PRECOCIOUS EGO DEVELOPMENT IN PHYSICALLY ABUSED CHILDREN

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Edward L. Coyle, II, B.S., M.S.
Denton, Texas
August, 1994
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The Rorschach records and Wechsler Intelligence Scale scores of sixty-six children between the ages of 5 and 13 were compared. Subjects in each group were from one of three conditions: children who have documented histories of physical abuse, children referred for clinical intervention with no history of abuse, and a community sample of children with no documented history of abuse or psychological treatment. Data from the groups were analyzed to examine evidence of increased reliance on ego functions related to motor activity and concurrent deficits in other areas of ego function by subjects in the physical abuse group. Results revealed that the physical abuse group showed a greater tendency toward color-dominant responses on the Rorschach than the comparison groups and that the Community control group produced records with lower extended form quality than the clinical groups. No significant differences were found for Performance/Verbal IQ split, EB style, Cooperative Movement or Aggressive content.
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CHAPTER I

INTRODUCTION

In order for a human being to properly develop and mature, certain elements must be present in the individual's environment. The most obvious are the factors which are necessary for physical health and growth; food, shelter from the elements, sleep. For optimal cognitive and emotional development, there must also be other things, which are provided primarily by other human beings. There must be nurturance, and education in a number of ways. In fact, the adequate or healthy development of a human being is accomplished only by a complex and delicate interweaving of numerous factors. There are many more paths which may lead to failure than success.

One way in which the individual may be deprived of adequate opportunity for proper development is through the inaction or neglect of the caretaking parent, or inadequate resources in the environment. The latter condition often exists in times of famine or war, when there simply are not enough of the basic necessities to go around. The former cause of poor growth, that resulting from parental neglect, leads to deficits in the child which may persist into adulthood, assuming the child receives enough to physically
survive. Each of these causes leads to similar problems for the child, in that he or she does not have the necessary basic components which would allow him or her to grow physically, intellectually, and emotionally. Deprivation of food causes a child to be stunted, listless and physically and intellectually weaker than others. Similarly, deprivation of emotional sustenance results in a child who is poorly formed in social capacities, unable to adequately form attachments to or learn how to feel comfortable with others. This consequent can be thought of as a kind of perpetual hunger for attention from others, similar in many ways to its biological counterpart. Winnicott (1989) describes the concept of the "good-enough mother" (p.44) or primary caretaker in relation to the realization or non-realization of appropriate and satisfactory early nurturing. Winnicott (1962) emphasizes the primary importance of the emotional and environmental provision upon the infant’s development, stating that:

So much difference exists between the beginning of a baby whose mother can perform this function well enough and that of a baby whose mother cannot do this well enough that there is no value whatever in describing babies in the earliest stages except in relation to the mother’s functioning. (p. 57)

The lack of adequate resources described above may be manifest as a passive type of injury to the developing
individual. The opposite of this also exists in an active form. Active influences which are disruptive to the developmental process occur when the environment or the parental caretaker act in such a way as to injure the child in some fashion, taking away from what integrity exists, rather than failing to provide building materials. This may result environmentally from living in a place which is dangerous because of the prevailing weather or climatic conditions, or because of wide-spread physical violence and aggression as is seen during war or in crime-ridden areas.

The developing child may also face physical and emotional threats from his or her caretaker or others in the home. In this instance, an unusual or additional source of stress on the developing child serves to divert needed internal resources which would otherwise be used for further growth. The present study will examine the results of this type of active assault, in the form of physical abuse, on the developing child’s personality structure. Of particular interest is the concept of differential development of specific personality features and preferred modes of interaction with the environment which result from physical abuse, and the evidence available from psychological testing of this uneven development.

Physical Abuse and its Sequelae

Historically, physical maltreatment of children has largely been accepted by most societies. Infanticide, abuse
and neglect of children have been considered to be relatively unimportant aspects of life. There have been exceptions, which usually involved placing some constraint upon the most serious acts of torture or murder directed at children. However, general societal efforts to prevent child injury and neglect in an organized and comprehensive fashion are relatively recent, beginning in the early nineteenth century (Radbill, 1987).

The nineteenth and twentieth centuries have seen a steady increase in the legal rights granted to children, including rights to education and protection from harm. Many of these rights were bestowed following the wide-spread misuse and neglect of children which resulted from the Industrial Revolution (Radbill, 1987). During the 1950’s and 1960’s, interest in protecting children from abuse was increased by improved medical technology which revealed that traumatic injuries to children were more wide-spread than was commonly believed (Silverman, 1953). As scientific and popular interest in the problems of child abuse increased, the body of knowledge regarding the negative effects of such treatment grew.

It is now well-known that abuse and neglect of children result in significant impairments in functioning which can continue throughout the lifetime of the victim. Aside from the obvious impairments due to physical injury, abuse and neglect may result in decreased intellectual ability and
problems in learning. (Oates, 1986) Numerous studies have also shown that physical abuse and neglect are strongly associated with psychological disturbances which interfere with daily living and interpersonal interactions (Kiser, Heston, Millsap & Pruitt, 1991; Kurtz, Kurtz, & Jarvis, 1991; Margo & McClees, 1991)

The Concept of Psychic Trauma

The idea of the occurrence of experiences which overwhelm and traumatize ego was first formulated by Freud (1910) during the early years of his clinical practice. He speculated that trauma resulted in neurosis (Vol. 11, p. 14). He believed that the initial traumatic incident resulted in the incorporation of the trauma into the psyche. This trauma would then continue to cause reverberations throughout the personality as the psyche sought to ease the resultant discomfort. Trauma was considered the result of some penetration or breach of ego’s barrier against overwhelming stimuli from the environment (Vol. 18, p. 31). It is clear from his writings that Freud conceptualized ego’s barrier as consisting of different mechanisms or psychic structures which were formed to absorb and/or repel noxious stimulation. When this barrier failed to prevent incursions from without, the inner systems became disorganized by the influx of sensation, somewhat analogous to the overload of an electrical system. The resultant disorganization would extend to other psychic structures and
produce difficulties for the individual in various areas of function.

The nature and degree of the stimuli which produce overload differ for each person, based upon organismic and historical variables which determine the threshold of overstimulation. Thus, some individuals are capable of withstanding considerable amounts of frightening, dangerous stimuli without showing noticeable decrements in function, while others become debilitated by relatively innocuous circumstances. (Winnicot, 1965; EIGEN,.) Freud originally thought of this overload primarily in terms of sexual stimulation; however, the concept has come to include other types of physical and psychological excitation, such as that resulting from aggression or fear elicited by dangerous situations, (e.g., violence in nature, war). Freud emphasized that the trauma need not involve direct physical experience, but could result from the psychological reaction or fantasied outcome by the individual. Thus, a person might suffer psychological trauma and concomitant damage to the psyche from witnessing or imagining an over-stimulating event. This does not mean that he believed that all traumata reported by his patients were fantasied, as some writers (such as Masson, 1984) have claimed.

The importance of whether trauma results from fantasied or real experience has been disputed since its formulation, however. Shengold (1989) discusses the two opposing
theories regarding the basis in reality of traumatic events in the context of psychoanalysis. He argues that taking either of the contrasting poles of belief in this case results in the analyst being trapped and made ineffectual by his theory. Rather, Shengold suggests that there must be a balance between the two approaches to past events. "...I believe patient and analyst must strive for both narrative and historical truth--falling back on narrative when the historical recedes, but a narrative supplied whenever possible by the patient, not by the analyst" (p. 35). His suggested approach appears to be that which is most often employed by any individuals attempting to examine past events, as occurs in legal testimony or other evaluations of data which can only be accessed through sources which are removed from the immediate moment.

The concept of psychic trauma provides a powerful explanatory function. It makes sense in a basic way, and serves to organize thought regarding the development and behaviors of human beings. Analogous to physical trauma, an injury to the psychic structure produces a wound, a rupture or bruising, with psychological processes coming into action which resemble the body’s efforts to repair the affected tissues. The psychological efforts at repair may take the form of mild disturbances or preoccupations which eventually dissipate when the injury is slight. However, if the damage is more serious, permanent psychic effects are more likely
to result, just as major physical injury produces scarring or impaired mobility in the body. It is also held that the earlier an injury occurs, the more damaging it will be to the developing individual. This idea is described by Anna Freud (1967) in her description of the trauma to the underdeveloped ego of the child.

(It) is only logical that the young child’s task of building up the stimulus barrier and defense organization is made immeasurably more difficult if traumatic experiences have to be endured during the critical periods of maturation and development, just as the supporting walls of a house are more open to damage during building operations than after completion. (p. 238)

Empirical support for this notion has been demonstrated by Zivney et al. (1988) who found that girls who were sexually abused at earlier ages showed significantly greater disturbances on projective measures of functioning than those who were abused at later ages.

Khan (1963) discusses trauma to the developing ego in terms of additive injury resulting from subtle failures of the caretaker to fully protect the infantile ego from minor stresses over time.

I should emphasize also that the breaches in this protective-shield role, as I envisage them, are not traumatic singly. To borrow the apt phrase from Kris
(1956b), they have the quality of a 'strain,' and do not so much distort ego development or psychosexual evolution as bias it. In this context it would be more accurate to say that these breaches over the course of time and through the developmental process cumulate silently and invisibly. Hence the difficulty in detecting them clinically in childhood.... They achieve the value of trauma only cumulatively and in retrospect. (p. 291)

Thus, trauma can result not only from what are obviously overwhelming injuries, physical and/or psychic, but also from less apparent failures of the caretaker to mediate between the infant and the environment. Khan posits that this results in a number of effects upon the infant's development, including a "premature and selective ego development" (p. 298) which is formed for defensive purposes, hypersensitivity and responsiveness to the caretaker's moods, faulty development of body-ego awareness, disturbance in the synthetic function of ego, and an inability to form true object cathexes.

Ego Development and Functions

Psychoanalytic theory, and the foci of ego psychology and object relations theory in particular, provide a useful framework for viewing the development and individuation of children, and the resultant adult personality structures. Freud conceived of human personality as being formed by the
interaction of three psychological structures: id, ego and superego. At birth, the infant's psyche consists entirely of id, or energy which seeks immediate expression or gratification. As environmental constraints result in increasing frustration, ego begins to form to mediate between id and the environment. Primary among ego's duties is the protection of the organism from unpleasure, which arises from frustration of drive expression. Ego is considered to develop in conjunction with the physical system, particularly the central nervous system.

Greenspan (1989) provides a cohesive and useful explanation of ego development as it relates to the maturation of physical abilities and senses of the infant. His writings are based upon lengthy and in-depth observations of many infants and their families over several years. He describes the infant's ego as becoming more and more differentiated as increasingly complex organizations of behavior and sensation are available. The earliest stage, homeostasis, in which the infant's ego exists with a "lack of differentiation between physical world, self and object worlds" (p. 64), is associated with the primary physical functions of reacting to environmental stimuli and increasing awareness of physical sensations of the body. Between the ages of approximately two and seven months, the infant's ego is characterized by increased efforts at seeking satisfaction through behaviors. The infant still
possesses relatively undifferentiated representations of self and object, but is beginning to note differences between the "physical world and human object world" (p. 64). In other words, the infant is becoming increasingly aware of the importance of other human beings to his or her own sense of satisfaction, although this is primarily based upon the physical sense of comfort he or she experiences. Between three and ten months, Greenspan also sees the infant developing the ability to purposely communicate with others as he or she learns more about cause and effect operations. An important function of ego at this stage involves the ability of the infant to communicate at a distance, using sensory modes other than physical contact. Greenspan describes the use of cause and effect reasoning as being the beginning of the ego function of reality testing, as the child learns that:

causality is the sense of one’s own behavior and emotions as having consequences. Cause-and-effect experiences teach a child that the world is a lawful place. When cause-and-effect behavioral patterns do not occur, the most fundamental aspect of the sense of causality may be compromised. (pp. 25-26)

Between the ages of ten and eighteen months, the infant works to organize and integrate the environmental data which now arrive with increasing frequency and complexity as the child becomes more mobile and physically autonomous.
According to Greenspan, it is near the end of this phase that the child begins to be able to understand and tolerate conflicting emotional experiences, that is, to begin to understand that the people with whom he or she interacts are not all bad or all good beings based upon their actions, but are the sources of both good and bad experiences who retain both good and bad qualities at all times.

The next stage in Greenspan's conceptualization, from age eighteen to thirty months, is that during which the child achieves representational capacity, or the ability to form abstract conceptualizations of self and others. This ability is necessary for the understanding of complex emotional interactions with others, and for expressing the child's own internal states and experiences.

The final stage of infant ego development occurs from approximately age 24 to 48 months. During this time, increasing differentiation among the many internal representations which have been formed continues. The internal world is organized according to past events and expected outcomes. The child increasingly compares his or her experience to ideas of what should occur, and modifies the internal representations accordingly.

It should be noted that all of these processes require appropriate environmental responses (from the caretakers) as well as adequate motor-sensory abilities on the part of the child. Greenspan clearly indicates the possibilities for
pathological outcome at each stage due to organismic or environmental failure. (Greenspan, 1989) The type of difficulty which results from such failures will be shaped by the nature of the insult as well as the stage at which it occurs. The early experiences of an individual are responsible for later development and adjustment as the person matures, with later childhood and adolescence following the course set out by the formative years. (EIGEN)

Theory of Ego Functions

The specific mechanisms, functions, or processes developed by ego to achieve equilibrium and protect the organism are numerous and complex, and have long been the subject of psychological theory and research. Theorists have hypothesized as many as forty and as few as five discrete ego functions. (Bellak, 1949; Beres, 1956) Bellak (1973), whose work in the area of ego psychology is probably most widely-recognized and accepted, proposed that ego functions may be most adequately described as fitting into twelve categories, which are as follows:

1. Reality testing, which includes the cognitive and sensory functions necessary to determine whether stimuli are within or without the individual, the accuracy of sensory impressions, and the awareness of inner states.

2. Judgement, which consists of the ability to be aware of the appropriateness and likely consequences of one's
behavior, and to use this awareness to avoid unpleasure and danger, and to acquire positive experiences.

3. Sense of reality, of both self and the world. This function describes the degree to which the individual experiences external events as real and understandable, experiences his or her body and its functions as familiar and belonging to the self, as well as the extent to which the person possesses a sense of individuality and separateness of the self from others and the environment.

4. Regulation and control of drives, affects and impulses, or the ability to both tolerate and appropriately express emotional experiences. Inability to mediate such functioning can lead to problems with other people and the law, as well as resulting in a state of almost continual emotional discomfort.

5. Object or interpersonal relationships, which include a host of psychological operations relevant to the way an individual relates to other people and important components of the environment. This function is to some degree related to the sense of reality, in that it is the ability of ego to perceive other people as separate and autonomous from the self and to find value in others apart from their ability to satisfy one’s desires.

6. Thought processes, or the basic functions of cognition, including attention, concentration, memory and language skills, and the ability to think logically and
abstractly. These may be thought of as the underpinnings of other mental activities and the behaviors which result from mentation.

7. Adaptive regression in service of ego, which refers to the ability of ego to harness primary process thought (characterized as fluid, atemporal and not guided by logic) in order to create or discover something new which is required by ego. All acts of creativity are tied to this particular function.

8. Defensive functioning, which includes the extent to which ego is successful in protecting the psyche from distressing intrusions, both intra- and extra-psychic, and to how well these defensive actions allow the person to interact with others and the environment.

9. Stimulus barrier, which is the function of ego that makes efforts to control the level of environmental stimuli impinging on the organism. This function is very important to the concept of psychic trauma, which will be explored in depth below.

10. Autonomous function, describing the ability of ego to carry out learned structured tasks, both physical and mental. This function also refers to motoric control of the body, and the sensory feedback necessary to perform and modify physical activities.

11. Synthetic-integrative functioning, which is the ability to reconcile or integrate contradictory or
discrepant attitudes, affects, behavior and self-representations. This is necessary for the individual to deal effectively with both him or herself and others, and to construct an accurate and complex representation of reality.

12. Mastery/Competence consists of both the objective abilities of the individual, as well as the individual’s own perception of his or her efficacy and sense of accomplishment.

Taken as a whole, this set of functions quite adequately describes the internal states and behaviors of a human being. It is also useful in predicting a person’s response to specific situations or stimuli, and in making hypotheses regarding the overall level of functioning and adjustment of the individual.

As individuals develop, certain ego functions may be emphasized over others due to environmental or biological factors. An understanding of which specific ego functions are more highly developed and which are lacking can be used in therapeutic interventions, and in making hypotheses regarding the individual and his or her behaviors. As noted above, certain functions described by Bellak are related to or dependent upon other functions. Thus, a deficit in one area may result in weakened functioning in other spheres.

Trauma and the Concept of Precocious Ego Development
Early theory and observations focused on the precocious development of intellectual functioning. Children were seen to respond to neglectful or abusive parents with a heightened ability to use language and care for their own daily needs. The result of increased verbal facility at an early age was often an increase in independence on the child's part, and a concurrent abdication by the parents of responsibility for the care of the child. These children often take on considerable responsibilities in the home, even to the extent of providing care for a psychologically or physically impaired parent.

Such a developmental pattern is postulated to often result in a narcissistic individual, who presents himself or herself as being highly capable and independent of other people for any type of assistance. Underlying this hyper-capability, however, is a core representation of self as weak and helpless. This self-representation is defended by the outward appearance of self-sufficiency, and is only seen when the defensive mask temporarily slips due to some personally perceived failure (Modell, 1975).

Solnit and Kris (1967) originally posited such precocious development in their long-term observation of a young girl and her mother. The girl was seen to come to rely upon a sort of rigid "freezing" in response to anticipated violence or abandonment by her mother. As she grew older, these early responses became more generalized to
all interactions with others, and the child relied heavily upon repression and isolation of affect in her daily life, to the exclusion of more adaptive responses. This would logically be predicted by the psychodynamic model of personality development. Just as there is thought to be only a specific amount of libidinal energy available for investment in the progressive psychosexual stages, the closed system concept of psychic energy also applies to the functions of ego. Therefore, if certain functions must be emphasized or developed in response to environmental threat, others will be left with little or no psychic investment.

Kulish (1988) implicates precocious ego development in the genesis of obsessive compulsive neurosis. Kulish states that intellectual and defensive precocity have been most often examined in the analytic literature, specifically in connection with obsessional neuroses. These disorders are thought to arise when ego and superego overpower the instinctual drives. Kulish observes that thought processes are overutilized at an early stage of development, thus incorporating portions of magical thinking, resulting in the observable defensive rituals of the obsessive-compulsive which continue into adulthood.

A relatively recent hypothesis regarding the effects of trauma on ego functioning and development in the child is that of precocious, or early, formation and strengthening of certain ego functions in response to externally induced
trauma, such as physical or sexual abuse. The functions which develop prematurely are those which serve the child best in responding to the traumatic stress. This response is hypothesized to consist of increased skills at avoiding physical danger, with a strengthening of ego functions which control physical interaction with the environment and sensory input. As these functions are relied upon to an increasing degree, however, other ego functions necessarily suffer, resulting in various personality malformations.

Schaer (1991) examined ego development among chronically abused inner-city youth, who evidenced "precocious motor development or hypercathectic of the sensory-perceptual system" (p. 1). Like Khan and Kulish, Schaer observes that these children develop functions which serve to gratify and bind the caretaker to the child. It is necessary for organismic survival that the child learn to monitor the caretaker's mood and respond in ways which lessen the likelihood of negative behavior on the part of the caretaker (e.g.; physical abuse, neglect). These functions involve a sharpening of the sensory processing skills which allow the child to discern from subtle expressions, body postures, and vocal tones the prevalent mood of the usually volatile and emotionally labile parent. Certain tones or gestures may require that the child act in a consoling, attentive fashion, while others serve as warnings that the child remain quiet and withdraw from the
parent, even if such pressing needs as hunger or illness are present in the child.

Schaer describes the resulting personality organization as representing what is known as the "false self" (Winnicott, 1965, p. 3). These children must learn to deny their own needs and feelings in deference to those of the pathological caretaker. They thus feel alienated from their own inner experience, and the children tend to develop "a false set of relationships to itself and others" (p. 3).

**Assessment of Ego Functions**

Few measures have been developed which specifically assess ego functions. Two examples of such measures are those of Bellak (1984) and Loevinger (1974). Bellak (1984) presents a structured interview approach to assessing each of his twelve ego functions. Researchers utilizing his interview has found it to be useful in predicting and/or evaluating patient improvement (Frieswyk et al., 1984), therapy treatment outcome (Sharp & Bellak, 1984), and drug treatment effectiveness (Bellak et al., 1984) among other topics of clinical interest.

The Loevinger Washington University Sentence Completion Test of Ego Development (Loevinger, 1974) measures the development of ego on a dimension of maturity. It is based on the responses of the subject to a number of sentence stems, which are then rated for the quality of the content and the type of ideation expressed by the completed
sentences. This measure is a global assessment, and stresses the interactions of the individual with others and the environment, while interpreting little of the internal processes which underlie these interactions. While not directly addressing much of what is usually meant by ego functioning, the data gathered from this test correlate with general level of social functioning. (Vaillant & McCullough, 1987; Gfellner, 1986)

Despite the fact that there is no specific empirical assessment device for measuring ego functions, virtually all of the psychological assessment instruments in clinical use are employed to assess what may be called ego functioning, regardless of the theoretical model, if any, from which the instrument was developed. For example, reality testing is a frequently encountered construct in the psychological literature. Writers are in good agreement as to what the concept means, i.e., an individual's ability to distinguish real perceptions and events from fantasied or non-real events and sensations, and to understand and agree upon what may be called consensual reality.

Test data from many instruments may be employed to assess the degree to which the subject exhibits development of this ability. The Minnesota Multiphasic Personality Inventory-2 (Butcher et al., 1989) Scale 8 is intended to make descriptive statements regarding the subject's reality testing. Clinicians routinely make judgements regarding
this function based upon responses to the Wechsler Intelligence scales. It is apparent that even though ego functions may not be specifically referred to in the assessment literature in the original sense, a good portion of test interpretation is carried out with these internal processes in mind. One test which does concern itself considerably with ego functioning is the Rorschach Inkblot Test (Rorschach, 1921/1942).

The Rorschach Inkblot Test

The Rorschach Inkblot Test (Rorschach, 1921/1942) provides several indicators which reflect the strengths and weaknesses of the various ego functions of the subject. Originated by Hermann Rorschach (1921), the Rorschach is perhaps the most well known personality test in the field. Originally conceived as a test of perceptual ability, the data generated from this method quickly became the subject of more involved study, namely in the assessment of various personality qualities. The ten inkblot reproductions are presented in order to the subject, usually with minimal instructions to describe what the blot might be. The descriptions provided by the subject regarding his or her perceptions and the location of pertinent details are then examined and compared to the common responses of others. Since its origination, the Rorschach has fostered numerous methods of interpretation. It has been assailed by many,
and as staunchly defended by others. Numerous studies have been carried out to investigate the technique's utility as a diagnostic tool, particularly in clinical settings.

The continuing controversy over the Rorschach is one which exemplifies the schism between psychologists who advocate the use of projective techniques and those who vilify it, considering it to be useless at best and dangerous at worst. Research attempting to assess the validity of the Rorschach, like most topics of study, includes both very good and very inept efforts. Utilizing a meta-analytic technique to summarize a number of Rorschach studies, Parker (1983) examined the aggregate reliability and validity of the test. He found that, when used with a standardized scoring system and coherent theoretical background, "about 70% of the variance in Rorschach scores can be accounted for" (p. 231). Parker translates this to a reliability coefficient of approximately .83, a level considered robust by most psychometricians. Parker also examined the ability of the studies to assess the relationship between "some independent measure (categorical or otherwise) and a Rorschach score" (p. 231) as an estimate of validity. In studies which were considered well conducted, the variance accounted for was 20%, translating to a validity coefficient of .44.
Rorschach Variables and Ego Functions

Both the quantitative and qualitative data gathered from the Rorschach offer information regarding the ego functioning of the subject. Historically, clinicians have emphasized the interpretation of qualitative material in the Rorschach record. Lerner (1991) provides an excellent overview of qualitative analysis of Rorschach responses. With Exner's Comprehensive System (1986), however, interpretation of the test data has focused primarily upon correlations among the specifically defined quantitative variables and observable behaviors and personality tendencies, with an effort to avoid tying interpretation to a specific theoretical model of personality. This approach has allowed for greater standardization among researchers, and resulted in something of a revival of research with this instrument. Exner bases his system upon scoring and interpretive criteria from the five major Rorschach systems developed up to 1970, including those of Klopfer (1954), Beck (1944), Rapaport et al (1968), Piotrowski (1950) and Hertz (1936). Following an exhaustive examination of the Rorschach research, Exner chose to include in his system those variables and formulations from each of the approaches whose usefulness is best supported by empirical data.

Of the variables in Exner's system, several are good measures of ego function (see Appendix for glossary of Rorschach terms). Perhaps the most important are those
which make up what Rorschach called the "erlebnistypus," a German word which translates approximately as "life-style" or "life-approach," and is represented in the Rorschach systems by the letters EB. The EB is calculated as the ratio of human movement responses (M) to the weighted sum of all responses based upon color in the blots.

The first component, that of responses which involve the perception of human movement, has been found to be related to abstract intellectual activity, daydreaming, and fantasy (Dana, 1968; Lerner, 1966; Schulman, 1953). According to Exner (1986):

Clearly, M involves the elements of reasoning, imagination, and a higher form of conceptualization. It is also contingent on a form of delay from yielding to more spontaneous translations of, or responses to a stimulus field, during which time an active and deliberate form of ideation occurs. (p. 329)

From these descriptions, it appears that M responses reflect the operation of ego functions related to thought process and creative intellectual functioning. In combination with the color variables to be discussed below, M relates to the ego's capacity to direct or control the expression of internal drives and needs.

Color responses to the Rorschach test are closely related to the emotional experience and expression of the subject. This thesis was originally made by Rorschach
(1921/1942) based upon his theoretical approach to the test. All writers who utilize the test have also held to this position, and research supports the idea that the utilization of the color features of the inkblots is related to emotional factors in the individual. Lerner (1991) relates color and affect based upon the impact that each has on the individual, stating that:

(a) brief review of the color experience and the affect experience reveals the following common features: both are experienced passively by the individual; in both the individual is affected immediately and directly; and both are closely bound to the dimension of pleasure/ unpleasure. (p. 84)

Exner (1986) provides a report of empirical evidence for the link between color responses and the affective sensitivity of the subject. The color variables are also relatively stable, as evidenced by long-term test-retest correlations of approximately .80 (Exner, 1986).

The extent to which form plays a part in the color response gives an indication of how direct and unmediated by thought are the emotional processes. Thus, Rorschach (1921/1942) proposed a weighting system for responses which contain color. Responses which include color but are more dominated by form reflect the most controlled expression of affect. Those which rely purely upon color to determine the percept are the least controlled by thought processes. A
third category, in which color predominates but includes form lies between the two extremes.

Taken in combination with the human movement variable, the color responses give rise to the above-mentioned concept of erlebnistypus, or EB. The balance of these variables reflects the way in which the individual tends to approach the world and interpersonal interactions. When the human movement responses dominate the record, the individual tends to be focused on inner processes. This style has been termed introversive, and describes a person who makes decisions primarily in response to his or her own thoughts and feelings, with little reliance upon external sources. The converse style is called extratensive, and refers to an individual who is highly responsive to emotional experience, and who relies heavily upon environmental stimulation and input for satisfaction of needs. Extratensive individuals tend to interact intensively with their environments, and to habitually seek emotional stimulation. Individuals who do not display a significant style-preference are called ambitent, and tend to rely upon both types of processing in a non-preferential fashion. Exner reports that these individuals are less effective at problem-solving than those displaying either of the other styles, and attributes this to the ambitent’s failure to approach tasks in a consistent manner (Exner, 1986).
With reference to ego functioning, it would seem that the EB style reflects the ability of ego to direct and control the expression of drive and affect. Individuals who respond to the Rorschach with a relatively large number of color responses can be thought of as less emotionally controlled than those who respond with more human movement percepts.

Affective control and interpersonal relations are also measured by what Exner (1986) terms aggressive content. This is a response which includes perceptions of aggressive acts within the blot, such as two people fighting, a shark devouring a swimmer, a man shooting a cat, et cetera. Lerner (1991) advises that such content should be taken into consideration when describing the likelihood of aggressive acts by the subject. High frequencies of this type of response reflect actual tendencies of subjects to act aggressively toward others (Exner, 1986). While a few responses of this nature are not unusual in a record of at least average length, their increasing presence in the record seems to indicate that the individual does indeed experience significant urges toward aggression, and may act upon these urges in some way.

Another scoring component devised by Exner (1988) which relates to ego functioning is that for perceived cooperative movement among characters in the blots. Just as the aggressive scores suggest animosity toward others,
cooperative movement (COP) scores indicate an interest in positive human interactions. An example of cooperative movement in a Rorschach response would be two women doing the wash together. One would expect high numbers of this type of response from a person who is genuinely interested in other people, and perceives human interactions as being generally of a positive nature. This type of response reflects a well-developed set of object relations, and an individual who tends to seek out or expect to experience positive and helpful interactions with others.

The majority of Rorschach responses are based upon the form features of the blot. Interpretations of these responses focus on the extent to which the subject’s perceptions follow conventional or normative perceptions of the same blot or blot portion. Following Rorschach’s (1921) original formulation, all of the formal systems for Rorschach interpretation utilize codings for good and poor use of the form features of the blot. Hertz (1936) was one of the first clinicians to develop normative tables for determining the form quality of a particular response. Exner (1988) provides an updated set of tables for comparing Rorschach response form quality. The variable of form quality is related to an individual’s function of reality testing, as this function is largely composed of the ability to perceive stimuli in a manner similar to that of the majority of people. Studies of schizophrenic patients also
support the hypothesis that poor form quality on the Rorschach is associated with impaired reality testing. Exner (1986) recommends using a composite variable which evaluates the percentage of good form quality of all responses in the record, called extended form quality-good, designated by the symbol X+. Non-patient subjects tend to produce records with X+ percentages in the 80’s, whereas the mean for a schizophrenic sample is 53%, almost three standard deviations below the mean for non-patients. For children, X+ tends to fall around 75%-78% with a standard deviation of approximately 10%. X+ is a stable variable, and its mean value does not differ significantly across age groups in Exner’s normative sample.

Wechsler Intelligence Scales and Ego Functions

The Wechsler Intelligence scales are the most commonly employed measures of intelligence (Piotrowski & Keller, 1989). They include versions for adults and children, with one version standardized for use with children as young as two years. The Wechsler Intelligence Test for Children-III (WISC-III) (Wechsler, 1989) is the third version of the test for children aged 6 to 17 years. It is composed of twelve subtests which measure the subject’s knowledge, verbal ability, problem solving ability, and perceptual processing through a variety of tasks. It provides three separate IQ scores: Verbal, which measures the subject’s ability to use
and understand language and verbal concepts; Performance, which primarily taps the subject's proficiency in using motor and sensory skills, and ability to perform abstract conceptual operations; and Full Scale, which gives an estimate of the subject's overall intellectual ability. Test-retest reliability coefficients for the WISC-III are .95 for the Verbal IQ, .91 for the Performance IQ, and .96 for the Full Scale IQ. The IQ scores correlate well with those yielded by the previous version of the test (Wechsler Intelligence Scale for Children, Revised; WISC-R Wechsler, 1974), indicating that the two tests measure the same constructs of intelligence (The Psychological Corporation, 1991). This test provides data which can predict the subject's ability to perform in school, and correlates with the ability to perform a number of other necessary functions in daily life. Other indications of the test's validity include robust correlations with numerous achievement tests (The Psychological Corporation, 1991).

This test clearly measures a number of ego functions as conceptualized by Bellak and other dynamic psychologists. As mentioned above, the ego functions to allow the organism to operate in its environment. Language, motor activity, thought processes, object relations, and defensive processes are all involved in the tasks performed by the subject. Factor analysis of the Wechsler tests supports the notion that the subtests measure different aspects of intelligence,
and that the differentiation between verbal and performance tasks is conceptually valid (Kaufman, 1990). Thus, one can reasonably hypothesize that the Performance IQ reflects in a general way the subject’s motoric and sensory ego functioning, while the Verbal IQ tends to measure more the functions of language and verbal reasoning. The subtests may be examined further for involvement of various ego functions, such as object relations, defensive functioning and others.

**Hypotheses**

The theory being examined in this study, that of precocious and imbalanced development of ego functions in response to traumatic circumstances in the child’s environment, would predict variations in functioning which should be reflected in the results of psychological testing. Specifically, it is predicted that children who have experienced physical abuse will evidence a noticeable proclivity toward development and employment of those ego functions which govern motoric and sensory activity. Concurrently, other ego operations in these children will be less developed than those of children not exposed to physical abuse. This pattern of development should be manifest in assessment data in the following ways:

**Hypothesis One.** As compared to their nonabused counterparts, subjects in the physical abuse group will show a greater tendency toward IQ scores in which the Performance
IQ is significantly higher than the Verbal IQ profile as measured by the Wechsler Intelligence scales for Children.

**Hypothesis Two.** On the Rorschach Inkblot Test, as compared to their nonabused counterparts, subjects in the physical abuse group will show a greater tendency toward the extratensive style, with color responses being more frequently given than by the control groups, and human movement responses less frequently given than by the control groups, resulting in a pervasive extratensive profile for significantly more of the physically abused children than the nonabused groups.

**Hypothesis Three.** As compared to their nonabused counterparts, subjects in the physical abuse group will produce Rorschach records containing lower quality of form responses, measured by a lower rating for the Extended Form Quality-Good, variable (X+%) than the control groups.

**Hypothesis Four.** As compared to their nonabused counterparts, subjects in the physical abuse group will produce Rorschach records containing greater frequencies of aggressive content, measured by the AG scoring variable than the clinical control and community samples.

**Hypothesis Five.** As compared to their non-abused counterparts, subjects in the physical abuse will produce Rorschach records containing lower frequencies of cooperative movement, measured by the COP scoring variable than the clinical and community controls.
CHAPTER II

METHODOLOGY

Subjects

Subjects were sixty-six children, ranging in age from 5 to 13 years. One group consisted of twenty-three children with documented histories of physical abuse. A second group of twenty-five children, the clinical controls, consisted of children referred for psychological evaluation and/or treatment who have no history of physical or sexual abuse or neglect. Data on these children are archival, and were obtained from the files of the Dallas Child Guidance Clinic (DCGC), where the children were evaluated following referral by the State Department of Human Services or the child’s school.

The physically abused children all had documented histories of some type of physical abuse, most often of a serious nature. Types of physical abuse included being intentionally burned, being beaten with an object, and being locked in a closet, among other things. Unfortunately, it was not possible to gather a full description of the length and extent of abuse for all of these children. Some children may have suffered abuse for several years, while others may have come to the attention of public agencies.
following a single incident. The children therefore may represent a relatively heterogeneous group with respect to nature and extent of the physical abuse experienced.

The Clinical control group was composed primarily of children referred for evaluation and/or treatment of attentional problems (n = 11), school problems (n = 7) and behavioral difficulties (n = 7).

A third group was composed of a community sample of eighteen children with no documented history of abuse who underwent psychological evaluation as part of a research data base. These subjects were selected from a community sample in Denton, Texas. These community subjects were solicited through a private school and two church organizations. Prior to assessment, the subjects' parents completed the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) along with a demographic and background information form. Subjects were excluded from the study if any of the CBCL clinical scales was significantly elevated (T ≥ 70) or if any of the children had received psychological treatment in the past. No subjects were excluded by these criteria.

Procedure

Rorschach Inkblot Test response records as administered by Guidance Clinic personnel and advanced clinical psychology graduate students (in the case of the community control groups) were rescored by the author, who was blind
to the treatment condition, using the Exner Comprehensive Scoring System. Ten records out of sixty-eight (14%) were drawn at random and scored by a second examiner with extensive experience in the Exner scoring system to establish interrater reliability. Following scoring, each protocol was entered into the Rorschach Interpretive Analysis Program-2 (RIAP-2) computerized system to derive summaries and calculated percentages. Wechsler Intelligence Quotient data were gathered from the files. For purposes of analysis, a difference of twelve points between Verbal and Performance Intelligence Quotients was selected as being significant at the 95% level of confidence, as suggested by Kaufman (1988).
CHAPTER III

RESULTS

Data were first examined to determine the similarity of the three groups on basic demographic and other variables. The Physically Abused, Clinical Control and Community Control groups did not differ significantly in age \([F(2, 65) = 1.83, \text{NS}]\), gender distribution \([F(2, 65) = 2.75, \text{NS}]\) or number of Rorschach responses \((R) \ [F(2, 65) = 1.96, \text{NS}]\). There was a significant difference among the groups for Full Scale IQ \((FSIQ) \ [F(2, 65) = 9.37, p < .001]\) with the Community Control group having a significantly higher FSIQ than the two clinical samples.

Across the sample, the variables of interest were examined for interrelationship. Extended Form Quality \((X+\%)) was found to be significantly negatively correlated with \((R)\). No other significant correlations among the variables of interest were noted (see Table 2).

The records were examined for extreme scores on the variables of interest. An outlier score was defined as one which was two or more standard deviations from the mean for that variable. Two of the physical abuse subjects both had outliers on two variables of interest. The data from these two subjects were subsequently removed from analysis.
Data for the EB style and Performance IQ > Verbal IQ were analyzed utilizing Chi-square nonparametric tests, as these data were categorical. No significant effects for Group were found for EB style (Pearson value = 2.84 (4 df) \( p = NS \)). No significant effects for Group were found for Performance IQ > Verbal IQ [Pearson value = 8.06 (4 df) \( p = NS \)].

The continuous variables of X+%\%, COP and AG were next examined. As X+% was negatively correlated with R, a MANCOVA was run utilizing R as covariate. A multivariate analysis of covariance (MANCOVA) was performed, designating AGG, COP and X+%\% as the dependent variables and Group as the independent variable, with R as the covariate. There was no significant difference among the three groups [Wilks lambda = .86, \( F(2, 63) = 1.51, p = NS, \eta = .26 \)].

Analysis indicated that FSIQ was significantly higher in the Community Control group, thus a second MANCOVA was performed using FSIQ as a covariate. This analysis revealed no significant group differences and that FSIQ did not add substantially to the experimental variance [Wilks lambda = .892, \( F(2, 63) = .92, p = NS, \eta = .29 \)].

An analysis was performed comparing the Physical Abuse group with the combined Clinical Control and Community Control groups, and the Community Control group with the combined Physical Abuse and Clinical Control groups. A significant effect for X+%\% was observed in the contrasts,
with the Community Control group mean X+% being significantly lower than that of the other two groups [Wilks lambda = .88, F(2, 63) = 2.74, p = .05, eta = .23].

To more closely examine the EB and PIQ > VIQ data, MANOVAs were performed on a P-V difference score and the EB component variables Weighted Sum C and Sum M. No significant differences among group means were detected [Wilks lambda = .78, F(2, 63) = 1.3, p = NS], although the means for these variables seemed to show a trend in the hypothesized direction (see table 3). A comparison between the Physically Abused group and the two Control groups did reveal a significant effect for WSumC, with the Control Groups displaying a lower WSumC than the Abuse group [Wilks lambda = .92, F(2, 63) = 2.71, p = .04, eta = .27].

In an effort to capture another measure of impaired reality testing, the Weighted Sum of the Special Scores (WSUM6) was also analyzed utilizing a MANOVA. Again, no significant effects appeared, although the means appeared to show a trend in the hypothesized direction [Unique SS = 176.07, F(2, 62) = 1.15, p = NS] (see table 3).
CHAPTER IV

DISCUSSION

The results of this study did not support the hypothesized configuration of psychological assessment data. Of the variables of interest, only Extended Form Quality (X+%%) differed significantly among the groups, and this finding was in the opposite direction of that expected. Comparison of the control groups with the physical abuse groups did reveal a significantly higher WSumC mean for the Physical Abuse group. No significant correlations between age and Rorschach content variables appeared, in contradiction of widely-used normative tables (Exner, 1990) of children's Rorschach data.

In the original hypotheses, it was presumed that children who were physically abused would be most likely to demonstrate an approach to the external world which was highly guided by affective experience, with little introspection or motoric delay. This assumption is not clearly borne out by the data, as there were no significant differences in EB style among the groups. The WSumC of the combined control groups was somewhat lower than that of the physically abused sample. This suggests that the physically abused children are somewhat more likely to respond to their
environments in an affectively driven manner than are the non-abused children. Although the Physical Abuse children show a greater tendency toward color-dominant responses on the Rorschach, they do not display the pervasive Extratensive style which was hypothesized. This may indicate that while these children are more likely to respond affectively to the environment, they do not do so consistently, and their psychological processes are not clearly focused on such a response style.

The content variables of Cooperative Movement (COP) and Aggressive content (AG) did not differ among groups, suggesting that the children did not differ significantly in the mental processes which underlie the production of such contents. The extremely low frequencies with which these type of responses are given may be responsible for the nonsignificant finding, and a examination of a larger sample might be necessary to observe significant effects for these variables.

The finding of lower X+X in the community sample as compared to the clinical samples is unexpected. It is possible that the differences reflect a test-taking set which was present during the assessment. Perhaps children in the clinical sample, who were tested at a guidance clinic following difficulties resulting in referral for services, approached the evaluation process with different expectations than those of the community sample, who were
aware that they were participating in a study and were tested in their school or a university clinic. These conditions may have resulted in a less serious or focused approach to the test by the nonclinical children. The clinical sample, however, were likely under some stress during evaluation, and may have approached the task more apprehensively. This more cautious, less playful attitude could explain the differences in extended form quality.

It is also possible that, rather than a testing situation effect, the Rorschach data represent a more generalized caution and attention to detail on the part of the clinical children, resulting from life experiences which discourage carelessness or playfulness in interacting with the environment. In this sense, the X+% may be related to the original hypothesis of the effects of trauma upon the child's ego functioning. This finding may indicate that children in less-supportive environments do spend more effort in scanning their surroundings and shaping their perceptions to improve their efficacy in response to environmental data than do children who come from less threatening or disorganized backgrounds.

Perhaps the most interesting finding in this study is that of the mean X+% for the groups. The sum for the entire sample was 41%, with the Community sample producing records with lower X+% than either clinical sample. These means are significantly lower than those of Exner's (1990) reference

This raises questions regarding the applicability of Exner's sample, which was collected almost twenty years ago, to the Rorschach records of children today. It is possible that the form quality tables which were developed by Exner based upon frequency of response are more strongly influenced by cultural factors than by perceptual processes. Given the dramatic changes in popular culture in the past two decades, particularly with regard to the effects of computer technology and dissemination of highly fluid and dramatic visual information as in animation and music videos, children today likely inhabit a perceptual reality which is guided by different rules than those which operated twenty years ago. It may be that children today have learned to be more liberal in their symbolic representations, as they have grown up in a barrage of rapidly-shifting images which are often condensed or distorted. This could explain why the percepts they report do not readily conform to the form requirements in the normative tables. If this is true, then the clinical assumptions which are routinely based upon comparisons to these tables may be significantly inaccurate due to this cultural influence.
Alternatively, the X+% may be measuring exactly what it is assumed to measure, that is, conformity of perceptual processes and visual representations to relatively objective interpretations of blot features. If this is true, then the low X+% in the current samples may represent a problematic trend among the children toward carelessness, or possibly an oppositional stance toward the test or examiner. This appears to be a topic worth further study.

The failure to find significant Performance/Verbal differences among the groups is also surprising, as a PIQ greater than VIQ split has long been accepted as being associated with individuals who have been abused, and clinical populations in general (Kaufman 1990). These findings may be due to a relatively small sample size. Alternatively, this may represent evidence which contradicts a widely-held clinical assumption. The PIQ greater than VIQ Wechsler profile is usually associated with a person who acts out in an external manner, and tends to take a more hands-on approach to interactions with others and the environment. The present findings may suggest that children respond to trauma in a more differential manner, with some taking the route of externalizing behaviors, while others tend to turn inward and focus upon their own thoughts and feelings as a way of dealing with difficulties. This position is supported by the findings of no significant differences among EB style for the groups as well. The
implication of this may be that children respond to the trauma of physical abuse according to individual proclivities rather than tending primarily to develop motoric responses and act out in an external fashion.

There is also the possibility that the relatively young age of the sample (Mean age = 9.4 years) does not allow a broad enough picture of the development of ego function to be drawn. Theoretically, one might expect that with the advent of puberty, the differences in libidinal investment would become more pronounced in the traumatized group, and that the assessment data of these children at age fifteen or sixteen might reveal more dramatic differences.

The findings of the present study do not support the hypothesis that physically abused children develop patterns of ego function as measured on the Rorschach and Wechsler Intelligence scales which rely heavily upon sensory/motor behavior at the expense of other ego functions. Instead, the data, with the exception of the WSumC and X+, suggest that physically abused children do not differ significantly on these measures from children referred for other problems or from children who are selected from a non-clinical population. The physically abused children do show a tendency to rely more heavily upon affective responses to the Rorschach when compared to the non-abused groups. These differences are not carried into the EB style preference, however. The implications of these findings are that
children who have been physically abused likely develop approaches to the world and adaptive behavior strategies which are based upon individual differences in environment and makeup rather than upon the type of trauma they have experienced.

With regard to the Rorschach form-quality variable, there is evidence that this sample differed significantly from Exner's normative sample, regardless of group membership. This calls into question the validity of making clinical judgements regarding perceptual processes based upon the form-quality variable. Further study of the relationship between the X+½ and children's behaviors appears to be warranted.

This study is limited in some ways which may be noteworthy, and thus may indicate the necessity for making cautious interpretations regarding some of the findings. The first and most noticeable limitation lies in the number of children studied. As some of the studied variables, such as COP and AG, occur with relative infrequency in Rorschach records, the sample may be too small to statistically demonstrate an effect, if one exists, which might still be clinically significant.

A second limitation of the study is that of the restricted age range of the sample. A more extensive investigation involving similar children at later ages, particularly those following puberty could provide more
descriptive results. According to analytic and developmental theory, as well as the clinical literature, the psychological changes which occur during adolescence tend to accentuate and, in a sense, crystallize the personality features and behaviors which the individual has been developing throughout his or her life. It is possible that this influx of energy, increased hormonal activity and struggles with social interaction which characterize adolescence would result in increased differentiation among children who suffered physical abuse in comparison to those who did not. Thus, observing the records of older children might reveal more clearly the hypothesized trends of developmental functioning as hypothesized above.
APPENDIX A

GLOSSARY OF RORSCHACH VARIABLES
Glossary of Rorschach Variables

Aggressive Content (AG):
Percept which contains elements of an aggressive nature, such as fighting, hurting, chasing, et cetera.

Ambitent:
Individual whose Rorschach record contains approximately equal values for color responses and Human Movement responses

Color Response:
Any percept which is described, in whole or in part, as being present due to color features of the blots.

EB (Erlebnistypus):
Classification based upon relative values for Color responses and Human Movement responses in a record. An individual is classified as Extratensive, Introversive or Ambitent.

Extratensive:
Individual whose Rorschach record contains a significantly higher value for Color responses than for Human Movement responses. These individuals tend to be more responsive to
emotional stimuli and to seek out environmental input, and approach problem-solving through trial-and-error.

Form Quality:
Refers to the degree to which a specific percept corresponds to the actual form features of a blot. Percepts which correspond quite well to the features and are reported relatively frequently are considered ordinary "o" form quality, or if extremely well-elaborated "+" form quality. Percepts which do not fit the blot features as well, but do correspond to some degree are coded unusual "u" form quality. If a percept does not correspond to the features or violates the form of the blot, it is coded poor "-" form quality.

Sum C:
Simple sum of the number of responses in a record based in whole or part upon color features of the blot.

Weighted Sum C (WSumC):
Sum of the weighted color responses. Responses which are primarily form-determined with some color (FC) receive a value of .5. Responses which contain primarily color with some form determinant (CF) receive a value of 1.0 and responses which are determined only by color receive a value of 1.5. This weighting system is based upon theory and
clinical observation regarding the psychological processes which relate to affective experience and the degree of control an individual displays in expressing such experience.
APPENDIX B

TABLES
Table 1

Subject Demographics and Test Variables

<table>
<thead>
<tr>
<th>Physical Abuse (n = 23)</th>
<th>Clinical Control (n = 25)</th>
<th>Community Control (n = 18)</th>
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</thead>
<tbody>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 F, 15 M</td>
<td>4 F, 21 M</td>
<td>8 F, 10 M</td>
</tr>
<tr>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
</tr>
<tr>
<td>9.4 1.6</td>
<td>9.6 1.8</td>
<td>8.6 1.5</td>
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<tr>
<td>FSIQ 93.6 10.3</td>
<td>FSIQ 99.0 14.1</td>
<td>FSIQ 111.1 14.3</td>
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Table 2

Correlations among Selected Variables

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>X+%</th>
<th>FSIQ</th>
<th>AGG</th>
<th>COP</th>
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</thead>
<tbody>
<tr>
<td>R</td>
<td>-.33*</td>
<td>.04</td>
<td>-.02</td>
<td>.08</td>
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<tr>
<td>X+%</td>
<td></td>
<td>-.12</td>
<td>-.17</td>
<td>.01</td>
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<td>FSIQ</td>
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<td>.03</td>
<td>.14</td>
<td></td>
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<tr>
<td>AGG</td>
<td></td>
<td></td>
<td></td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>COP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Note. N of cases: 68; 1-tailed significance: *-.01

R=Number of Rorschach responses
X+%=Rorschach Extended Form Quality
FSIQ=Full Scale Intelligence Quotient
AGG=Aggressive Content
COP=Cooperative Movement Responses
Table 3  
**Means for Selected Variables**

<table>
<thead>
<tr>
<th></th>
<th>all subjects (n = 66)</th>
<th>Phys Abuse (n = 23)</th>
<th>Clinical (n = 25)</th>
<th>Community (n = 18)</th>
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</thead>
<tbody>
<tr>
<td>XP</td>
<td>41.11 11.95</td>
<td>43.96 11.68</td>
<td>42.36 9.60</td>
<td>35.72 13.98</td>
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<tr>
<td>AGG</td>
<td>.32 .56</td>
<td>.39 .58</td>
<td>.24 .52</td>
<td>.33 .59</td>
</tr>
<tr>
<td>COP</td>
<td>.41 .80</td>
<td>.57 .95</td>
<td>.40 .82</td>
<td>.22 .55</td>
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<tr>
<td>WSUMC</td>
<td>2.28 1.90</td>
<td>2.78 2.14</td>
<td>2.06 1.80</td>
<td>1.94 1.66</td>
</tr>
<tr>
<td>WSUM6</td>
<td>9.62 8.73</td>
<td>11.17 9.88</td>
<td>9.88 8.90</td>
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<tr>
<td>SUMM</td>
<td>2.59 2.09</td>
<td>2.69 2.03</td>
<td>2.92 2.02</td>
<td>2.00 2.25</td>
</tr>
</tbody>
</table>

XP=Extended Form Quality  
AGG=Aggressive Content  
COP=Cooperative Movement  
WSUMC=Weighted sum of Color responses  
WSUM6=Weighted sum of Special Scores  
SUMM=Sum of Human Movement responses
**Table 4**

**EB Style by Condition**

<table>
<thead>
<tr>
<th></th>
<th>PHYS ABUSE (n = 23)</th>
<th>CLIN CONTROL (n = 25)</th>
<th>COMM CONTROL (n = 18)</th>
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<tbody>
<tr>
<td>INT</td>
<td>5</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>AMB</td>
<td>13</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>EXT</td>
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<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

CHI SQUARE PEARSON VALUE = 2.836  DF = 4  p = .586

**Table 5**

**Performance IQ Greater than Verbal IQ (P > V by 12 or more points) By Condition**

<table>
<thead>
<tr>
<th></th>
<th>PHYS ABUSE (n = 23)</th>
<th>CLIN CONTROL (n = 25)</th>
<th>COMM CONTROL (n = 18)</th>
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<tbody>
<tr>
<td>P&gt;V</td>
<td>8</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>V=P</td>
<td>13</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>V&gt;P</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

CHI SQUARE PEARSON VALUE = 8.062  DF = 4  p = .089
Table 6

**MANCOVA with Dependent Variables of X+%, COP and AG**

Comparing Community Controls with Combined Clinical Groups

<table>
<thead>
<tr>
<th>Test Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilks .88</td>
<td>2.74</td>
<td>3.0</td>
<td>60.0</td>
<td>.05</td>
</tr>
</tbody>
</table>

Univariate F-tests with (1, 62) DF

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth SS</th>
<th>Error SS</th>
<th>Hyp. MS</th>
<th>Error MS</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>XP</td>
<td>753.83</td>
<td>7480.58</td>
<td>753.83</td>
<td>120.65</td>
<td>6.24</td>
<td>.015</td>
</tr>
<tr>
<td>COP</td>
<td>.88</td>
<td>40.69</td>
<td>.88</td>
<td>.66</td>
<td>1.33</td>
<td>.252</td>
</tr>
<tr>
<td>AGG</td>
<td>.003</td>
<td>19.77</td>
<td>.003</td>
<td>.32</td>
<td>.009</td>
<td>.923</td>
</tr>
</tbody>
</table>

Table 7

**MANCOVA WSumC and SumM Nonabused Controls compared to Physically Abused Children**

<table>
<thead>
<tr>
<th>Test Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilks .92</td>
<td>2.71</td>
<td>2.0</td>
<td>63.0</td>
<td>.047</td>
</tr>
</tbody>
</table>

Univariate F-tests with (1, 63) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth SS</th>
<th>Error SS</th>
<th>Hyp. MS</th>
<th>Error MS</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSumC</td>
<td>19.88</td>
<td>240.15</td>
<td>19.88</td>
<td>3.75</td>
<td>5.29</td>
<td>.025</td>
</tr>
<tr>
<td>SumM</td>
<td>8.84</td>
<td>273.43</td>
<td>.23</td>
<td>4.41</td>
<td>.05</td>
<td>.81</td>
</tr>
</tbody>
</table>
REFERENCES


58


Hertz, M.R. (1936). Frequency tables to be used in scoring the Rorschach ink-blot test. Cleveland, OH: Western Reserve University Press.


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