hypotheses testing. One hundred forty-one psychologists returned surveys of the 300 mailed (47%). Sixty-six percent of the respondents were female while 34 percent of the respondents were male. Twenty-four percent of the respondents used the Rorschach during the 1993-94 school year. Parenthetically, not all respondents were employed through the schools--several respondents noted that they were working in private practice, at universities, or other settings.

The number of Rorschachs administered, per individual that used the Rorschach during that year, ranged from one to 70 with a mean of 10.88 and standard deviation of 16.66.

Thirty-six percent of those who reported using the Rorschach recorded that they used Exner's scoring system. Although 30 individuals of the total 141 respondents reported that they used Exner's system, 18 administered no Rorschachs during the 1993-94 school year. Table 5 depicts the location of survey respondents by region of the United States. Table 5 also illustrates the use of the Rorschach by respondents according to geographical region.

Table 5 Survey Respondents by Region

Region	Number of respondents	Percent of respondents	Number using the Rorschach	Percent using the Rorschach
Northeast	77	54.6	18	54.5
N. Central	7	5.0	0	0.0
South	39	27.7	12	36.4
West	15	10.6	3	9.1
Non-U.S.	3	2.1	0	0.0
TOTAL	141	100.0	33	100.0

Respondents reported an average of 14.6 school psychologists in their school district with a standard deviation of 21.93. They indicated, on average, that 2.29 of their colleagues use the Rorschach with a standard deviation of 7.47. Fifty percent of the respondents reported that they think that the data obtained from the Rorschach is unimportant in making placement decisions regarding individuals suspected of being emotionally disturbed. Three percent of the total number of respondents felt that the Rorschach provided extremely important

information, while six percent of the respondents that used the Rorschach reported that Rorschach data is extremely important. Seven percent of the respondents that used the Rorschach marked that Rorschach data is unimportant in making placement decisions. Table 6 shows how the total number of respondents viewed the importance of the Rorschach compared to the respondents that used the Rorschach during the 1993-94 school year.

Table 6 View of Importance of Rorschach

Rank	Percent of all respondents	Percent of respondents who used the Rorschach
1=Unimportant	50	7
2	26	26
3	13	35
4	8	26
5=Extremely important	3	6
TOTAL	**100**	**100**

DISCUSSION

The fact that the majority of sample ED subjects had lower EA scores than es scores is consistent with assertions that the EA and es provide information regarding an individual's emotional functioning. However, simple numeric comparison of the EA and es may not be sufficient to classify individuals as being ED. Results support that individuals with EA greater than es but who have more achromatic color and shading responses that are not form

dominated also experience emotional disturbance. Thus, it appears Kleiger's (1992) skepticism regarding the interpretation of the EA and es, at least in part, has merit.

Although the traditional interpretation of the EA and es was supported, further analysis of the scores that comprise the EA and es appears to be beneficial. This study found support for use of the achromatic color and shading responses in this analysis but not for color and human movement. The fact that ED individuals with EA=>es did not have more human movement responses of poor quality (M-) than ED individuals with EA<es was surprising in light of findings in the literature (Phillips and Smith, 1953; Beck, 1965; Molish, 1965). This may indicate that M- responses are not related to emotional disturbance in adolescents or the type of psychopathology attributed to M- responses is not manifested by a sufficient number of ED students in the schools. The later explanation seems more plausible when considering Blatt et. al (1976). They found an association between M- responses and psychotic symptoms of inpatients. It seems unlikely that ED students in the public schools manifest symptoms similar to psychotic inpatients.

The subjects with EA=>es did have more color responses that were less form dominated than the subjects with EA<es. This difference did not reach statistical significance but it may provide useful information within practical settings. When interpreting Rorschach scores, a holistic or integrative approach is recommended rather than interpreting scores in isolation (Exner, 1974). Thus, an individual's color responses may support a classification of ED when reviewed in conjunction with other Rorschach scores that reflect emotional disturbance. Although color responses appear to be an important component of the EA, no definitive conclusions can be made regarding color responses alone. Perhaps further research will reveal how color responses add to the interpretative value of the EA.

The finding that ED individuals had lower EA scores than non-ED individuals supports the interpretation that EA is an index of coping ability. A higher EA score reflects more ability to cope than a lower EA. An unexpected finding was that ED students had lower es scores as well. If es is an index of negative experience affecting an individual, then it would appear that ED individuals would have higher not lower es scores than non-ED individuals. Again, the numeric value of scores in isolation may have less

interpretative value than when they are compared to other scores.

As mentioned previously, the results also indicate that ED individuals have significantly less EA than es scores. This finding strengthens the argument that the es is a measure of emotional disturbance in that ED individuals have more distress than they are able to manage. An alternate explanation for the lower es of ED individuals is that ED individuals may give fewer total Rorschach responses. This may also account for lower EA scores as well. However, the numeric difference between the es of the sample and Exner's norms is less apparent (1.3) when compared to the difference between the ED subjects and Exner's norms for the EA (3.84). Additional research will need to clarify these questions.

The foremost conclusion, based on the results of this study, is that ED individuals appear to have less ability to cope with the stresses affecting them. An implication of the results is that ED individuals do not have any more negative experience than non-ED individuals but that they have less ability to cope with their negative experience. Although this is an interesting supposition, it also requires empirical validation.

Chapter 5

SUMMARY OF THE STUDY

STATEMENT OF PROBLEM

Identifying adolescents who are emotionally disturbed is a difficult task that confronts school personnel. Although behavioral methods are used more frequently than other techniques, they are unable to assess internal emotional states. Projective techniques are purported to provide information regarding distorted thinking and affective disturbance. However, many projective techniques primarily rely on clinical judgment and lack empirical support.

The Rorschach is a problem-solving technique that has been the focus of study and controversy throughout this century. Much of the controversy of the Rorschach is related to its validity and the time needed to administer, score, and interpret it. Several scoring systems have been developed to increase the value of this problem-solving

technique in assessing personality and psychopathology and to gain empirical support for its use. Exner's coding system has gained in popularity during the past few decades. Exner has attempted to standardize Rorschach responses according to his coding system. Exner's Comprehensive Scoring System involves many factors and requires considerable time to score and interpret. Two key scores of Exner's system are the Experience Actual (EA) and Experience Stimulation (es).

Some authors purport that the relationship between these scores provides an indication of an individual's ability to cope with emotional factors affecting him. The interpretation of the EA and es has been questioned as well as the meaning of the scores that compose the EA and es. Kleiger (1992) argues that the EA/es relationship has inconsistencies. He reasons that if form dominated responses indicate emotional delay, then interpretation of the EA/es relationship is secondary to the analysis of the determinants that comprise the EA and es. For example, an adolescent with lower EA than es, but whose es is comprised of mostly form dominated determinants may be less disturbed than would be expected based on Exner's interpretation.

Thus, it is not only important to appraise the validity of the EA and es but also individual determinants.

However, the validity of the interpretation of individual determinants may not, necessarily, affect the validity of the EA and es. The EA and es may still provide valid information regarding coping processes. In addition, the EA/es relationship may prove to be useful in differentiating ED from non-ED adolescents and it may provide some indication of the severity of disturbance. The utility of the EA/es relationship needs additional study, particularly with adolescents. Further analysis of the form dominated determinants that comprise the EA and es was also warranted.

STATEMENT OF PROCEDURES

Subjects were selected by referral and through the use of a nation-wide survey of 300 members of the National Association of School Psychologists. Although providers of data included individuals under the age of 12, only protocols of individuals age 12-18 years were used. A requirement for inclusion was that subjects be placed in public special education programs for individuals who are emotionally disturbed according to the federal educational definition. This analysis used only complete Structural

Summaries using Exner's Comprehensive Scoring System. The author did not use unscored Rorschach responses. Obtaining permission to use subject protocols was the responsibility of the individual providing subject data. As requested, subject data received had the subject's name removed and only his age and sex recorded. The author obtained permission, via letter, from John Exner to have completed Structural Summaries copied and included in this study.

A directional t-test for independent means was used to determine significant differences between the mean of the EA for Exner's norms (a composite mean across the age groups studied) and the mean EA of the treatment sample, the mean es for Exner's norms (a composite mean across the age groups studied) and the mean es of the treatment sample, and the mean EA-es for Exner's norms (a composite mean across the age groups studied) and the mean EA-es for the treatment sample.

Duncan's multiple-range test was used to determine if significant differences existed between Exner's age group norm means for EA and es. Duncan's test is preferred over other multiple-comparison procedures due to the lower probability of making a Type II error (Ferguson and Takane, 1989). Since there were no significant differences between

age means, these means were consolidated into a single mean. If there were significant differences, then individual t-tests would have been conducted for each age group studied.

Additional analysis involved ED subjects with EA equal to or greater than es. ED subjects were divided into two groups: EA=>es and EA<es. ED subjects with EA=>es and ED subjects with EA<es group means were compared using directional t-tests across the following variables: FC-CF+C; M-(M-); and Sum FC', FT, FV, FY minus Sum YF, Y, TF, T, VF, V, C'F, C'. The significance level for all tests was at least $p<=.05$.

RESEARCH HYPOTHESES

The educational definition of individuals who are emotionally disturbed implies that they are less able to meet the demands of daily living due to difficulties affecting or resulting from their emotional-cognitive-behavioral functioning. The EA and es scores from Exner's Comprehensive Scoring System of the Rorschach are purported to be an index of an individual's ability to cope (the EA) and an index of the stresses affecting the individual (the es). The relationship of the EA and es, then, provide information regarding the individual's emotional functioning. If proven to be valid, analysis of the EA and

es should help distinguish between individuals who are emotionally disturbed and those who are not. Therefore, the first hypothesis is that adolescents who are emotionally disturbed (as defined by P.L. 94-142 and P.L. 101-476) have higher es (an index of negative affective experience acting on an individual) than EA (an index of coping resources available to an individual).

In more operational terms: the mean of the EA minus es for adolescents, ages 12-18 years and classified as emotionally disturbed, according to the federal education definition, was hypothesized to be significantly less, at the .05 level of significance, when compared to a mean of EA minus es derived from Exner's non-patient norms. The corresponding null hypothesis was:

Ho_1: The mean of EA-es for emotionally disturbed adolescents is equal to the mean of EA-es derived from Exner's nonpatient norms.

Since the null hypothesis was rejected, further analysis of the components of the EA and es was conducted in hopes to broaden understanding of the interpretative value of the Rorschach, particularly regarding the assessment of emotional disturbance. Kleiger (1992) argued that the numeric value of the EA or es may not have as much meaning

as analysis of the determinants composing the EA and es. The EA is the sum of human movement responses (M) added to the weighted sum of color responses. The use of form accompanying color is purported to indicate control or delay but is given less weight in the computation of the EA. In other words, pure Color responses or C (associated with poor affective control) are given a greater weight than color responses using form. In addition, human movement responses of poor quality (M-) are an indicator of emotional disturbance. Thus, an EA that consists of more M- and C responses may reflect fewer resources available than would be expected by the numerical value of the EA.

Similarly the meaning of the numeric value of the es may be secondary to the meaning associated with the use of form in the responses. An es that is high and consists of few form dominated responses may indicate more psychopathology than a high es with many form dominated responses. Empirical analysis was needed to support or refute these suppositions. A method of testing these premises was to analyze the determinants of the EA and es of the ED sample. The initial hypothesis was that emotionally disturbed adolescents with an EA equal to or greater than

es, when compared to subjects with an EA less than es would have either/or:

a) More CF+C codes resulting in a significantly lower mean for FC minus CF+C.

b) More M- codes resulting in a significantly lower mean for M minus M-.

c) A significantly lower means for form dominated achromatic color and shading codes (FC'+FT+FV+FY) minus achromatic color and shading dominated codes (C'F+C'+TF+T+VF+V+YF+Y).

The accompanying null hypothesis was:

Ho_2: Emotionally disturbed adolescents with an EA equal to or greater than es do not have significantly more human movement responses of poor quality (M-), pure color and color-form (C+CF), or non-form dominated achromatic color and shading (C'+C'F+T+TF+V+VF+Y+YF) responses than emotionally disturbed adolescents with EA less than es.

CONCLUSIONS

The fact that nearly two-thirds of the sample had an EA score that was less than their es score suggests that a simple comparison of EA and es scores is somewhat useful in identifying adolescents who are emotionally disturbed. However, caution should be used when differentiating individuals who are ED from those who are not based on

simple comparison of the EA and es. This is in light of Exner and Weiner's (1982) finding that about half of nonpatient individuals above the age of ten have an EA score that exceeds the es score. What appears to have more utility is the comparison of the EA, es, and EA-es of ED individuals to individuals who are free of psychopathology.

The sample had lower EA and es scores than would be expected based on Exner's norms and the sample EA scores were much lower than would be expected. Although the sample mean for EA, es and EA-es was significantly lower than those of Exner's norm groups, it appears that the EA contributed more to the lower mean of the sample EA-es. From a practical stand point, the EA seems to provide more information regarding emotional disturbance than the es. Individuals who are emotionally disturbed had lower EA scores than non-ED individuals. However, it is not recommended to interpret scores in isolation.

Although the results of this study appear to generally support the theoretical validity of EA/es interpretation, it also raised some questions regarding the es. The sample mean for EA-es was significantly lower than the mean based on Exner's norms. This is consistent with the interpretation that individuals who are emotionally

disturbed do not have adequate resources to cope with the stresses affecting them. There was also support that the EA is an index of available coping resources. Sample subjects had much lower EA scores than those who are not ED. However, sample subjects also had statistically significant lower es scores. This would suggest that the ED sample has fewer stresses affecting them than non-ED individuals. Intuitively this does not make sense. On the other hand, there was, on average, a 1.3 point difference between the es scores of the ED sample (mean=7.61) and Exner's norms (mean=8.91). Although statistically significant, the difference in scores may have little meaning in applied settings.

It is of interest that there were no significant differences across Exner's age group norm means for EA and es. This indicates that the EA and es are stable through adolescence and adulthood. However, this is not to infer that individual EA and es scores will not fluctuate over time.

Subjects with EA=>es did have more color responses that were not form dominated than subjects with EA<es but this difference did not reach statistical significance. Perhaps this was due to the general infrequency of color responses

of the sample or the research methodology used. Rather than comparing the frequency of use of form with color responses of subjects, the results of finding the relationship between subject's EA-es and FC-CF+C may have provided more pertinent interpretative information. Correlational analysis of subject EA-es and color responses may provide support or refute the premise that ED individuals with higher EA-es scores (suggests less disturbance) have more color dominated responses than form dominated color responses (suggests less affective control).

Surprisingly, there was little difference between subjects with EA=>es and subjects with EA<es as to the ratio of human movement (M) responses and human movement responses with poor quality (M-). As discussed in Chapter 2, human movement responses of poor quality are associated with psychopathology (Phillips and Smith, 1953; Beck, 1965; Molish, 1965) and, specifically, with psychotic inpatients (Blatt et. al., 1976) and suicidal depressed adolescent inpatients (Silberg and Armstrong, 1992). Although there was not a significant mean difference of M-(M-) between the EA=>es and EA<es subjects, the ED sample did produce more M- responses (mean=.53) than Exner's norms (means ranged from .03 for adults to .22 for 12 year olds). This suggests that

human movement responses of poor quality distinguish ED from non-ED individuals. However, this assumption needs to be tested empirically.

As was hypothesized, subjects with EA=>es had significantly fewer form dominated shading and achromatic color responses compared to shading and achromatic color responses with less form dominance than subjects with EA<es. This lends support, following traditional Rorschach interpretation, that the es of subjects with EA=>es is indicative of more disturbance than the es of subjects with EA<es. It can be argued, then, that interpretation of the es and EA/es relationship should involve not only the numeric values but analysis of the determinants, primarily the use of form with shading and achromatic color responses. From a practitioner's perspective, analysis of the EA/es relationship and how form is used with shading and achromatic responses is useful in identifying ED from non-ED individuals.

Aside from the primary purpose of this study, survey results indicate that a modest number (24%) of school psychologists use the Rorschach. This is similar to the 29% reported by Pratt (1983). However, respondents reported a wide range of use of the Rorschach with most administering

less than ten a year. Exner's Comprehensive Scoring System was not used as extensively as was thought. Only 36% of the respondents that use the Rorschach reported that they use Exner's system. Of the 30 respondents that recorded using Exner's system, 18 did not administer any Rorschach during the school year specified. It is unclear as to why individuals trained in using Exner's system are not using the Rorschach. The fact that most of the respondents that reported using the Rorschach are from the Northeast is likely related to training availability and acceptance of its use.

As would be expected based on the number of respondents that use the Rorschach, most of the respondents reported that the Rorschach is less important in making ED determinations. Surprisingly, many of those who reported using the Rorschach were ambivalent about the importance of its use regarding ED placement. Only 6% of respondents that reported using the Rorschach indicated that they felt the information provided by its interpretation was extremely important. Possible reasons for why only few school psychologists use the Rorschach and why most shy away from using it will be discussed under the Implications heading.

IMPLICATIONS

This study supports that the EA and es provide information regarding an individual's emotional functioning. The methodology of this study does not allow further validation of the interpretation of the EA and es offered by Exner. Following Exner's interpretation of the EA and es, current results suggest that ED adolescents have fewer cognitive/affective resources available to cope with the stresses acting on them. However, they do not seem to have more stresses acting on them than individuals who are not ED. Another explanation for why the es of ED and non-ED individuals were similar may be that the es is not an index of stresses affecting an individual. However, the finding regarding the use of form with achromatic and shading responses supports the supposition that ED individuals with EA equal to or greater than es use less form. Therefore, it seems plausible that achromatic and shading responses that involve less form are an indication of more disturbance. M- responses may be associated with more disturbance than M responses. It would be interesting to compare the frequency of M- responses of the study sample and Exner's norms. The M- was equally present in the EA=>es and EA<es sample

groups, but both groups may have had more M- responses than non-ED individuals.

Although the EA/es relationship seems to provide information regarding an individual's emotional functioning, there is little known about how the EA and es are related to overt behavior. More practitioners may be supportive of the Rorschach if a link was found between the EA and es and behavioral patterns.

School psychologists should be encouraged by the results to reconsider using the Rorschach in assessing adolescents suspected of being emotionally disturbed. Koppitz (1982) inferred that the Rorschach is not suitable for use in the schools because of the time involved in administering, scoring and interpreting it. Conversely, Worchel (1990) argued that the information gathered is more important than the time involved in gathering it. Current results support that the Rorschach provides useful information. Thus, it seems plausible that many school psychologists do not use the Rorschach because they lack knowledge of its validity and they have not received adequate training and experience. Due to the complexity of scoring and interpreting the Rorschach, it appears that extensive training and ongoing use are required to fully

understand the power of this test. The power of the Rorschach should be more fully understood before it is dismissed.

Perhaps the power of the Rorschach within the educational system is most needed in making decisions regarding ED placement. Tharinger, Laurent, and Best (1986) illuminated the difficulties involved in determining individuals who are and who are not emotionally disturbed. They pointed out that ambiguous guidelines are partly responsible. Another difficulty in determining emotional disturbance is that emotional disturbance is not a dichotomy but a continuum. Knoff (1986) and Worchel (1990) state that a comprehensive assessment of individuals suspected of being emotionally disturbed involves behavioral, personal, and environmental factors.

As discussed in Chapters 1 and 2 and supported by the results, the Rorschach provides information regarding the individual's covert processing rather than overt behavior. In light of Knoff's and Worchel's suppositions, the Rorschach can be used in conjunction with behavior rating scales and, thus, behavioral and personal factors can be assessed. However, the use of the Rorschach will depend on each local educational agency's definition of emotional

disturbance. It also seems that decisions regarding the use of the Rorschach, due to the time involved, will depend on the difficulty of the case. It should be pointed out that the current study does not support the validity of other Rorschach variables.

Suggested Further Research

The complexity of the Rorschach necessitates vast research if this problem-solving technique is to be fully understood. The finding that individuals who are emotionally disturbed have significantly fewer EA scores than non-ED individuals lends support of the validity of the EA/es relationship and to the use of the Rorschach. However, additional research should address how the EA and es are related to overt behavior and, more specifically, how individual scores are related to psychopathology and personality characteristics.

It may be useful to assess the correlation between EA-es and the degree of disturbance of the individual. This may validate using the numeric value of the EA and es as indicators of the degree of emotional disturbance. Further study of the EA and es may involve different weighting of the variables that make up these indexes. This type of research may provide greater understanding of what

components of the EA and es are related to coping processes. Empirical analysis of the weighting of the EA factors particularly seems warranted since construction of the EA was based on observation and clinical judgment.

Furthermore, the EA/es relationship needs to be studied more thoroughly with children between the ages of five and twelve. Little has been written concerning the EA and es of this population. It may also be of interest to compare EA and es scores of individuals from differing special education classifications. This may shed more light on what the EA and es assess and their value in practical settings. Previous research has found a relationship between M-responses and adult psychopathology. Additional study of M-responses of latency aged children and adolescents seems warranted. Due to the infrequency of achromatic and shading responses it is difficult to study these variables individually. Perhaps, research designs that group achromatic color and shading responses together may add more to the current body of knowledge.

Further study of the es is warranted in light of the finding that ED individuals had lower es scores than would be expected. This research should seek to find out if ED students have more emotional distress than non-ED

individuals. Furthermore, it should help determine the nature of this distress. It is possible that the emotional distress that Exner attributes to the es may be different from the disturbance ED students' experience. If ED individuals are so classified primarily due to externalizing behavior problems, then they may not have the same internalizing problems summarized by the es.

Finally, this study raised questions regarding school psychologist's attitudes toward the Rorschach. Although school psychologists appear to have a general negative appraisal of the Rorschach, development of their perceptions of the Rorschach is unknown. Analysis is needed regarding school psychologists' views concerning the Rorschach.

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APPENDIX A

Survey Coverletter

Dear Colleague:

I have served as a school psychologist for two years in a school district in Indiana and I am preparing for a doctoral internship at a children's hospital in Utah. In completion of my degree at Indiana State University, I am in the process of gathering data for my dissertation. Using Exner's system, I am studying Rorschach scores that may assist in determining individuals who are emotionally disturbed (ED) according to Public Law 94-142 and P.L. 101-476. In order to conduct this study, I will need copies of structural summaries for individuals, ages 12-18 years, who have been classified as being emotionally disturbed and receive special education services. The only identifiable information needed is the age and sex of the individual. Names should not be provided.

In addition to gathering the data, I would like to know how often the Rorschach is used in your schools. To help me obtain this information, please complete and mail the postcard enclosed. If you have Rorschach data that you will be able to contribute (as noted on the postcard), I will call you and we can make arrangements for me to obtain the data. I realize that obtaining permission or gathering these data may take some time, but my immediate need is to know the availability of the data.

When completing the postcard, if you wish to remain anonymous do not write your last name. If you are unsure of exact numbers, please estimate. Please respond to all items. If you have administered the Rorschach and do not wish to provide data, then mark the last item 0 and you will not be contacted further.

I am sure you have received prior solicitations to complete surveys or provide research data and I realize that it is an inconvenience. Therefore, I have attempted to minimize the amount of time and effort required if you choose to participate. I sincerely appreciate your assistance.

Thank you,

Jordan L. Mulder

APPENDIX B

Survey

Please complete and mail by 20 September 1994.

Name:_____ Work Ph #:_____
City:_____ State:_____

Number of Rorschachs given last school year:_____
Do you use Exner's scoring system: Yes No
# of your colleagues that use the Rorschach:_____
# of school psychologists in your district:_____

In your opinion, how important are Rorschach data in making ED eligibility decisions? 1 2 3 4 5
(1=unimportant, 5=extremely important)

Possible # of Rorschachs you will provide:_____

APPENDIX C

Subject Selection by State and School District

State	School District	Number of Subjects
Indiana	Covered Bridge Special Education CO-OP	7
Indiana	Clay Community Schools	4
New Jersey	City of Trenton School District	6
North Carolina	Multiple districts	26
Tennessee	Data unavailable	2
Utah	Granite School District	1
Virginia	Data unavailable	3