THE ROSEBUSH PICTURE SORT: A DIAGNOSTIC TECHNIQUE
TO DIFFERENTIATE SEXUALLY ABUSED CHILDREN
FROM OTHER CHILDREN

by

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This study (N = 123) contrasted a group of sexually abused children in treatment, aged 6 to 12 years, with two comparable groups—other non-sexually abused children in treatment, and non-abused, non-treatment children—to determine whether differences in Rosebush Picture selection could be demonstrated. All children underwent evaluation procedures that included completion of a 12 picture selection (the Rosebush Picture Sort) and the Culture-Free Self-Esteem Inventory-2 (CFSEI-2). A demographic questionnaire for each child was completed. Results showed no differences in picture selection or self-esteem scores of children at the beginning or end-treatment stage. Sexually abused children's Rosebush Picture Sort (RPS) selections at mid-treatment were different than both comparison groups. The self-esteem scores of the two clinical groups in mid-treatment were significantly lower than the scores of the non-abused, non-treatment group, but did not differ from one another. The findings indicate that sexually abused children identify Rosebush Picture Sort pictures differently than other children. It is possible that sexual abuse affects the internal working model of children differently than other types of abuse and trauma.
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**CHAPTER 4: RESULTS**

**Phase One**

Sample Characteristics

Reason for Referral

Gender

Age

Parent

Ethnic Heritage

Geographic Area

Gender Multivariate Analysis

Treatment Group Analysis

**Phase Two**

Hypothesis 1

Rosebush Picture Sort Beginning-Treatment

Rosebush Picture Sort Mid-Treatment

Rosebush Picture Sort End-Treatment

Hypothesis 2

Self-Esteem Beginning-Treatment

Self-Esteem Mid-Treatment

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Informal Findings

Culture-Free Self-Esteem Inventory-2 (CFSEI-2)

Informal Findings

Summary of Findings

**CHAPTER FIVE: DISCUSSION AND CONCLUSIONS**

Discussion

Phase One Sample Characteristics

Reason for Referral

Gender

Age

Parent

Ethnic Heritage

Geographic Area

Phase One Data Analysis

Treatment Group Analysis

Phase Two Data Analysis

Hypothesis 1

Rosebush Picture Sort Beginning-Treatment

Rosebush Picture Sort Mid-Treatment

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CHAPTER 1

INTRODUCTION

Nature of the Problem

"Child sexual abuse is a violation of a child's body, mind, and spirit" (Bagley & King, 1991, p.34). The short and long term effects of sexual abuse on a child's body, cognitive ability, and sense of identity can no longer be underestimated.

In the past ten years, the problem of identifying children who have been sexually abused, and assessing the type and degree of that abuse, has become a major challenge for social service agencies, the criminal justice system, and society as a whole (Berliner & Conte, 1993; Kendall-Tackett, Williams & Finkelhor, 1993; Melton & Limber, 1989; Myers, 1993; Rogers, 1990; Sgroi, 1989). The societal consequences of early sexual trauma are far reaching. Children who have been sexually abused engage, as adults, in a wide variety of anti-social and self-destructive behaviours, such as prostitution, sexual and physical assault, and drug abuse (Finkelhor & Browne, 1985; MacFarlane & Krebs, 1986). Victims of sexual abuse inevitably carry the scars of their abuse with them into adulthood, and many
victims suffer from sexually related interpersonal problems for the rest of their lives (Conte, 1985).

Instances of childhood sexual abuse are difficult to substantiate since the act typically occurs in the privacy of the home or in a secluded environment purposely chosen by the abuser to ensure anonymity. Existing methods of assessing the sexually abused have not proved effective, yet a detailed and comprehensive psychological assessment is critically important since the adversarial legal system demands objective and corroborated information in order to determine whether or not a crime has been perpetrated. A definite need exists for research which will clearly identify specific underlying effects of child sexual abuse, and which will direct professionals towards a more effective and efficient means of providing a comprehensive sexual abuse assessment (Bagley & King, 1991; McGovern, 1993; Robin, 1993; Steller, 1992; Waterman & Lusk, 1993). This study has as its purpose the development and application of an instrument which will be able to distinguish sexually abused children from other non-abused children, or from children who may have been abused, but non-sexually.

The remainder of this chapter outlines previous research problems, including the difficulties in providing accurate sexual abuse assessment; definitions
of terms; the justification for this study; the study's conceptual model; and projective test dynamics. A summary is provided.

Previous Research Problems

In an attempt to identify sexual abuse syndromes, earlier sexual abuse assessment studies have utilized children's drawings, as well as questionnaires and check lists that request adults or children to identify various behaviours and attitudes characteristic of the sexually abused child. Although these studies pursued valid questions, many of the selected measurements have been standardized on non-abused samples and the tests have yielded mixed results (Robin, 1993; Waterman & Lusk, 1993). The empirical studies have not been replicated, and retrospective reports have been found to have low reliability, being shaped by external and internal factors (Brewin, Andrews & Gotlib, 1993). Further compounding the problem, it has been shown that there are no identifiable socio-economic variables that distinguish sexually abused children and their families from non-abused children and their families (Farber & Egeland, 1987; Finkelhor, 1993; Friedrich, Grambsch, Broughton, Kuiper, & Beilke, 1991).
The measurements used in sexual abuse assessment studies primarily concentrate on an analysis of the drawings of children, adult perceptions of the child's behaviours and attitudes, and the child's own self-perceptions. The findings suggest the absence of any specific sexual abuse syndrome or pattern, as well as the absence of a single traumatizing process. No single symptom of sexual abuse has been found, although low self-esteem is one of the most frequently cited characteristics of the sexually abused child (Kendall-Tackett et al., 1993; Wolfe & Gentile, 1992).

Child Sexual Abuse Assessment Obstacles

Typically, child sexual abuse assessment procedures and techniques are similar to the general procedures and techniques used in child psychological assessments. The assessment protocols that professionals are encouraged to use with sexually abused children (American Professional Society on the Abuse of Children, 1990; College of Psychologists of British Columbia, 1990; Steller, 1992; Wakefield & Underwager, 1989) fail to take into account, however, the possible differing emotional, psychological, and sexual development of the sexually abused child. The major drawback of these assessment protocols is that
they require the child to respond in the very manner that the experience of sexual abuse has inhibited. For example, the child may have been threatened by the offender if she shares any sexual abuse information. Researchers agree that sexually abused children are less likely to disclose their abuse than non-abused children are to invent misleading disclosures. At the same time, however, sexually abused children are highly accurate in what they report, but are liable to make numerous errors of omission (Berliner, 1991; Friedrich, 1990; Smith, 1992; Steward, Bussey, Goodman, & Saywitz, 1993). Regardless of these current facts, earlier suggested assessment procedures (Steller, 1992; Wakefield & Underwager, 1989) continue to emphasize unsolicited verbal disclosures from these children.

Assessment criteria of this type make it difficult for distressed, sexually abused children to come forward with an account of their abuse. Children become inarticulate and confused when experiencing conflicting emotions (Garbarino, Stott & Faculty of the Erikson Institute, 1989; Riordan & Verdel, 1991). Furthermore, the sexually abused child's sense of trust in adults has been violated by both the age-inappropriate sexual intimacy with the offender, and by the failure of the adult care-giver to protect the child from the abuse. The shame and guilt felt by the
child tends to produce defensive withdrawal and a denial of the abusive experience (Campis, Hebden-Curtis & Demeso, 1993). Children find various means to avoid recalling the abusive events they experienced (Friedrich, 1990; MacFarlane & Krebs, 1986), for example, denying it happened to them; they also find ways to minimize their low self-esteem by responding in a socially acceptable manner and ignoring their internal feelings (Campis et al., 1993; Kendall-Tackett et al., 1993).

A further problem arises when court personnel, police officers, or social workers who interview sexually abused children do not understand the child's communication, and misinterpret or misread the message contained in the child's play or story (Baartman, 1992; Garbarino et al., 1989). Sexually abused children often relate abuse experiences in a manner that is not specific enough for adults to understand.

Suggested interview protocols in sexual abuse assessments encourage the use of open ended questions. Elementary school-age children have often not developed the fairly high degree of coherent comprehension and expressive ability that this type of questioning requires (Friedrich, 1990). A further disadvantage of this kind of questioning is that it relies on stereotypical responses (Berliner & Conte, 1993).
Moreover, the adults who interview sexually abused children often lack the training required to understand and to interpret the latent meaning of the verbal communications given (Horner, Guyer & Kalter, 1993). As a result, adult judgments may be faulty and they may make decisions before sufficient information is available and alternative theories or interpretations have been considered (McGovern, 1993).

Generally speaking, current child sexual abuse assessment protocols are inadequate for understanding sexually abused children, and do not provide a set of standardized procedures that can measure the effects of sexual abuse on the personality development of the child.

Definition of Terms

Dissociation. Dissociation is a defensive ego function, in which the mind fragments portions of the self in order to survive. Often, dissociation results in the separation of thinking and feeling, for example when a child reports a terrifying experience in a flat, unemotional, monotone voice. External events that threaten people, psychologically and physically, call for this function (Hartman & Burgess, 1989).
Ego Structure. Ego structure is the internal process that integrates the pressures of personal impulses and conscience with perceptions from external reality (Sugarman, 1992).

Emotional Abuse. Emotional abuse is the performance of acts or omission of acts by those responsible for the care of a child. The process is likely to undermine a child's self-image, sense of worth and self confidence (Province of British Columbia, Ministry of Social Services, 1989).

Internal Working Model. The internal working model is an individual's psychological organization; consisting of basic attachment needs, thoughts, feelings, memories, and the use of defense mechanisms. The schematic image of self develops from how one is responded to and how these actions are internally processed. These conditions begin to operate at an unconscious level and include more than one internal working model as one develops (Crittenden, 1992).

Physical Abuse. Physical abuse is direct and indirect behaviour that physically harms a child (hitting, using force, spilling hot water on a child), as well as failure to intervene when others are aggressive against a child (Garbarino, Guttman & Seeley, 1986).

Primary Process Thinking. Primary process thinking is a separate process that develops simultaneously with
logical and neutral thought and is conceptualized as a subtype of affect-laden cognition (Dubowski, 1990; Fischer & Pipp, 1984; Russ & Grossman-McKee, 1990). It often involves images, symbols, fantasy and metaphors (Allan, 1988; Allan & Bertoia, 1992).

**Projective Techniques.** Projective techniques are assessment methods that are founded on the broadly based principle of projection; the techniques utilize a stimulus in order to tap into the unconscious aspects of the participant's personality (Rabin, 1986).

**Rationalization.** Rationalization is the process in which an individual substitutes a socially acceptable explanation of their conduct in place of the real reason (Chaplin, 1975).

**Self-esteem.** An individual's perception of his/her own worth (Battle, 1992).

**Sexual Abuse.** Sexual abuse is an act of sexually exploiting another person (Cavanaugh-Johnson, 1992). The sexual contact/interaction between the two individuals is performed solely for the purpose of fulfilling the needs of the instigator. Acts of sexual abuse include sexual exposure, threatened sexual assault, unwanted sexual activity including kissing, fondling, and attempted or actual anal, oral, or vaginal penetration (Rogers, 1990).
Justification of Study

Impact of Sexual Abuse on Personality Development

The impact of sexual abuse on the personality development of children can be seen in cognitive and emotional distortions, and low self-esteem (deYoung, 1992). Children cannot logically consent to age-inappropriate sexual activities, as they do not understand to what they are consenting and they lack freedom of choice. Children are also unaware of the social meaning of sexuality (Finkelhor, 1979). There is growing evidence that the experience of sexual abuse may alter children's fundamental beliefs about themselves in relationship to others, thus contributing to impaired interpersonal relationships and the development of personality disorders (Stovall & Craig, 1990). Sexually abused children develop low self-esteem as a result of offending adults providing them with messages that are contrary to their internal beliefs (Friedrich, 1990).

Sexually abused school-age children typically lack a strong, clearly defined sense of self. They often feel shame because they believe they have violated accepted moral principles (Garsee & Schuster, 1992). In many instances, they act compulsively in order to block out thoughts of distressing events (Kaufman &
Sexually abused children may be more perceptive of adult behaviour than other children, while being less perceptive of their own, or other children's behaviour (Crittenden & Ainsworth, 1989).

Children who have experienced sexual abuse in the past, and are currently being sexually abused, are the most severely depressed of clinical and non-clinical samples (Wolfe, 1990). Such a finding suggests that a history of sexual abuse continues to affect children and augments the effect of current abuse. Further complications arise when personality changes related to the abuse do not become evident until after the individual has been involved with the criminal justice system (Terr, 1990). The use of non-adaptive defense mechanisms, such as denial, protect sexually abused children from immediate emotional upset, but these defense mechanisms may also have subsequent negative effects, leading to future psychopathology (Dollinger & Cramer, 1990; Livingston, Lawson & Jones, 1993; MacFarlane & Krebs, 1986; McElroy & McElroy, 1989; Schetky, 1990; Shapiro, Leifer, Martone & Kassen, 1990).

Childhood sexual abuse is a complex phenomenon, which includes a wide range of factors, including historical, social, cultural, situational, familial, genetic, and environmental factors. The effects of the
criminal justice system on the victim must also be taken into account (Rogers, 1990). Although society is less tolerant of child sexual abuse than other types of abuse (Bagley & King, 1991), there is a conspicuous absence of trustworthy methods of identifying young sexual abuse victims. At present, the professional community is faced with the problem of obtaining a variety of valid, reliable, non-threatening clinical tools that will accurately reflect the range of factors that need to be considered in assessing and identifying the sexually abused child.

The Conceptual Model

A broad conceptual model is an important primary structure to have in order to evaluate the information generated in the testing situation. With such a model in place, one can develop theoretical constructs, as well as evaluate the significance of test scores and test content (Sugarman, 1991). By adopting an "unbiased" conceptual model, it becomes possible to connect what is currently known about the phenomena of sexual abuse with what is observed in the attitudes, feelings and behaviours of sexual abuse victims (Conte, 1985; Finkelhor, 1988). This type of model makes it easier to understand the interaction of the dynamics
involved in sexual abuse child assessments (Brewin et al., 1993; MacFarlane & Bulkley, 1982).

Unfortunately, there is discouraging empirical research that examines children's own reports of how they have been affected by abuse (Hartman & Burgess, 1989). Previous sexual abuse conceptual models have been cognitively and behaviourally focused (Finkelhor & Browne, 1985; Friedrich, 1990; Hoier, Shawchuck, Pallotta, Freeman, Inderbitzen-Pisaruk, MacMillan, Malinosky-Rummell & Greene, 1992; Sgroi, Blick & Porter, 1985). These models are effective in identifying fear and anxiety in children, but neither do they address the ego structure of the child, nor do they offer methods of restoring the child's self-esteem (Berliner, 1991).

In order to assess the impact of sexual abuse upon an individual, one needs to obtain access to the individual's subjective experience. One way to do this is to find a reliable, non-verbal, projective measure that has the potential to discriminate sexual abuse effects from other abuse effects.
Evaluation of Sexual Abuse Effects from a Projective Perspective

It has been shown that anxious, traumatized children have difficulty verbally communicating a reliable expression of their thoughts and feelings (Garbarino et al., 1989). When children consciously or unconsciously use defense mechanisms, they express their feelings as if they belong to someone else, minimizing and under reporting the extent of their sexual abuse experiences. Although children may verbally deny any ownership of the experience, or the feelings associated with it, they often communicate the suggestion of abuse through their use of symbols or metaphors. Through understanding the latent content of the communication, one gains access to understanding the individual's internal working model.

An alternative way for the clinician to gain insight into children's internal working models is by stimulating the child's emotions and fantasies, and the internal images and feelings which make up the child's internal world, but which the child cannot articulate (Ammann, 1991; Bretherton, 1990). Images presented to the child may trigger similar (though not necessarily identical) reactions to the reactions caused by the original stimuli. Mental imagery can be viewed as the
hypothetical connecting link between the processing of conscious or unconscious information and physiological change (Ammann, 1991; Crittenden, 1989). It can thus play a causative and reactive role.

An alternative assessment procedure involves obtaining from children, through their art, representative images of their traumatic sexual experiences, thereby gaining access to their unexpressed thoughts, feelings and reactions (Burgess, McCausland & Wolbert, 1981). This method releases the child from the pressure of verbal communication and helps to circumvent stereotyped defenses (Cornman, 1988). The child's drawings become the unconscious projection of emotional aspects of the personality, providing cues that are lacking in other measures (DiLeo, 1983; Jung, 1976; Kaufman & Wohl, 1992). Incorporating children's drawings into a non-verbal projective assessment procedure may prove to be an effective means of precisely discriminating sexually abused children from other types of abused children.

Using Projective Measurement with Children

Although clinicians regularly use projective techniques in child assessment, they seldom undertake
research analysis of the accumulated results (Marshall, 1993). This may be due to a number of factors: the interpretation of projective tests requires extensive training; children's reactions to the stimuli may reflect response contamination unwittingly caused by clinician suggestions; and cultural picture bias influences children's responses (French, 1993). Nevertheless, projective technique research is beginning to isolate specific characteristics that can be explored, while eliminating other confounding factors (Singer, 1981). As Singer (1981) suggests, formal projective technique research needs to identify the underlying psychological process that will be measured and to design the instruments accordingly.

Projective measures for use with children include Kinetic Family Drawings (Burns & Kaufman, 1970), Make A Picture Story (Shneidman, 1952), Children's Apperception Test (Bellak, 1986), Goodenough-Harris Drawing Test (Harris, 1963), and House-Tree-Person (Buck, 1970). These measures complement the overall child assessment, but are of limited value in providing reliable sexual abuse diagnostic descriptors. These projective stimuli measures require verbal and visual-motor responses from children.

Three projective studies using the image of a rosebush were undertaken during 1984 to 1992 (Allan &
Crandall, 1986; Bowden, 1991; Carter, Allan & Boldt, 1992; Crandall, 1984) and have shown great promise in the development and application of a non-verbal projective technique for abused children. Rosebush pictures drawn by abused and non-abused children were sorted by adults and other children. The findings of the sorts showed statistical levels of significance, dependent upon the focus of the individual study. For example, counsellors discriminated between rosebush pictures drawn by coping and non-coping children (Allan & Crandall, 1986); Bowden (1991) found abused children sorted rosebush pictures differently than non-abused children. Following these findings, the next step in the development of this non-verbal projective technique is to determine if there are specific rosebush pictures, or rosebush picture sets, selected by a child sexual abuse sample. A standardized self-esteem inventory is included with this study to examine correlations of children's self-esteem level with diagnostic category. The inventory consists of 60 yes/no questions which address common thoughts and emotions reported by sexual abuse victims.
Summary

Current procedures for assessing sexually abused children are based on cognitive and behavioural models, and require conscious, unsolicited verbal responses from the children. These models do not satisfactorily discriminate sexually abused children from children who have experienced other types of abuse. Studies have shown that sexually abused children often have lower self-esteem and exhibit more sexualized behavior than other abused children, but this information alone is not considered reliable enough by the legal system to be used as a basis for discriminating sexually abused children from other children, even when the information is combined with verbal report. There is an urgent need for a broader based test model, one which incorporates unconscious elements, given the limitations of current sexual abuse assessment procedures.

The purpose of this study is to develop a non-verbal projective measure that will investigate and analyze the correlation between specific picture choices and children's diagnostic categories. It is assumed that the internal working models of elementary school age children who have experienced sexual abuse will be different than those of children who have
experienced other kinds of abuse, or no known abuse. The personality dimension of self-esteem has been selected for inclusion in this study, as studies have shown that low self-esteem is a dominant personality trait in sexually abused individuals of all ages (Bagley & King, 1991; Briere, 1992; Briere & Runtz, 1991; Browne & Finkelhor, 1986; Conte & Schuerman, 1988; Faller, 1990; Gold, 1986; Kaufman & Wohl, 1992; Porter, Blick, Sgroi, 1985; Tong, Oates & McDowell, 1987; Wolfe, 1990). As Farber and Egeland (1987) state, assessing differences in abused and non-abused children does not identify these differences as causes of abuse.

There are several reasons why this study differs from the majority of studies on sexual abuse. These are: (a) the study requests abused children to evaluate other children's drawings, rather than completing their own drawings; (b) the focus of the pictures is directed toward the visual and auditory senses of the participants with minimal verbal interaction with an examiner required; (c) parents will not be required to fill out questionnaires about themselves or their children; (d) the selected or designed instruments were chosen, after considerable analysis, for their ability to provide a valid measurement of significant concepts that are known to
affect sexually abused children; and (e) a design is used which incorporates findings from previous studies, and provides the opportunity for uncomplicated replication in future studies.
CHAPTER 2

LITERATURE REVIEW

This chapter includes the following topics: a synopsis of studies undertaken during the past ten years which investigate the impact of childhood sexual abuse; a critique of studies addressing sexual abuse assessment protocols and interviewing techniques; a review of physical, emotional, and sexual abuse studies; the use of projective techniques with children; and an analysis of the use of drawings as a diagnostic tool. In conclusion, the background studies of Rosebush drawing research and the hypotheses of this study are presented. The criteria for selection of the studies cited in this chapter are that the work is (a) current or a forerunner in addressing the topics; (b) representative of the issues of concern; (c) frequently cited as the rationale for later studies; (d) representative of a psychodynamic theoretical approach; and (e) one which uses children's drawings as indicators of suspected sexual abuse.
Sexual Abuse Impact Findings

This section will review the development of the internal working model, the long and short term impact of abusive conditions on the internal working model and the identified problems in sexual abuse studies that need to be addressed in the future.

There are numerous longitudinal studies identifying how early relationships affect one's internal and external perceptual development (Ainsworth, 1991; Bowlby, 1988; Bretherton, 1991; Crittenden, 1989; Egeland & Sroufe, 1981; Hinde & Stevenson-Hinde, 1991; Hopkins, 1991; Kobak & Sceery, 1988; Main, Kaplan, & Cassidy, 1988; Schneider-Rosen, Braunwald, Carlson & Cicchetti, 1988; Waters & Deane, 1988). As summarized in the following paragraph, Steele (1983) addresses significant points that relate to early developmental processes of the internal working model that abused infants experience.

Infants are unable to develop stable feelings of security when the parenting they receive is inconsistent in quality and quantity. Infants develop primitive representations of the parent as an unreliable comforter, and this internal attitude leads to future difficulties in their relationships with others and their feelings about themselves. When this
negative process occurs, infant egos or self-identities become overwhelmed with the physical and emotional pain of neglect and injury. Infant ego structures become distorted and disintegrated, with the result that the infant withdraws musc,ularly and vocally. The infant's internal sensations are not validated. This invalidation results in internal sensations becoming less important in decision making. The infant learns to respond only to external cues, disregarding internal cues. Inadequate care-giving during infant development may lead to low self-esteem characteristics later in life. These children, in turn, may be more vulnerable and susceptible to abusive circumstances as they continually seek secure attachments. As they mature, the sexually abused are covertly and overtly silenced by the offender, with the result that they expend their psychic energy maintaining this status for their personal safety, while at the same time depleting growth in their normal developmental processes (Hartman & Burgess, 1989).

Studies identifying the long term impact of sexual victimization in childhood include findings of symptoms of post traumatic stress disorder, impaired self-esteem, depression, self-blame for negative events, feelings of helplessness, personal "emptiness," and psychological maltreatment (Briere & Runtz, 1991; Gold,
Sexual abuse victims suffering the greatest trauma as adults report experiencing a greater frequency and duration of abuse, multiple perpetrators, penetration, physically forced sexual contact, perpetrator substantially older than victim, bizarre abuse features, feeling responsible for abuse, powerless, betrayed, and stigmatized (Anderson, Martin, Mullen, Romans, Herbison, 1993; Briere, 1992).

Studies using the Child Behavior Checklist (Achenbach & Edelbrock, 1983), suggest that sexually abused children exhibit significantly more sexualized and aggressive behaviours than non-abused children (Friedrich, Urquiza, Beilke, 1986; Tong et al., 1987). Tong et al. (1987) found that sexually abused girls had lower self-esteem ratings on the Piers-Harris Self-esteem Inventory (Piers, 1990) than the non-sexually abused, but that there was no difference in the scores of the two groups of boys.

The most current review of the impact of sexual abuse (Kendall-Tackett et al., 1993) found that not all children who have been sexually abused exhibit internal or external symptoms. However, sexually abused children have more clinical symptoms than non-abused children, but not as many as other clinical child populations. The study identified the absence of any specific sexual abuse syndrome and concluded that there
is no single traumatizing process which occurs. The review implied that sexual abuse symptomatology is developmentally specific. The studies showed the most common symptoms for school age, sexually abused children are fear, neurotic and general mental illness, aggression, nightmares, school problems, hyperactivity, and regressive behaviour.

Friedrich (1993) found that identification of pathological behaviours in sexually abused boys did not occur until the mid-treatment stage. Although the characteristic of low self-esteem is not significant in some study findings, it is hypothesized that this fact may be a result of sexually abused children initially minimizing their internal feelings in their self-reports. Although there are no identifiable demographic characteristics to exclude certain children from sexual abuse, a higher percentage of girls, children with step-fathers, children with poor parenting, preadolescence, children living without a natural parent, children having an impaired mother, and children witnessing family conflict are common risk factors in the sexually abused population (Finkelhor, 1993).

Sexual abuse is a multidimensional, serious problem for children, regardless of long term effects (Browne & Finkelhor, 1986). The need to establish a
conceptual foundation for sexual abuse standardized assessment instruments is very clear (Browne & Finkelhor, 1986; Conte, 1985; Friedrich, 1991). Studies of the effects of sexual abuse are usually based on global self-reports, anecdotal and retrospective clinical reports, lists of clinical problems, and previously established standardized tests validated for non-sexual abuse concerns. The diagnosis of sexual abuse is often dependent upon clinicians formulating opinions based on lists of symptoms or on court decisions (Melton, & Limber, 1989; Myers, 1993).

Theories regarding why sexually abused children differ from non-sexually abused children are in the initial stages of formation. For example, developmental theory suggests that children's cognitive understanding of sexual abuse may determine the emergence and persistence of sexual behaviours (Friedrich, 1991). Cognitive behaviourists point out numerous reasons why the cognitive approach is sensible: (a) there is a specific nature of stimulus events that initiate responses in a predictable way; (b) there are features of classical conditioning in sexual abuse; and (c) the optional types of responses elicited from a cross-section of individuals may be controlled by the same stimulus, such as a threat to survival (Hoier et al., 1992). Psychodynamic theory
includes understanding how children's cognitive, emotional, and other internal processes react to the aversive properties of sexual abuse, e.g., children may sexually act out in an ego defensive manner because they identify with the offender (Friedrich, 1991). In reviewing adult retrospective reports, Brewin et al. (1993) recognize that both cognitive behavioural and psychoanalytic theories propose that it is advantageous for adult victims to find thematic links between their early and current experiences, so that they may reappraise their current sources of difficulties. It is evident in all theories that the impact of sexual abuse on individuals is debilitating and needs to be rectified.

In sum, the immediate and long term impact of childhood sexual abuse on the internal working model is devastating to some, but not to all, individuals. There are no standardized measurements to identify sexually abused children. Parental reports are the preferred measurements in use. Child self-reports have proven to be unreliable due to the child's minimization of the abusive events experienced. The majority of all measurements are based on cognitive and behavioural theoretical foundations, omitting the psychodynamic component. The following section will review studies of sexual abuse assessment and interview protocols.
Sexual Abuse Assessment and Interview

The sexual abuse assessment and interview format used with children is influenced by a multitude of factors, including educational background and/or personal bias of investigators, selection of assessment measurements, and, most importantly, the welfare of the children involved. The following section will outline previously and currently identified issues in these areas.

During the 1980's, North American communities scrambled to develop objective interview and assessment guidelines for police, social workers, psychologists, lawyers and counsellors to use with children who were allegedly sexually abused. The limitations of personal agendas, subjective bias, lack of sound methodological research, and inadequate understanding of sexual abuse dynamics soon became apparent (McGovern, 1991; Robin, 1993; Steller, 1992; Wakefield & Underwager, 1989).

Child sexual abuse assessment and interview protocol (American Professional Society on the Abuse of Children, 1990; College of Psychologists of British Columbia, 1990) were based on early studies of non-sexually abused children's memory responses. The studies took place in laboratory settings. The protocols were developed with minimal understanding of
the impact of sexual abuse on the internal working model of children and of the effect of factors impacting upon children following a disclosure, e.g., delay of court process, suspected false disclosure, removal from home, family responses.

Berliner (1988) provided an excellent discussion of the confounding factors involved in child sexual abuse assessments, recognizing that there is no universally accepted procedure for interviewing children or assessing the validity of their statements. In a follow-up study of current assessment and interview approaches, Berliner and Conte (1993) analyzed reported techniques for significant empirical findings and conceptual integrity. They concluded from their review that the inclusion of professional opinion is vitally important in sexual abuse cases. Additionally, if professional opinion is formed from a broad range of criteria, the judgment is more likely to be objective.

Current studies suggest that assessments include ratings of children's global adjustment and include a rating of their adjustment that is specific to sexual abuse (deYoung, 1992; Shapiro et al., 1990; Steward et al., 1993; Wolfe & Gentile, 1992). Sexual abuse assessment checklists are currently being developed, but there are no studies that are quantitative in
nature and capable of generating a statistical diagnosis of sexual abuse. The use of projective techniques may be of value in addressing this problem. Although there are significant differences between sexually abused children and non-sexually abused children, the question of whether or not these differences are the result of sexual abuse or other coexisting factors is still of concern (Waterman & Lusk, 1993).

Comparative Studies of Sexually, Physically, and Non-Abused Children

This section reviews ten representative studies that attempt to identify specific traits, behaviours, and internal processes that discriminate sexually abused children from other children. These studies illustrate the wide range of data collection techniques that are employed: retrospective clinical chart reviews, parent questionnaires, child questionnaires, child observations and the use of the projective techniques of sand play analysis, analysis of verbal responses to projective pictures, and analysis of children's graphic representations. Research and
methodological limitations of these reviews will be discussed in the Methodology and Data Analysis Problem section.

Obtaining 58 participant records from a psychiatric hospital, Deblinger, McLeer, Atkins, Ralphe and Foa (1989) investigated differences in post-traumatic stress descriptors in sexually abused, physically abused, and non-abused children, ages 3 to 13. Using former in-patient chart notations, they found that sexually abused children exhibit significantly higher rates of inappropriate sexual behaviours and had a higher number of post-traumatic stress disorder symptoms than either the physically abused or non-abused groups. The sexually and physically abused children showed more avoidant and dissociative symptoms than the non-abused children.

Kolko, Moser, and Weldy (1988) compared emotional indicators of 103 sexually abused, physically abused, and non-abused child psychiatric patients. The children's average age was 9 years 9 months. The examiners used parent ratings of home behaviours and hospital chart behavioural frequency counts to collect the data. There were few significant correlations between the identified home and hospital symptoms of the groups.
None of the symptoms that discriminated the sexually abused from the non-abused children were found to significantly differentiate the physically and non-abused children. The differences in the psychopathology profiles of the sexually abused children included exhibiting greater degrees of sexual behaviour, mistrust, anxiety and fear. Although these findings provided empirical validation of behavioural and emotional symptoms of sexual abuse, the explanation of the mechanism or process which contributed to this finding was not identified. The examiners stressed the need for the development of specialized sexual abuse diagnostic and therapeutic techniques.

Exploring the relationship of the severity of emotional distress to chronological age in sexually abused girls, Gomes-Schwartz, Horowitz and Sauzier (1985) requested parents of sexually abused pre-school, school-age, and adolescent girls to complete questionnaires regarding their children's behaviours and attitudes. The findings indicated that there was more clinically significant psychopathology in school-age girls than the other two age groups. This finding lends support to the theory that elementary school-age children develop an increased emotional sensitivity (Westen, Klepser, Ruffins, Silverman, Lifton & Bockamp, 1991). Although school-age children were seen as more
socially skilled than pre-schoolers, they exhibited more internalized anxieties of fear and impulsivity. School-age children displayed more angry, destructive behaviours. The examiners indicated that other psychological problems may appear at later stages of development, and that the sexually abused may have some predisposing, unidentified factors that make them more vulnerable to abuse. They stressed the importance of understanding the emotional harm that the sexual abuse experience has caused the individual.

Comparisons of emotional and behavioural difficulties in 6 to 12-year-old girls (N = 258) were investigated by Mannarino, Cohen and Gregor (1989). The participants were divided into 3 groups; sexually abused, clinic controls, and normal controls. The data collection included the Child Behavior Checklist, the Piers-Harris Personality Inventory, the Child Depression Inventory and the State-Trait Anxiety Questionnaire.

Once again, the sexually abused and clinic participants had more pathological symptoms than the normal control group on the Child Behavior Checklist. However, on the Piers-Harris and on the Child Depression Inventory self-report measures, there were no discrepancies between the three groups. The examiners hypothesized that the lack of significant
findings may be due to the inadequacy of the instruments in tapping into the emotional problems experienced by sexually abused children. The State-Trait Anxiety Scale analysis indicated that the sexually abused girls were more anxious than the other two groups.

It is interesting to note that Mannarino et al. (1989) found that the factors of the familial nature of the abuse, the type of abuse, the number of episodes of abuse, and whether or not force was used, did not significantly correlate with the self or parent-reported symptomatology.

Although the White, Halpin, Strom and Santilli (1988) study focused on 2 to 6-year-old sexually abused children, it is included in this review as it addressed important issues to be considered. The study compared the behavioural characteristics of sexually abused children with those of a group of neglected and/or physically abused children and non-referred children, using a developmental questionnaire including additional items that are characteristic behaviours of sexually abused children.

Contrary to previous findings, there were no developmental delays in any of the boy groups. There were developmental delays in the girl groups. This study found that the sexually abused boys were
significantly more interested in intimate body parts and behaviours of others than the girls. The sexually abused boys exhibited lower self-esteem than the controls, whereas there were no differences in the self-esteem ratings of the sexually abused girls and the controls. The investigators suggested that future studies need to include gender analysis of the data.

The possibility of false positive and false negative disclosure in the respective reports in groups of sexually abused and other children needs to be taken into consideration. An example of this is seen in the previously mentioned studies. The positive self-esteem, self-report scores of sexually abused children may be due to the children's conscious or unconscious projection of their ideal self.

In an innovative projective study by Harper (1991), the differential effects of sexual abuse and physical abuse were identified through sand table scene analysis. Harper made the assumption that children play out their existing conflicts in a direct or symbolic manner. The 40 participants were children between the ages of 3 to 10 years of age. The three groups consisted of sexually abused, physically abused, and sexually/physically abused children. The children were asked to make a "picture" of a world of their own
choice in the sand tray with sand tray items. They each did this on four separate, one-hour occasions.

The themes of the sexually abused children included the need for nurturance and protection. The sexually abused group did not use fantasy and were reluctant to provide a verbal explanation of their scene. Their worlds were described as closed, aggressive and rigid in comparison with the other two groups. Unfortunately, the small sample size limited a formal statistical analysis.

Livingston (1987) compared sexually abused and physically abused children, mean age 9 years 7 months. The children were given a structured diagnostic interview at the time of hospital admission. Of the 100 completing the interview, 28 qualified for the study. The diagnoses were made by a child psychiatrist, based upon the interviews. There were several significant differences between the two groups. Conduct disorders were less common in the sexually abused, but the sexually abused children had more major depressive disorders, somatic complaints and gender identity problems than the physically abused children. It is interesting to note that historical information on both groups of children included reported symptoms of attentional deficit disorders and oppositional
disorders at an early age, preceding either type of abuse report.

Stovall and Craig (1990) investigated mental representations of self and others in a sample of 60 school-age girls, comparing scores of physically abused, sexually abused, and non-abused (distressed) girls on the WISC-R, the Thematic Apperception Test (TAT) and the Piers-Harris.

From a psychodynamic perspective, the investigators assumed that unresolved traumatic experiences create chronically disturbed behaviour and arrested character development.

The TATs were scored with the Internalized Object Relations Scale by two trained graduate students. The scale is used to differentiate between perceptions of self and others. The statistical findings from this scale indicated that the two abused groups significantly differed in comparison to the non-abused children.

Comparisons of the Object Relations Scale and the Piers-Harris indicated the Object Relations Scale is more sensitive in assessing unconscious perceptions of self and others than the Piers-Harris Scale. The physically and sexually abused girls had negative unconscious perceptions of self and others and positive conscious perceptions of self and others. The non-
abused girls had congruent conscious and unconscious perceptions of self and others.

Although mental representations between physically and sexually abused children were not significantly different, there was a significant difference in comparison with non-abused children. The findings support the hypothesis that the difference is related to the actual abuse. The overall results suggested the importance of therapists going beyond child self-reports and conscious interactions during diagnostic and assessment procedures with sexually abused children.

Yates, Beutler and Crago (1985) studied the relationship between drawings by victims of child incest and drawings by children with other diagnoses. The sample was obtained from a child psychiatry clinic. Several studies have linked a child's expression of their internal reality to art works produced, and have suggested that further research be done in this area (Harris, 1989; Klepsch & Logie, 1982; Wohl & Kaufman, 1985). This study sought to identify categories that separate the sexually abused children's drawings from the non-sexually abused children's drawings. The researchers selected 15 psychological dimensions with which to evaluate the drawings, e.g., quality of projection, level of anxiety, and confusion between
love and anger. The investigators attempted to determine which dimensions were more etiologically significant for sexual abuse identification. They hypothesized that the drawings done by incest victims were causally related to both hypo and hypersexualization and that the other differences between the abused and non-abused might include other qualities such as projection. The two psychologist raters of the drawings were purposely unaware of the children's diagnoses and rated the drawings on the basis of subjective impressions to the 15 dimension models. Each decision was substantiated with an example.

In this study, 35 girls between the ages of 3.5 and 17 years, were used as participants. A comparison group (n = 17) was matched for age and socioeconomic background to the children who had experienced incest (n = 18). The diagnoses of the sexually abused girls were based on court identification. An analysis of the t tests indicated only two significant discrepancies between these 2 groups: incest victims had significantly less control over their impulses and tended to rid their conscious thought of painful memories.

An F test showed significant group differences (p < .05). Incest victims were found to be more variable
in exaggerating or minimizing the sexual features of
drawings; they were also less mature, and had
difficulties directing a sexual instinct into an
acceptable form.

Although the study contains numerous
methodological difficulties, the findings showed that
female children who have experienced incest responded
with an impaired ability to control their impulses in
comparison with the other group. It appears that the
internal working models of these girls were affected by
the sexual abuse.

Another study undertaken by Hibbard and Hartman
(1990) compared 134 human figure drawings drawn by
sexually abused and non-abused children, ages 5 to 8-
years old. The drawings were scored using the Koppitz
Emotional Indicators list, a list of 30 items that are
indicative of an area of behavioural or emotional
difficulty, e.g., tiny figures, transparencies. No
statistically significant differences between
categorized items were observed, although there
appeared to be trends. The main conclusion was that
the drawings of sexually abused children demonstrated
anxiety more often than the drawings of comparison
children. There were no gender, race, or socioeconomic
differences between the two groups.
In sum, the comparison studies show sexually abused children exhibit higher rates of sexual behaviours, anxiety, low self-esteem and major depressive disorders than other children. Sexually abused children exhibit inadequate impulse control, have impoverished fantasy and limited expressive verbal skills. Unfortunately, the studies are difficult to replicate due to the wide variety of projective measurements and non-projective measurements that are employed. There are no instruments designed that measure the psychological impact of sexual abuse on the internal working model of children.

Methodology and Data Analysis Questions

Although these previous studies are often cited in research, their limitations are seldom mentioned. Extremely small samples, poor inter-rater reliability, correlating unstandardized personality characteristics with drawings, neglecting to mention that control group members may have been sexually abused, and the omission of age and gender variability are oversights in previous studies. Early studies have a lack of consistent and standardized definitions of child abuse and often have no control groups. Differences that
were found were often assumed to be the consequences of the suspected abuse (Pearce, 1984).

Previous research on the assessment and identification of sexually abused children has not led to a thorough understanding of the internal working model of sexual abuse dynamics for the child. Yet to be determined are the effects of sexual abuse on the covert functioning of the child.

Both qualitative and quantitative researchers are beginning to address the question of how sexual abuse affects an individual's internal personal script and cognitive bias. The authors of research discussed in this review used different terms in describing internal perceptions of self (Finkelhor & Browne, 1985; Friedrich, 1990; Sgroi, 1989; Summit, 1983) and applied a provisional model in referring to the unconscious and conscious workings of the sexually abused person. Ultimately, a more specific and adaptable system is required.

There are certain items in sexually abused children's drawings that provide strong indicators that their internal perceptions are directly related to the sexual abuse they experienced (Kaufman & Wohl, 1992), e.g., the presence of clouds in human figure drawings is more prevalent in pictures drawn by sexually abused children than non-abused children. Some research
studies provide minimally corroborative measurements, but the samples are small and the case studies appear aborted. They are often presented in a provisional manner. Consequently, the basic fundamentals of robust quantitative research need to be supplemented with rigorous qualitative inquiry. The dynamics surrounding sexual abuse issues are of definite public concern, and the underlying issues are of national importance both in theoretical and practical terms.

Projective Techniques in Assessment

The use of projective techniques in the formal assessment of adults and children is a controversial subject. The controversy surrounds the question of whether there is (a) a necessity to understand the process underlying the observed behavior; (b) a relationship of the projective conclusions to the participant's total personality; and (c) the validity of the projective conclusions (Gittleman-Klein, 1986; Zubin, Eron, & Schumer, 1965). Questions commonly asked include: is similar information available from other sources, has a reliable measurement tool of the identified psychological process been developed, are
the test results any better than chance, and have the parameters that influence projective techniques and their interaction been accounted for in the analysis (Meehl, 1965; Singer, 1981; Zubin et al., 1965)? There are parallels between projective testing results and other testing results. For example, the results do not always generalize to the social environment and many times the test administrator is more concerned with the study content than the experimental design (Gittleman-Klein, 1986; Masling, 1965; Murstein, 1965).

The use of projective tools in a thorough assessment of the personality incorporates consideration of the client's intellectual functioning, affect organization, object relations, and defense mechanisms, with the aim of respecting and understanding each client (Jaffee, 1990; Sugarman, 1992).

The rationale underlying the use of projective techniques includes the following assumptions: (a) all behaviour is an expression of personality; (b) a stimulus response is brought about by a set of internal inferences that one formulates judgments about; (c) projective tests tap the durable essence of personality equally in different individuals; (d) the individuals taking the test provide material they can not or will not otherwise volunteer; (e) the more similar the
stimulus to the client, the greater the degree of projective identification; (f) the ambiguous stimulus is unimportant in comparison to the value of the response it elicits; and (g) projective techniques tap into various layers of the personality (Korner, 1965; Murstein, 1965; Zubin et al., 1965). The possibility of projective test results providing a means of identifying latent pathology has also been suggested (Korner, 1965).

There is a need to get beyond simplistic descriptions of symptoms in understanding the total personality. Reporting on a battery of tests becomes useless if the findings provide insufficient data to answer the diagnostic question (Berliner & Conte, 1993). There has been so much emphasis on the statistical verification of testing, but respect for the nature of the unconscious has been neglected (Jaffee, 1990). This statement is supported by Sugarman (1991). Sugarman (1991) suggests that by adapting a broad theory based approach to an assessment, it is possible to expand the sources of data that emerge from the testing situation.

Current studies using projective test coding are obtaining significant qualitative and quantitative data (Exner, 1991; Sugarman, 1992; Westen, 1991). For example, Westen (1991) has developed a five point
coding process which can be used to analyze correlations between sexually abused female reactions on Thematic Apperception Test cards and their scores on the Wechsler Adult Intelligence Scale-R, Picture Arrangement subtest.

As a complement to current sexual abuse assessment protocols, the use of projective testing may prove to provide the much needed, sensitive, non-threatening instrument that distinguishes sexually abused children from other children.

Projective Testing of Children

This section outlines the benefits of projective testing of children, reviews projective testing studies, and presents the types of projective tests often used in child assessment.

The use of projective techniques in assessment provides the clinician with a broader view of children's psychological functioning. When using projective techniques with children, it is necessary to consider the child's developmental level, degree of emotional and social maturity, and the relative fluidity of their ego boundaries (Rabin, 1986). For
example, sexually abused children may be of superior intelligence while their emotional development is frozen at an earlier stage of development.

Child studies using projective techniques have moved from the original psychoanalytic base to a more objective picture of personality development (Haworth, 1986; Rabin & Doneson, 1986; Westen et al., 1991). For example, factor analytic studies of the CAT, multivariate analysis of the TAT, and interrater reliability of the CBCL, indicate that personality issues such as character integrity and an understanding of social causality can be identified in elementary school age children through an objective analysis of projective techniques (Haworth, 1986; Westen et al., 1991).

Projective techniques are assumed to be sensitive to the unconscious aspects of behavioural responses and to connect with one's primary process thinking (Rabin, 1986). Westen et al. (1991) found that certain dimensions of object relations develop during children's elementary school years, e.g., their capacity for emotional investment increases. Accepting this finding, it is clear that the effects of sexual abuse on the internal working model of elementary school age children may be even more devastating to this particular age group.
Projective technique studies with children provide objective findings regarding the interaction of their primary process thinking, coping devices, and affect-laden play (Levine & Levine, 1986; Rabin, 1986; Russ & Grossman-McKee, 1990). In comparison to adults, their responses may be a reflection of their actual reality, rather than their fantasy world (Rabin, 1986; Terr, 1990).

Projective techniques are used in assessment to obtain specific levels of diagnostic information, which are then interpreted with other forms of data. The techniques are only as meaningful as the extent to which they are viewed with a deeper understanding of children's life circumstances. One is cautioned that children's verbal responses to projective tests may be influenced by their anxiety and other defenses, such as emotional numbness, lack of self-understanding, misinterpretation of reality in the testing situation, or their general verbal fluency (Dollinger & Cramer, 1990; Rabin, 1986; Westen et al., 1991). McGrew and Teglas (1990) found that emotionally disturbed boys had much more difficulty than the comparison group in telling a complete, logically constructed story using the TAT cards. Their stories were rambling and their story characters lacked feeling. This is a similar type of response to that of sexually abused children.
Therapists need to incorporate alternative child assessment procedures to allow children an expressive means other than a verbal response. Projective techniques offer this alternative to children. The following section will review projective studies comparing drawings of sexually abused children with drawings of non-abused and other abused children.

The Use of Drawings as Projective Techniques

Using drawings as a projective technique with children provides more information than is obtained from an objective verbal measurement (Klepsch & Logie, 1982; Wohl & Kaufman, 1988). Words are unable to convey all that a drawing represents, and feelings may be altered through the filter of language (Harmer, 1986). Symbols in a drawing bridge the gap between the internal world of the child and that of the child's external reality (DiLeo, 1983). An objective measurement is likely to reveal the kind of attitudes the child perceives the examiner desiring, whereas the use of a projective technique makes portions of the internal self visible (Burns & Kaufman, 1970; Klepsch & Logie, 1982). Verbal objective measurement provides a picture of the way a child would like to be, while
projective measurement provides a view of the way a child truly is. According to Machover (1953), stereotyped defenses are less easy to apply to graphomotor projective responses than to verbal projective responses. Drawings show the cognitive stage, developmental level, flexibility, and overall personality integration of the child (Rubin, Schachter & Ragins, 1983). Drawings become the graphic representation of the child's internal world (Wohl & Kaufman, 1988).

A study by Lewis and Livson (1980) compared differences in cognitive development, personality traits and drawings. Children between the ages of 5 and 11 years (N = 72) were administered the Wechsler-Intelligence Scale for Children (WISC) or the Stanford-Binet and the Goodenough-Harris Drawing Test. A written description of the children's behaviour during testing was recorded immediately after the test administration.

The comparison of I.Q. scores on the WISC and Goodenough-Harris found that boys and girls who appeared more success-oriented obtained higher intelligence test scores than drawing scores. Boys who were shy and dependent and girls who were withdrawn, sombre and irritable received higher scores on the human figure drawings than the intelligence tests.
Lewis and Livson (1980) speculated that this discrepancy may have been due to social conditions experienced by the children in the two testing situations, which affect their different personality styles either positively or negatively.

The study did not identify differences in the verbal and performance WISC scores of the two groups. Findings such as these show that the use of nonverbal stimuli, such as drawings, allows the individual to enter the unconscious perception of their self-concept.

Often times, the affective implications of drawings are ignored in assessment (Harmer, 1986). Children are more comfortable with drawings than with direct inquiry. Drawings are a means of safely ameliorating the defensive affect of traumatized children, while obtaining valuable information at the same time (Lewis & Livson, 1980; Pynoos & Eth, 1986).

The value of human figure drawings as a reliable diagnostic technique is beginning to be recognized. Acton and Moretti (1993) did a meta-analysis of empirical drawing research from 1949 to 1992. The analysis corrected for observed deficiencies of past reviews. The results indicated that a large number of drawing features show potential as measures of the constructs of anger, hostility, anxiety and thought disorder.
Rubin et al. (1983) analyzed drawings completed by children between 4 to 12 years of age. There were 10 participants in each age group and gender. Each participant completed 4 human figure drawings on two separate occasions, one week apart. The findings indicated that human figure drawings reflected major changes in intellectual, behavioural and psychodynamic functioning. The investigators concluded from these findings that the reliability of using human figure drawings in clinical work may not be as significant as the sensitivity to change within the child that the drawings reveal (Rubin et al., 1983).

A study done in 1973 (Prytula & Thompson, 1973) found no supportive results of correlations between the size of human figure drawings and the self-esteem levels of 10 to 13-year-old children. Several years later, a study of stress in hospitalized children compared human figure drawings, physiological and behavioural indices prior to, and following, an injection (Sturner, Rothbaum, Visintainer & Wolfer, 1980). The findings showed significant emotional indicators and graphic expressions of stress-laden themes in the pre-post drawings of the children. There were correlations between the pulse ratings and coping behaviours, but no correlations of the ratings and behaviours with the drawings, suggesting that acute
anxiety taps into an inner psychic process that is internally processed in a different way than the recorded behavioural responses. The possibility of anxiety affecting the internal working model of children differently than the recorded physiological and behavioural responses may be similar to the effect of sexual abuse on children.

The significance of understanding the inner working model of the sexually abused child was recently addressed by Burgess and Hartman (1993). They used a series of event drawings with sexually abused children. The findings suggested that children initially process and organize information at a sensory level, and then use a higher cognitive process to label the information. It follows that using drawings with sexually abused children provides the assessor with greater understanding of children's internal working models and how they have been affected by the sexual abuse.

Drawings as a Diagnostic Technique with Sexually Abused Children

Studies have found it beneficial to use drawings as a diagnostic tool with the sexually abused child.
Drawings are a means of taking the pressure off the child to verbalize, while, at the same time, gaining access to the child's unexpressed thoughts and feelings. The trauma of sexual abuse often interferes with the child's ability to concentrate and attend to stressful questions. The sexually abused child's drawing identifies the impact of the abuse upon the child, allowing for an understanding of the child's ego functioning (Burgess et al., 1981; Kaufman & Wohl, 1992; Miller & Veltkamp, 1989; Riordan & Verdel, 1991). Drawings can be a permanent record for use in treatment or by the court. They can be discussed with the child more than once (Allan, 1988; Miller, Veltkamp & Janson, 1987).

Studies have shown that sexually abused children below the age of 7 years are more likely to include genitalia in their human figure drawings than non-abused children (Hibbard, Roghmann, & Hoekelman, 1987), and the inclusion of genitalia in elementary school children's drawings occurs very infrequently. Sexually abused, elementary school children's human figure drawings scored lower than their chronological age and demonstrated more signs of anxiety than human figure drawings of non-abused children (Hibbard & Hartman, 1990; Jones, 1989). There were no gender, racial or socioeconomic status differences in the sexually abused
and the non-abused sample (Hibbard & Hartman, 1990). Sexually abused (incest) children's family drawings were significantly different than other children's family drawings (Hackbarth, Murphy & McQuary, 1991). Although the above studies show significant promise for clinical use, the studies have limitations that need to be addressed.

Limitations of Drawings as a Diagnostic Tool in Assessment

The use of drawings in the assessment of sexually abused children presents some limitations. The drawings may have been completed by children to satisfy the adult requesting them; drawings taken out of clinical context do not provide enough information to qualify as a complete assessment; some children may not like to draw; children's perceptions of their drawings may not have been adequately explored; diagnosis cannot be made on the basis of one drawing; generalizations about drawings are possible in terms of principles only, not specific symbols in drawings; it is difficult to define widespread variables for scoring drawings; and finally, the chain of inference leading from children's drawing to assessment reports may be too
complex and subjective to be reliable or valid (Hagood, 1992; Miller & Veltkamp, 1989; Tritell, 1988).

An alternative to the human figure and kinetic family drawings is being developed.

Rosebush Research

A method of inner personal evaluation was developed by Violet Oaklander (1978). As originally described by Stevens (1971), this technique, intended as an aid to children who were processing the emotions of painful issues, requested that children use the familiar metaphor of a rosebush as an artistic medium. This technique encouraged children to visualize themselves as a rosebush, draw detailed pictures of themselves as a rosebush, and then respond to questioning about the feelings of the rosebush.

Crandall/Allan Rosebush Study

Building on this approach, Allan and Crandall (1986) developed and administered the Rosebush Visualization Technique (RVT) individually to 20 ten-year-old children (10 "coping" and 10 "non-coping"), and then asked them to "draw a picture of their rosebush." Three independent counselling
psychologists, trained in projective assessment, then sorted the 20 drawings into "coping" and "non-coping" categories. A significant difference (p < .05) was found between the two groups. Interestingly, after each child's words and phrases were included with their drawing, the raters ability to discriminate between the two groups improved to the .01 level of significance. As the background of each child's drawing was examined, it was discovered and clinically noted that the rosebushes of coping, sexually abused, physically abused, and emotionally neglected children differed significantly. Coping children drew colourful rosebushes with abundant flowers; sexually abused children placed protective fences around many of the rosebushes; the physically abused children tended to include large numbers of thorns on the rosebush, and the drawings of the emotionally neglected children were extremely impoverished. Clearly, the RVT appeared to offer the possibility of providing a differential diagnosis.

**Bowden Rosebush Study**

In 1991, Bowden (1991) continued the rosebush research by presenting previously drawn rosebushes to 42 abused and non-abused children. Bowden's assumption was that if a traumatic past experience was
internalized by the child, it was likely that this similarity would be recognized through rosebushes drawn by children who had experienced similar trauma.

Bowden's subjective analysis indicated that non-traumatized children selected light, colourful, balanced designs filled with positive life qualities, while the abused and neglected children selected pictures depicting isolation, lacking midpoint horizon lines, and containing dark backgrounds.

Each child was asked to evaluate and sort the rosebushes into seven Q-Sort categories from "most like" to "least like" themselves. Bowden found that abused and non-abused children globally discriminated in selecting the rosebush drawings of other abused and non-abused children (p < .05). However, no significant correlation was found to exist within the specific participant diagnosis of physical abuse, sexual abuse, emotional abuse or non-abuse children, and drawings done by children with similar diagnoses.

For clarification on this matter, Bowden suggested that an empirical approach be used to effectively discriminate which specific drawings differentiated the non-abused, sexually abused, physically abused, and emotionally neglected groups of children. The more important result of this study, however, was the fact that the children did not randomly sort the drawings.
Carter/Allan/Boldt Rosebush Study

To further explore the possibility of rosebush drawing selection offering a differential diagnosis, Carter et al. (1992) examined two questions: (a) to what extent do sexually abused children select pictures completed by similarly diagnosed children as being most like themselves and reject pictures completed by children with other diagnoses as least like themselves? and (b) which specific pictures within each set of pictures are chosen as being more significant to one diagnosis than another?

Participants for this study included 11 children, ages 7 to 12, in individual treatment with one therapist; 3 males, mean age 9 years 3 months; and 8 females, mean age 9 years 6 months. Two males and 7 females were diagnosed as sexually abused. One male and 1 female were diagnosed as having an adjustment reaction disorder. The sample Caucasian families were of mixed socioeconomic and marital status.

The individual children were previously given the RVT. They visualized their own rosebush environment, drew a symbolic representation of it, and responded to a series of questions as if they were the rosebush; e.g., "Tell me about your flowers."

Sexually abused children often believe others can tell that they have been abused (Sgroi, 1982). In
turn, the children become anxious in interpersonal relationships, feel like social outcasts, and develop physiological and somatic reactions to their internal feelings (Schetky, 1990). To account for the anxiety level of the sample, the Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1990) was individually administered to the 11 children during a therapeutic session. The RCMAS is a standardized, objective measurement scale of anxiety that children experience, including physiological anxiety, worry, over-sensitivity, social concerns, and concentration. The RCMAS includes a Lie scale.

Rosebush Q-Sort Pictures

Q methodology was used as an objective analysis technique to obtain subjective points of view from this small group of individuals. Because the participant conducts the sort, this methodology avoids interrater reliability complications. Twenty-four rosebush drawings were selected for the Q-Sort from an accumulated collection of drawings used in the previous rosebush studies. Six representative rosebush drawings were chosen to be part of each set: emotional neglect, pictures 1-6; non-abuse, pictures 7-12; physical abuse, pictures 13-18; sexual abuse, pictures 19-24. A forced choice Q-Sort (McKeown & Thomas, 1988) of the 24
pictures was individually administered to the children. The children were asked to place the pictures in order from "most like themselves" to "least like themselves" in the following pattern:

Frequency: 1 2 2 3 4 4 3 2 2 1
Q-Scores: 10 9 8 7 6 5 4 3 2 1
Evaluation Criterion: "Most Like..."...."Least Like..."

Results

A data analysis was undertaken using one repeated measures factor design (Glass & Hopkins, 1984). The analysis showed the participants grouped into 3 types: Type 1 - 3 sexually abused females, 1 sexually abused male; Type 2 - 3 sexually abused females, 1 sexually abused male, 1 adjustment reaction disorder female and male; Type 3 - 1 sexually abused female. Type 3 was discarded from the data analysis as the client was extremely atypical of the total sample and not of importance in the analysis (McKeown & Thomas, 1988).

Type 1 Z-scores (1.0 or greater than 1.0) indicated 4 non-abuse drawings were selected as most similar to Type 1 children (see Appendix A). Two physical abuse and 1 sexual abuse drawings were least similar to them. Type 2 Z-scores indicated 2 non-abuse, 2 sexual abuse and 1 physical abuse drawings were chosen as most similar to Type 2 children (see
Appendix A). One emotional neglect and 2 physical abuse drawings were least similar to Type 2 children.

Data analysis of the 24 rosebush pictures was undertaken using one repeated measures factor design (Glass & Hopkins, 1984), hypothesizing that there would be no significant pictures within each set. The tentative conclusion appeared to be an overall significant difference between the pictures at the .01 level. Emotional Neglect Set $F_1$ (df 1,10) 6.35; Non-abuse Set - $F_2$ (df 1,10) 4.77; Physical Abuse Set - $F_3$ (df 1,10) 21.32; Sexual Abuse Set - $F_4$ (df 1,10) 4.11.

The RCMAS total t-scores and subtest scores on Type 1 and Type 2 sexually abused children indicated there was no significant difference in levels of anxiety between the 2 Types at the .05 level of significance.

Type 1 sexually abused children selected pictures from the non-abuse set as being most like themselves. The remaining two pictures in the non-abuse set were their next choices as being most like themselves.

Type 1 children chose two physical abuse and one sexual abuse pictures as being most unlike themselves. Following this choice, a sexual abuse and emotional neglect picture were chosen.

In summary, Type 1 sexually abused children chose non-abuse pictures as being most like themselves. The
majority of sexual abuse pictures were chosen by Type 1 children as being least like themselves. Reasons for these choices include their possible denial of reactions to the abuse, their psychological reintegration since the abuse was reported, or an as-yet unidentified cause.

According to the therapist, Type 1 children had a positive attitude towards themselves; the children made good eye-contact, exhibited a sense of humour, were clean and well-groomed, played creatively, and were able to directly address their personal concerns. They chose non-abuse rosebush pictures as being most similar to themselves. They stated they "liked" these pictures more than the other pictures. These children chose physical and sexual abuse rosebush pictures as being least similar to themselves. The emotional neglect rosebush pictures were not significant.

Type 2 children had negative attitudes towards themselves. According to the therapist, they were unmotivated during play, focused on themes of war, deprivation and abandonment. They did not demonstrate problem solving skills. There appeared to be more ambivalence in Type 2 children's discrimination between sets of pictures. For example, pictures from three different sets were selected as being strongly similar to Type 2 children. They chose sexual abuse pictures,
physical abuse pictures, and non-abuse pictures as being most like themselves. The rationale underlying this discrepancy may be due to several components, e.g., degree of reaction to abuse, length or type of treatment, low self-esteem, poor attachment patterns, or an internal attitude of identifying themselves as a victim.

On the RCMAS, there was no significant difference in levels of anxiety between the two groups at the .05 level of significance.

There were 7 significant pictures within the picture sets for Type 1 and Type 2 Z-scores. The Type 2 Z-score for emotional neglect picture 6 was negative. This score indicated a denial of feelings associated with emotional loneliness. Type 1 Z-score for picture 6 was not significant. Type 1 Z-scores were significantly positive for the non-abused pictures 7 and 8 in comparison to Type 2 Z-scores being in the negative range. It is evident that Type 1 children identified the pictures drawn by non-abused children as being similar to themselves.

Physical abuse pictures 15 and 18 and sexual abuse pictures 20 and 21 had significant positive Z-scores for Type 2. These same picture Z-Scores were either close to zero or negative for Type 1. Type 2 children identified with pictures drawn by physically abused and
sexually abused children as being similar to themselves.

It seems that the pictures were selected by all groups from their overall impressions of the pictures, and according to how they corresponded to their inner self-perceptions. According to the children's verbal report, the majority of their choices were made because they felt they "liked" the pictures and not because of specific items in the pictures.

There did not appear to be a gender or single/two parent family status discrepancy between Type 1 and Type 2 participants. Type 1 children had been in therapy slightly longer than Type 2 children. The mean number of children's therapy sessions were 19.3 and 16.5, for Type 1 and Type 2, respectively.

In summary, Type 1 children were positive, with healthy ego structures enabling them to handle tension with less use of denial as a defense mechanism. They were cheerful in their home, school, and therapeutic environment. The effects of their sexual abuse appeared to be externally and internally resolved at this stage of their development.

Type 2 sexually abused children were described as negative and aggressive in their home, school, and therapeutic environment. Their ego development
appeared thwarted and the necessity for this group to continue therapeutic treatment was apparent.

Continuing the development of the RVT as a tool to distinguish sexually abused children from other children was strengthened by the Carter et al. (1992) research. The need to find a set of discriminating rosebush pictures appeared to be the next step in this process.

Limitations of Rosebush Studies

The participants in the previous Rosebush studies were obtained from a metropolitan area on the west coast of British Columbia. Future Rosebush studies need to obtain a larger number of participants from a broader geographic area. This will increase the strength and generalization of the findings.

Q-Sort methodology was advantageous in analyzing the data in the previous Rosebush studies. The direction of the current study is to develop a projective assessment tool. Because Q-Sort Rosebush selections required a long period of time for children to complete, it will be beneficial during assessment procedures to provide children with a smaller number of discriminating pictures, requiring an alternative type of selection response.
The preceding Rosebush data analyses showed significant differences in the picture selections of abused children and non-abused children. Furthermore, differences in Rosebush picture selections were shown between sexually abused children having positive attitudes and sexually abused children having negative attitudes. The possibility of Rosebush picture selections being related to the stage of treatment, level of self-esteem, and the type of abuse, needs to be considered.

Hypotheses

In this subsection, the hypotheses on which this study is based are presented. Each hypothesis is prefaced by a brief statement of rationale.

Studies have found that sexually abused children exhibit more overt sexual behaviour and include more sexual images in their drawings than other abused children. Therefore, it is possible that acts of sexual abuse affect the internal working model of children differently than other abusive acts. Accessing this internal discrepancy through visual stimuli provides children with a non-threatening,
unconscious operation to which they can easily respond. Sexually abused children have developed strong defense mechanisms that protect them from ego threatening circumstances. Once sexually abused children in treatment begin to feel safe, and develop trusting relationships, their internal working model is more accessible.

**Hypothesis 1.** Sexually abused children at different stages of treatment will select Rosebush Pictures that are significantly different than pictures chosen by children with other abuse diagnoses, or children with no known abuse.

Low self-esteem is a significant trait of sexually abused children. The possibility of children having low self-esteem prior to being sexually abused must be considered. Feelings of low self-esteem may create thought patterns and behaviours that make children susceptible to any kind of attention from others, and, in turn, more vulnerable to being sexually, physically, and emotionally abused. It is proposed that the self-esteem of children is affected differently by sexual abuse than other types of abuse. The differences within children between the effects of sexual abuse and other types of abuse does not change during treatment.
Hypothesis 2. Self-Esteem scores of sexually abused children at different stages of treatment will be significantly different than the self-esteem scores of other abused or non-abused children.
CHAPTER 3

METHODOLOGY

This chapter begins with the design of the study, a description of the participant sample, the therapists and the procedures that were undertaken. This is followed by a description of the instruments, followed by the data analysis relevant to each hypothesis.

Method

Design of the Study

The rationale of this design is based on the tacit assumption that there is some element in Rosebush drawings that triggers a response from sexually abused children that is different than responses from other children.

This study investigates the relationships between scores on Rosebush picture selections and child diagnostic categories, e.g., do sexually abused children choose a certain Rosebush Picture or set of Rosebush Pictures more often than children who were not sexually abused? Included in the investigation are the child participant's stage of treatment and level of self-esteem. The dependent variables are the child participants' scores on the set of 12 Rosebush
pictures. The independent variables are the diagnostic referral groups, stages of treatment (see Figure 1), and level of self-esteem.

Figure 1 - Child Participant Selection Diagram

Child Participants

Following approval from the University of British Columbia Behavioural Sciences Ethical Review Committee for Research involving Human Subjects, the Ministry of
Social Services, and the Ministry of Child and Youth Mental Health Services (see Appendices B-1, B-2, B-3), 66 sexually abused children and 46 other children in treatment were recruited from the case loads of therapists and psychologists in private practice, private agencies, mental health and social service offices of a western province.

A descriptive introductory letter (see Appendix C-1) was sent to the therapists and psychologists, followed by a telephone call or personal contact by the principal investigator to obtain therapist or psychologist consent (Appendix C-2). Participating therapists and psychologists were then sent specific research directions (see Appendix C-3) and asked to obtain written consent from parents of participating children between the ages of 6 years 0 months to 11 years 11 months and of normal intelligence (see Appendix C-4). This age range was selected for inclusion of participants in the study because the actual detection of sexual victimization is less probable in school-age children than younger children (Campis et al., 1993; Conte, 1991); school-age children are more likely to maintain the secrecy of abuse as they recognize the social implications (Anderson et al., 1993); school-age children have feelings of guilt and shame associated with the sexual
abuse they have experienced; and school-age children do not depend on the behavioural reenactment of the sexual abuse as the only means they use of mastering the trauma; if behavioural reenactment is used as a healing technique by this age group, it is less detectable as the children often play outside, or in an unsupervised environment. Any child of normal intelligence, within the defined age-range, and in treatment, qualified for inclusion in the study.

The therapist was requested to place the signed Parental Consent Form with the child participant's clinical record. Of the 130 child participant returns, 7 were excluded due to falling outside of age requirements: 2 returns were under age 6 years 0 months; 5 returns were over age 11 years 11 months.

Eleven non-abused, non-treatment child participants were obtained from the families and friends of three psychologists and one nurse clinician.

**Therapists**

Provincial mental health representatives gave permission for the staff at 8 mental health facilities to be contacted, providing a mental health pool of 15 therapists or psychologists to administer the materials to the child participants (see Appendix B-3). In
addition, 12 therapists and 4 psychologists in private practice or community services agreed to participate. Of the 31 therapists or psychologists administering the instruments to child participants, 4 were male and 27 were female. There were 8 registered psychologists having clinical, counselling and developmental backgrounds. Of the remaining 23 therapists, 15 had backgrounds at the masters level in art, counselling psychology, education, nursing, or social work. Six therapists held bachelor degrees in education, nursing, psychology, or social work. The remaining two therapists were a registered art therapist and a licensed practical nurse. The therapists and psychologists will be referred to as "therapists" in the remainder of the study.

Eighteen of the therapists collected data in a large metropolitan area. The remainder of the therapists collected data in the major provincial zone locations: interior (7), valley (4), northern part of Island (2).

Procedures

Data were collected over an 8 month period. Each therapist was provided with a number coded set of materials for each child participant once the therapist
agreed to participate in this study. The set of materials included (a) a letter of instructions for the therapist (see Appendix C-3), (b) a demographic questionnaire (see Appendix D-1) (c) a Rosebush Picture Sort answer sheet and administration instructions (see Appendix D-2), (d) a CFSEI-2 question/answer sheet (see Appendix D-3), (e) a Therapist Permission Sheet (see Appendix C-2), (f) 2 Parent Permission Forms (see Appendix C-4) and (g) 1 cerloxed set of Rosebush Pictures (see Appendix D-2).

The therapist completed the demographic questionnaires and returned them with the Rosebush Picture Sort (RPS) forms and Culture-Free Self-Esteem Inventory (CFSEI-2) answer sheets to the principal investigator (see Appendix D-1, D-2, D-3). Each individual set of data was given a numeric code to provide anonymity to the children and their therapist.

The principal investigator identified the beginning stage of treatment as 1 to 3 sessions (Carter & Allan, 1992; Horvath & Greenberg, 1989; Mannarino et al., 1989). The mid and end stages of treatment were identified by the child's therapist and noted on the demographic questionnaire: "# sessions with therapist...; beginning rx...middle rx...end rx...". Distinguishing the mid and end stages of treatment was an individual decision made by each therapist, based on
their knowledge of the child participant and the therapeutic process.

If the returned data were incomplete, the principal investigator contacted the therapist and requested the missing information. Once each set was complete, the principal investigator assigned the child participant returns to one of three diagnostic categories, as the therapist noted on the demographic questionnaire item "reason for referral": sexual abuse, other treatment or non-treatment (see Figure 1). The non-treatment, non-abuse child participant group (N = 11) was used as a comparison for all the three treatment stages.

Following the receipt of the data, the principal investigator provided each therapist with the self-esteem ratings of their number-coded participants. No other response information was released to the therapists.

**Instruments**

Three instruments were used to collect information: a demographic questionnaire; the Rosebush Picture Sort (RPS); Culture Free Self-Esteem Inventory-Second Edition (CFSEI-2; Battle, 1992).
Demographic Questionnaire

The demographic questionnaire (see Appendix D-1) provided information on the following: (a) therapist gender and educational level; (b) geographic location; (c) child gender; (d) child age; (e) child ethnic heritage; (f) child residence; (g) reason for referral; (h) degree of suspected abuse; (i) type of suspected abuse; (j) number of treatment sessions; (k) stage of treatment; (l) type of parental attachment; and (m) general comments. The reason for referral, type of suspected abuse, number of sessions and stage of treatment data were used as criteria to assign participants to groups (see Figure 1).

The items on the demographic questionnaire were selected to obtain specific information with which to clarify potential correlations between sexual abuse and other factors; for example, whether there is a higher number of sexually abused children of single parent families in comparison to sexually abused children living in two parent families. The demographic items of interest were selected and compared using chi-square tests to determine if there were significant differences in demographic variables across the three treatment groups. If differences were found, these variables might need to be included in the final data analyses.
The type of parental attachment information was not under investigation in this study. The parental attachment information was collected for use in future research.

**Rosebush Picture Sort (RPS)**

A set of 13 Rosebush pictures (see Appendix D-2) was selected for use in the study. The original pictures were drawn by sexually abused, physically abused, emotionally neglected, and non-abused children. The 13 pictures were chosen based on previous Rosebush research (Bowden, 1991; Carter et al., 1992), in which these 13 Rosebush Pictures discriminated between groups of abused and non-abused children, and sexually abused children with high and low self-concepts. Four expert child abuse therapists reviewed the 13 Rosebush Pictures for potentially distressing or threatening visual cues. They approved this set of Rosebush Pictures for research with abused children.

The selection of discriminating pictures noted above was based on results derived from previous Q-Sort methodology findings (Bowden, 1991; Carter et al., 1992). The Q-Sort method allowed children to conceptualize and rank order a large set of Rosebush Pictures ($N = 24$). For the present study, a Likert response format was substituted for the Q-sort method.
to investigate the strength of a child's identification with each picture. The children identified how they felt about each picture in this format, rather than ranking the pictures against one another. Unlike the Q-Sort method, the Likert Scale can be administered rapidly, facilitating inclusion of the Rosebush Picture Sort Likert Scale in an assessment package. In research or assessment with children, the length of time for test completion is of major importance as a lengthy assessment tool quickly becomes boring to children and may, therefore, influence their true responses. Although the Likert Method is usually a five point anchored scale, a shorter, even numbered four point scale was chosen to prevent participants from continuously selecting the midpoint of the scale (Dawis, 1987). Further, using four choices provided clearer information in relation to the strength of the hypotheses. For example, either children did or did not identify with each Rosebush Picture; no neutral choice was allowed.

The Rosebush Picture Sort (RPS) was presented individually to each child by their therapist. The therapist was requested not to interact with the child or give the child any prompting during this test administration (see Appendix D-2). The child rated
each picture on a four point Likert scale from "not at all like me" = score of 4...to "very much like me" = score of 1.

The first picture was a test sample, drawn by a non-abused child. The remaining 12 Rosebush Pictures were arranged in the following rotating order: picture drawn by (a) non-abused, (b) physically abused, (c) sexually abused, and (d) emotionally neglected child. This picture order (a,b,c,d) was repeated three times, totalling 12 test choices. This picture order was decided upon to prevent children from making a set response choice or from using a sequencing bias, e.g., making a repeated negative response to four pictures in sequence that were drawn by a non-abused child. And in turn, the alternating picture order was selected to provide optimum conditions in which to tap into their internal working model (feelings, memories, defenses).

Culture-Free Self-Esteem Inventory - Second Edition (CFSEI-2)

The Culture-Free Self-Esteem Inventory (see Appendix D-3; Battle, 1992) was individually administered to each child by their therapist or psychologist to obtain a measure of the child's self-esteem level. Form A of the Culture-Free Self-Esteem Inventory (CFSEI-2) is a 60 item, yes-no inventory,
intended to measure an individual's perception of self-worth. The CFSEI-2, Form A, was standardized on children, grades 1 through 6.

The Culture-Free Self-Esteem Inventory (CFSEI-2) was chosen for inclusion in this study as it uses items that are often of specific concern to sexually abused children. For example, items such as "I often feel ashamed of myself," "I usually fail when I try to do important things," and "I spend a lot of time daydreaming," are common attitudes expressed by, or observed in, sexually abused children. The CFSEI-2 includes 4 self-esteem subscales: General, Social, Parental and Academic. For the purposes of this investigation, only total scores on the CFSEI-2 were used. The Lie scale is scored separately. Lie subtest research measured individual defensive responses to self-esteem items, e.g., stating they never told a lie. There were no gender differences and the majority of the elementary school-age sample showed a lack of defensiveness.

A self-esteem inventory is considered reliable if participants respond to the stimulus items in a consistent manner across time. The test-retest correlations of CFSEI, Form A, ranged from .81 to .89 \( (p < .01) \) based on a sample of 198 elementary school children tested with a 48 hour interval between
testings (Battle, 1991). Thus, children in grades 3 through 6 responded to CFSEI, Form A in a statistically reliable manner. Further reliability of this inventory was established when 33 children from the original 198 children were retested two years later. The test-retest correlation for these participants was .74 (p < .01) (Battle, 1991).

Construct validity of the CFSEI, Form A, was established by selecting the 60 most discriminating items from a pool of 150. Concurrent validity of the CFSEI, Form A, was established by comparing these scale results with other established self-esteem measurements; for example, the Coopersmith Self-Esteem Inventory for Children. The correlations between the two tests were significant for all grade levels, supporting the validity of this instrument (Battle, 1991).

Therefore, the valid, reliable Culture-Free Self-Esteem Inventory, Second Edition (CFSEI-2) was selected for inclusion in this Western Canadian study, since the items address specific concerns relevant to sexually abused children. The inventory was standardized on Canadian children and covers the age range defined in this study.
Data Analysis

To examine the hypotheses of this study, a one-way multivariate analysis of variance (MANOVA) was used to determine if there were significant overall differences in mean scores on the Rosebush Picture Sort (RPS) among three study groups (see Figure 2). The multivariate analysis was selected to evaluate simultaneously the effects of the independent variables/diagnostic groups (3) on the dependent variables/pictures (12). Conceptually, the MANOVA is an extension of the univariate analysis (ANOVA) technique. The MANOVA and ANOVA are suitable for testing the research hypotheses that there are no mean differences among the three study groups. The MANOVA investigates if the mean differences among groups on the combined dependent variables are larger than what is expected by chance.

Tabachnick and Fidell (1989) outline several advantages of using MANOVA instead of ANOVA: (a) by measuring several dependent variables at once, instead of singly, the chance of discovering what it is that changes as a result of different variables or their interactions is improved; (b) when there are several dependent variables, MANOVA protects against an inflated Type I error by avoiding the use of multiple
a. ROSEBUSH PICTURE SORT SCORES

MANOVA (2 x 12) Sexual Abuse/Other X Pictures

MANOVA (2 x 12) Gender X Pictures

b. DEMOGRAPHIC CHI SQUARE ANALYSES

BEGINNING STAGE

MID-STAGE

END STAGE

GENDER AGE PARENT ETHNIC AREA

Figure 2. Phase One Data Analysis Design
tests of correlated dependent variables; and (c) MANOVA may reveal differences not shown in ANOVA when dependent variables are considered in combinations and may be more powerful than separate ANOVAs.

An a priori decision was made that if the MANOVA results showed there were significant mean differences among the study groups, discriminant function analysis (DISCRIM) would be performed (see Figure 3). The primary goal of the discriminant function was to find the dimensions along which the groups differed and to find the classification functions that predicted group membership (Tabachnick & Fidell, 1989). Discriminant function analysis (DISCRIM) asked if there was some combination of variables that reliably separated the groups. The purpose was to predict group membership from a set of predictor variables; e.g., can predictions of group membership for a group of sexually abused children in treatment, a group of other children in treatment and a group of non-abused, non-treatment children be made reliably from a set of Rosebush Picture Sort scores?

Thus, multivariate statistics provided appropriate analyses when there were many independent variables and dependent variables. The intercorrelations among these variables can be compared in one omnibus analysis.
ROSEBUSH PICTURE SORT SCORES

a. MANOVA(3X12) Beg. X Picts
   MANOVA(3X12) Mid X Picts
   MANOVA(3X12) End X Picts

   *SA  OT  NON

b. DISCRIM(12X3) Picts X Beg.
   DISCRIM(12X3) Picts X Mid.
   DISCRIM(12X3) Picts X End.

   *SA  OT  NON

c. Chi-Square Analysis of Pictures by Stage of Treatment - Secondary Analysis

SELF-ESTEEM INVENTORY SCORES

d. ANOVA (3X1) Beg. X Est.
   ANOVA (3X1) Mid X Est.
   ANOVA (3X1) End X Est.

   *SA  OT  NON

Figure 3. Phase Two Data Analysis Design

*SA = Sexual Abuse Treatment
OT = Other Treatment
NON = No Sexual Abuse, No Treatment
MANOVA tests whether the mean differences among the three study groups' Rosebush Picture Selections were likely to occur by chance or reflect a significant difference. The DISCRIM predicted group membership through classification of picture choices.

MANOVA and DISCRIM assumptions that must be met were similar to those of ANOVA: normal distribution of observations, homogeneity of variance and independence of observations.

Chi-square analysis was used to compare the four Likert scale categories of response scores among the 3 groups within each treatment stage (see Figure 3). That is, the Rosebush Picture scores were treated as categoric response variables.

A series of one-way analyses of variance (ANOVA) was carried out to compare standardized mean self-esteem scores on the three groups within the Beginning, Mid and End-treatment stage (see Figure 3).

In sum, the data analyses were performed in two phases (see Figures 2 & 3). The first phase used a MANOVA to investigate gender differences in the sexual abuse group picture selections (N = 66) and a MANOVA to investigate overall treatment group differences (N = 111) in picture selections. The three groups in the three treatment stages were compared with respect to the demographic variables of gender, age, parent,
ethnic heritage, and area, using chi-square tests of independence. The demographic factors were compared within each treatment stage to see if any of these variables might be influencing the picture (predictor variables) selection findings. If differences arose, it would be necessary to include the demographic factors as variables in the subsequent analyses.

The second phase of data analysis included MANOVA and discriminant function analyses with stage of treatment and diagnostic group picture selection comparisons. A secondary analysis was completed using chi-square analyses of the individual pictures in each stage of treatment. The self-esteem score means of diagnostic groups in relation to stage of treatment were investigated using ANOVAs.

Summary

This study investigated the association of Rosebush Picture selection and child diagnosis in relation to participants' stage of treatment and level of self-esteem, using the instruments of the Rosebush Picture Sort (RPS), the Culture-Free Self-Esteem Inventory (CFSEI-2), and a demographic questionnaire. The data were analyzed using MANOVA, DISCRIM, ANOVA, and Chi-Square tests.
The participants in the study were elementary school-age children of normal intelligence. The participants were obtained from the case loads of psychologists and therapists. These professionals administered and completed the design instruments with the cooperation of the child participants.

Null Hypotheses

Null Hypothesis 1:

It is hypothesized that the Rosebush Picture Sort (RPS) selection of sexually abused children at different stages of treatment will not differ from those of other children in similar stages of treatment and will not differ from non-abused, non-treatment children.

A multivariate and discriminant function analysis of the Rosebush Picture Sort (RPS) selection will show no significant differences among children at the three different treatment levels.

Null Hypothesis 2:

It is hypothesized that the self-esteem mean scores of sexually abused children at different stages of treatment will not differ from those of other children at similar stages of treatment and will not
differ from the mean scores of non-abused, non-treatment children.

An analysis of variance of the Culture-Free Self-Esteem Inventory-2 (CFSEI-2) will show no significant differences among children at the three different treatment levels.
RESULTS

The results of the data analysis will be formally reported in this chapter. Informal information, e.g., remarks from participants and therapists will also be reported. Phase One includes chi-square tests of independence of the demographic characteristics of the sample, a multivariate analysis of Rosebush Picture Sort (RPS) selection by gender, and a multivariate analysis of Rosebush Picture Sort (RPS) selection by sexually abused children and other children in treatment (see Figure 2). Phase Two pertains to the multivariate and discriminant function analyses of the Rosebush Picture (RPS) selection according to stage of treatment and group, chi-square tests of independence of the pictures and groups, an analysis of variance of self-esteem scores with respect to treatment stage and groups (see Figure 3), concluding with an informal data analysis.

Phase One

Sample Characteristics

This study investigated seven demographic variables using chi-square to test for distinguishing
characteristics of the sample, examining the three stages of treatment for any relationship between the three groups (sexual abuse, other treatment, no abuse/no treatment) and the following variables: reason for referral, stage of treatment, child gender, age, parent status, ethnic heritage, and geographic area.

Reason for Referral

The primary reason for referral listed for Group 1 was sexual abuse. The type of sexual abuse ranged from pornography to violent rape. According to demographic information from therapists, 8% of Group 1 participants experienced mild sexual abuse (see Table 1; Appendix D-1). Moderate sexual abuse, including fondling and masturbation (see Appendix D-1), was listed for 62% of Group 1 participants. Anal, rectal and/or vaginal penetration were experienced by 30% of Group 1 participants. Of the 66 sexual abuse participants, 17 children, or 26% of Group 1, were identified as not experiencing emotional or physical abuse. The therapists identified the remaining 74% of the sexual abuse group as experiencing emotional and/or physical abuse (see Appendix D-1). The total number of cases of emotional and physical abuse does not equal the number of sexually abused children, since some children were
Table 1

Abuse Classification Information on Group 1 and Group 2

Group 1 Sexual Abuse

<table>
<thead>
<tr>
<th>Degree</th>
<th>Abuse Type</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexl</td>
<td>Emot</td>
<td>Phys</td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>3</td>
<td>13</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>26</td>
<td>12</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>14</td>
<td>8</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>33</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Chi-Square, 4 df = 23.4
$p = .0001$

Group 2 Other Treatment

<table>
<thead>
<tr>
<th>Degree</th>
<th>Abuse Type</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexl</td>
<td>Emot</td>
<td>Phys</td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>6</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Chi-Square, 2 df = 4.86
$p = .088$
identified as experiencing more than one type of abuse.

Within the three treatment stages, sexual offenders included both parents (1), father (2), mother (1), step-parent (4), grandmother (1), brother (2), uncle (1), babysitter (2), male adolescent (2), foster parents (1), family friend (1), mentally handicapped adult (2), or stranger (1).

The frequency of abuse ranged from one event to an unknown number of sexual events. The time period of abuse ranged from infancy to the present day. The number of offenders per victim ranged from one offender to many.

Although the above information was volunteered by some of the therapists and, therefore, may not be a complete representation of a pattern for the entire sample, it is similar to other sexual abuse epidemiological studies (Finkelhor, 1993). For example, the offender is usually related to, or known by the victim; abuse events range over a short or long period of time; and the children involved are adversely affected by the many different kinds of abusive circumstances.

Therapists listed the following reasons for the referrals of Group 2 (n = 46) other children in treatment: physical abuse, emotional neglect or abuse, dysfunctional parenting, oppositional or bizarre
behaviour, inappropriate sexual behaviour, emotional swings, threats of suicide, poor social skills, depression, anxiety, aggression towards peers, school suspension, enuresis, nightmares, encopresis, learning disabilities, low self-esteem, sibling rivalry, somatic complaints, arson, sleep problems, and phobias. As previously noted (Kendall-Tackett et al., 1993), many of these behaviours are often observed in sexually abused children. The therapists did not identify sexual abuse as a type of suspected abuse on the demographic questionnaires of Group 2 children, but this does not mean that sexual abuse had not occurred.

According to the demographic information provided by the therapists, 28% of the Group 2 referrals have not experienced sexual, physical or emotional abuse. The remaining 72% of Group 2 are identified as experiencing physical and/or emotional abuse (see Table 1). The total number of cases of physical and emotional abuse does not equal the actual number of physically and emotionally abused children because some of the children are identified as experiencing both physical and emotional abuse. As shown in Table 1, Group 2 female and male children are identified as experiencing more emotional abuse than physical abuse.

The largest number of data returns were assigned to the Mid-Treatment stage (see Table 2). The members
of this stage represent 60% of the total study population. In this Mid-Treatment stage, 54% were diagnosed as sexually abused, and 31% were in the other treatment group. The 11 Group 3 no abuse, no treatment children represent 15% of the Mid-Treatment stage. The Beginning-Treatment and End-Treatment stage returns were similar to one another: 37% and 36%, respectively, Group 1 sexual abuse; 31% and 33%, respectively, Group 2 other treatment; 31% for Group 3 in both treatment stages.

**Gender**

Female participants account for 55% of the study population (see Table 2). This female/male ratio is lower than other sexual abuse population data (Finkelhor, 1993). The percentage of female participants in the Beginning-Treatment stage is 63%, and 67% in the End-Treatment stage, but only 51% in the Mid-Treatment Stage (see Table 2). In the Mid-Treatment stage, Group 2 other treatment, there is a significant difference among groups with respect to gender ratio (chi-square = 9.09; p = .01); Group 2 other treatment has a larger representation of males than females.
### Table 2

**Demographic Variable - Gender**

#### BEGINNING-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>35</td>
</tr>
</tbody>
</table>

Chi-Square $2 \text{ df} = 0.79 \quad p = .67$

#### MID-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>24</td>
<td>6</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>Male</td>
<td>16</td>
<td>17</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>23</td>
<td>11</td>
<td>74</td>
</tr>
</tbody>
</table>

Chi-Square $2 \text{ df} = 9.09 \quad p = .01$

#### END-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>11</td>
<td>5</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>36</td>
</tr>
</tbody>
</table>

Chi-Square $2 \text{ df} = 5.44 \quad p = .07$

*Group 1, sexual abuse;  
Group 2, other treatment;  
Group 3, no abuse, no treatment.*
Age

One-way analysis of variance showed no differences in the mean ages of the three groups in each stage of treatment (see Table 3). The age range of the entire sample spans 6 years 0 months to 11 years 11 months, with the mean age 9 years 5 months. The Group 1 (sexual abuse) mean age is 9 years 2 months; the Group 2 (other treatment) mean age is 9 years 6 months; and the Group 3 (no abuse, no treatment) mean age is 9 years 7 months (see Table 3). The mean age of the total group of females (n = 68) is 9 years 2 months, ranging from 6.0 years to 11 years 11 months, and the mean age of the total group of males (n = 55) is 9 years 7 months, with the age range from 6 years 1 month to 11 years 11 months.

Parent

The chi-square test for the parent type was not significant in any treatment stage (see Table 4). The children reside with two birth parents in 29% of the families in the total sample: Group 1 has 29%; Group 2 has 24%; and Group 3 has 36%. In other two parent families of the total sample, one of the parents is a step-parent. In the total sample, 11% of the two parent families include a step-parent: Group 1 has 9%; Group 2 has 15%; and Group 3 has 9%. Close to 50% of the total sample are living in single parent families.
Table 3

Demographic Variable - Age

BEGINNING-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>9.49</td>
<td>1.68</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>9.30</td>
<td>1.62</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>9.71</td>
<td>1.68</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>9.50</td>
<td>1.66</td>
</tr>
</tbody>
</table>

F (df 2, 32) = .17; p = .85

MID-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>8.80</td>
<td>1.66</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>9.25</td>
<td>1.51</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>9.71</td>
<td>1.68</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td>9.25</td>
<td>1.62</td>
</tr>
</tbody>
</table>

F (df 2, 71) = 1.56; p = .23

END-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13</td>
<td>9.15</td>
<td>1.79</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>10.17</td>
<td>1.52</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>9.71</td>
<td>1.68</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>9.68</td>
<td>1.66</td>
</tr>
</tbody>
</table>

F (df 2, 33) = 1.16; p = .32

*Group 1-Sexual Abuse;
   Group 2-Other Treatment;
   Group 3-No Abuse, No Treatment.
### Table 4

**Demographic Variable - Parent**

**BEGINNING-TREATMENT**

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-parent</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>2-parent</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Step</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>35</td>
</tr>
</tbody>
</table>

Chi-Square 4 df = 3.13  \( p = .54 \)

**MID-TREATMENT**

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-parent</td>
<td>17</td>
<td>12</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>2-parent</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Step</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Foster</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>23</td>
<td>11</td>
<td>74</td>
</tr>
</tbody>
</table>

Chi-Square 6 df = 1.56  \( p = .96 \)

**END-TREATMENT**

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-parent</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>2-parent</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Step</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Foster</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>36</td>
</tr>
</tbody>
</table>

Chi-Square 6 df = 1.78  \( p = .94 \)

* Group 1 - Sexual Abuse;  
  Group 2 - Other Treatment;  
  Group 3 - No Abuse, No Treatment.
In Group 1 and Group 2, 49% of the children are living in single parent families. Group 3 has 56% of the children living in single parent families. None of the Beginning-Treatment children reside in foster parent families. There are 12% of Mid-Treatment children and 14% of End-Treatment children residing in foster parent families.

**Ethnic Heritage**

The chi-square test for ethnic heritage was not undertaken at the Beginning-Treatment and End-Treatment stage due to numerous empty cells (see Table 5). The chi-square test undertaken at Mid-Treatment was not significant. Caucasians are the largest ethnic group represented in all three treatment stages and sample groups. The total sample is 90% Caucasian. Group 1 sexual abuse and Group 2 other treatment have an 89% Caucasian representation. The no abuse, no treatment Group 3 is 100% Caucasian. Aboriginal children represent 7% of the total sample. There are 3 Aboriginal children and 1 Latin American child in the Beginning-Treatment stage. The Mid-Treatment stage includes 7 Aboriginal children. The End-Treatment stage includes 1 Aboriginal child, 1 Asian child, and 1 East Indian child. There are no identified children of African or Inuit origin.
Table 5

Demographic Variable - Ethnic Heritage

BEGINNING-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Latin Amer.</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>35**</td>
</tr>
</tbody>
</table>

MID-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>35</td>
<td>21</td>
<td>11</td>
<td>67</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40</td>
<td>23</td>
<td>11</td>
<td>74</td>
</tr>
<tr>
<td>Chi-Square 2 df = .30</td>
<td>p = .86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

END-TREATMENT

<table>
<thead>
<tr>
<th>Group*</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>12</td>
<td>10</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Aboriginal</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Indian</td>
<td>0</td>
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<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>36**</td>
</tr>
</tbody>
</table>

*Group 1 - sexual abuse;  
Group 2 - other treatment;  
Group 3 - no abuse, no treatment.  

**Chi-Square not computed due to numerous empty cells.
Geographic Area

Chi-square test results were not reported due to empty cells in each treatment stage (see Table 6). Combining the metropolitan resident participants from the three treatment stages accounts for 57% of the total study population. Close to 47% of the sexually abused children reside in a large metropolitan area. The remaining 53% of the sexually abused children reside in smaller metropolitan areas. Of the children in treatment for other reasons, 41% reside in a large metropolitan community. The remaining 59% of this group live in smaller communities. The entire no abuse, no treatment group resides in a large metropolitan area. Although 57% of the study population resides in a large metropolitan area, 15 other areas of the province are represented by the sexual abuse group and other treatment group, covering all treatment stages.

To summarize the demographic data, the largest number of returns that were received fell into the Caucasian, Group 1 sexually abused female of the Mid-Treatment category. Many of these children reside in a large metropolitan area, with a single parent family. ANOVA and chi-square tests of independence were used to compare gender and parent constellation in demographic treatment groups. The tests indicated no significant
Table 6

Demographic Variable - Geographic Area

BEGINNING-TREATMENT

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Lower Main</td>
<td>9</td>
<td>7</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Fraser Val</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>35</td>
</tr>
</tbody>
</table>

MID-TREATMENT

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>1</td>
<td>0</td>
<td>17</td>
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<td>3</td>
<td>0</td>
<td>9</td>
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<tr>
<td>Lower Main</td>
<td>16</td>
<td>5</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Fraser Val</td>
<td>2</td>
<td>14</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>11</td>
<td>74</td>
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END-TREATMENT

<table>
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<td>6</td>
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<tr>
<td>Lower Main</td>
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<td>7</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Fraser Val</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>36</td>
</tr>
</tbody>
</table>

*Group 1 - sexual abuse;  
Group 2 - other treatment;  
Group 3 - no abuse, no treatment.
age differences within Beginning, Mid or End-Treatment groups. There was an unequal ratio of female/male in the Mid-Treatment stage, with more males than females in Group 2 other treatment.

**Gender Multivariate Analysis**

A one-way MANOVA, with the Rosebush Picture Sort (RPS) scores as the dependent variables and gender as the independent variable, was performed to check for the presence of gender effect on the sexual abuse group. The MANOVA test for Homogeneity of Dispersion indicates the assumptions have been met: $F (df 78, 668) = 1.04, p = .387$.

The analysis shows no gender effect in the scores of 43 female and 23 male sexually abused children ($N = 66, F (df 12, 53) = 1.50, p = .153$)(see Appendix E-1). Given this finding, no follow-up gender analysis was undertaken.

**Treatment Group Analysis**

A one-way MANOVA was undertaken comparing the mean scores of Rosebush Picture Sort (RPS) selections of Group 1 sexually abused children ($n = 66$) and Group 2 children in treatment for other reasons ($n = 45$). The data were not sorted according to stage of treatment in this first phase of analysis.
The MANOVA test for Homogeneity of Dispersion indicates the assumptions have been met: $F \left( df \ 78, \ 284 \right) = 1.12, p = .216$.

There were no significant differences found between the picture score means of Group 1 sexually abused and Group 2 other children in treatment; $F \left( df \ 12, \ 98 \right) = 1.17, p = .312$ (see Appendix E-1).

The next one-way MANOVA was undertaken after the data were sorted into groups by stage of treatment.

Phase Two

The Phase Two analyses were divided into seven sections: (a) a MANOVA analysis of the Rosebush Picture Sort (RPS) scores at the Beginning-Treatment stage, (b) a MANOVA analysis of the RPS scores at the Mid-Treatment stage, (c) a MANOVA analysis of the RPS scores at the End-Treatment stage, (d) chi-square tests of independence for each Rosebush Picture within the three study groups, (e) an ANOVA of the self-esteem scores at the Beginning-Treatment stage, (f) an ANOVA of the self-esteem scores at the Mid-Treatment stage, and (g) an ANOVA of the self-esteem scores at the End-Treatment stage.
Hypothesis 1

The Rosebush Picture Sort (RPS) selection of sexually abused children at different stages of treatment will not differ from those of other children in similar stages of treatment and will not differ from non-abused, non-treatment children.

Of the 123 RPS returns, it appears only 4 male children (3%) made set choice responses. The responses were all negative: 3 males chose "This is not at all like me" for all responses or all but one of their responses; 1 male chose "This is not like me" for all but one of his responses. Three of the males were in Group 1, sexual abuse and 1 male was in Group 2, other treatment. This Group 2 male was appropriately classified according to the discriminant function analysis. Their ages ranged from 7 years 0 months to 11 years 11 months.

Rosebush Picture Sort (RPS) Beginning-Treatment Stage:

The MANOVA of the RPS scores of Group 1 sexual abuse, (n = 13), Group 2 other treatment, (n = 11), and Group 3 no abuse, no treatment, (n = 11), indicated no significant differences among the three groups at the Beginning-Treatment stage. The null hypothesis is not rejected, with $F (df 24, 42) = 1.45, p = .142$ (see Appendix E-2). Therefore, a discriminant analysis was
not done. A chi-square analysis was done following this finding (see Appendix E-3).

At the Beginning-Treatment stage, Picture 10 showed the only statistically significant trend in the chi-square analysis: \( p = .009 \) (see Appendices D-2, E-3). Picture 10 is dark and has thorn-studded stalks filling the centre of the picture. Children in treatment, Groups 1 and 2, tended to identify with Picture 10 more than children not in treatment, Group 3.

**Rosebush Picture Sort (RPS) Mid-Treatment Stage:**

The MANOVA of the RPS scores at the Mid-Treatment stage showed significant differences among the three groups (\( N = 73 \)), \( F (df 24, 118) = 2.03, p = .007 \) (see Appendix E-2).

A discriminant function analysis was completed using the twelve Rosebush picture variables as predictors of membership in three groups: Group 1 sexually abused children in treatment; Group 2 other children in treatment; and Group 3 non-abused, non-treatment children. For the 73 child participants' scores, evaluation of assumptions of linearity, variance-covariance matrices revealed no threat to the validity of multivariate analysis: \( F (df 78, 6142) = 1.06, p = .341 \).
One discriminant function was calculated, with a combined chi-square ($df$ 24) = 44.55, $p = .007$. After removal of the first function, there were no further associations between groups and predictors, chi-square ($df$ 11) = 11.44, $p = .41$. The first discriminant function accounted for 77.57% of the between-group variability. The first discriminant function separated the sexually abused group of children and other two groups from each other. The sexually abused group had a 75.0% predicted group membership. The other children in treatment group had a 59.1% predicted group membership and the non-abused, non-treatment group had a 72.7% predicted group membership.

The standardized weights of correlations between picture predictor discriminant functions suggest that the best predictors for distinguishing between the sexually abused and the other two groups were Pictures 6, $F$ ($df$ 2, 70) = 4.25, $p = .02$, and Picture 8, $F$ ($df$ 2, 70) = 4.02, $p = .02$. Picture 6 has a dark sky border, black lines for clouds, and thorny bushes. Picture 8 contains a barren, single flower face with "closed eyes" on a stalk. These pictures, plus Pictures 2 and 9, showed large standardized discriminant function coefficients (see Appendix D-2, Table 7): Picture 2 = -.565; Picture 6 = .627; Picture 8 = .923; and Picture 9 = -.523. Standardized weights less
Figure 4 - All Groups Discriminant Function Scatterplot

*  © Centroid - Group 1 Sexual Abuse
   ▲ Centroid - Group 2 Other Treatment
   □ Centroid - Group 3 No Abuse, No Treatment
Table 7

Results of Discriminant Function Analysis RPS Variables

<table>
<thead>
<tr>
<th>Picture #</th>
<th>Correlations*</th>
<th>Univariate Coefficients**</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>-.04</td>
<td>.96</td>
</tr>
<tr>
<td>2</td>
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<td>.94</td>
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<td>.90</td>
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<td>6</td>
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<td>7</td>
<td>.08</td>
<td>.31</td>
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<td>8</td>
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<tr>
<td>9</td>
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<td>10</td>
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<td>11</td>
<td>-.07</td>
<td>.81</td>
</tr>
<tr>
<td>12</td>
<td>.27</td>
<td>.19</td>
</tr>
</tbody>
</table>

Variance % 77.57

Eigenvalue .67 (p < .05)

*Correlations of Predictor Variables with Discriminant Function

**Standardized Discriminant Function Coefficients
than .50 were not interpreted. Picture 2 has strong dark colours, and although there is "life" in the picture, the overall impression is rather stark. Picture 9 contains a fence with a "Keep Out" sign.

In reviewing the discriminant analysis of the individual groups in the Mid-Treatment stage, within Group 1 sexual abuse, 18% or 7 children selected pictures more closely related to Group 2 other treatment choices. Two of Group 1 children identified more closely with the no treatment Group 3 picture choices. There were 6 participants or 27% of Group 2 other treatment misclassified. Four of the children chose pictures that were similar to those chosen by Group 3 and 2 of the children chose pictures similar to the selection of Group 1 sexual abuse. Three children in Group 3 selected pictures that were similar to the selection of Group 2 other treatment children. Only 1 child in Group 3 selected pictures that were similar to those selected by Group 1 sexual abuse.

In summary, there are significant differences between the sexually abused mean discriminant scores and corresponding scores of other children in this study. The hypothesis that the RPS mean discriminant scores of sexually abused children at Mid-Treatment will not differ from the scores of other children at similar stages of treatment or no abuse, no treatment
children was rejected. The mean discriminant scores of sexually abused children at Mid-Treatment differ from scores of other children in treatment or no abuse, no treatment children.

The chi-square analyses of individual pictures at Mid-Treatment showed Picture 8, a single, "sleeping" flower, as the only statistically significant trend; \( p = 0.02 \) (see Appendices D-2; E-4). Group 1 sexual abuse, either strongly accepted (choosing option 1) or strongly rejected (choosing option 4) this picture. Group 3 mainly rejected Picture 8.

**RSP End-Treatment Stage:**

At this stage of treatment, there was no significant difference among the three groups with respect to picture selection (\( n = 36, F (df 24, 44) = 1.48, p = .129 \)) (see Appendix E-2). Discriminant analysis was not undertaken following these findings. Chi-square analyses of this stage of treatment was undertaken.

At the End-Treatment stage, Picture 5 showed a statistically significant trend; \( p = .098 \) (see Appendices D-2; E-5). Picture 5 shows the base of a tree with roots, a bird with a worm in its beak and insects (see Appendix D-2). Groups 1 and 2 strongly identified with this picture, while Group 3 mildly
identified with the picture. It is possible that Picture 5 tapped into positive internal feelings that the children in the End-Treatment stage had recently developed about themselves.

**Hypothesis 2**

The self-esteem mean scores of sexually abused children at different stages of treatment will not differ from those of other children at similar stages of treatment and will not differ from the mean scores of non-abused, non-treatment children.

Participants with Lie scores one standard deviation below the mean (score below 40) were not included in the analyses. The Lie subtest measures defensiveness (Battle, 1992). Defensive participants do not accept valid, but socially unacceptable characteristics within themselves. The Beginning-Treatment stage Lie scores of 2 sexual abuse participants and one other treatment participant were below 40 (see Figure 5). The Mid-Treatment stage indicated 5 sexual abuse participants and 2 other treatment participants with Lie scores below 40. The End-Treatment stage score of one sexual abuse participant was below 40, but there were no Lie scores below 40 of other children in treatment. None of the
non-abuse, non-treatment group self-esteem Lie scores were below 40.

The ANOVA of the Self-Esteem scores of Group 1 sexual abuse, Beginning-Treatment stage; Group 2 other treatment, Beginning-Treatment stage; and Group 3 no abuse, no treatment, indicated no significant differences among the three groups (see Table 8); $F (df 2, 28) = 1.51, p = .24$. No further analysis was done with the Beginning-Treatment stage following this finding.
Table 8

Self-Esteem Descriptive Statistics and One-way ANOVA

**BEGINNING-TREATMENT**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std.Dev.</th>
<th>Min.</th>
<th>Max.</th>
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</thead>
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<td>Group 1</td>
<td>11*</td>
<td>48.73</td>
<td>11.35</td>
<td>30</td>
<td>65</td>
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<tr>
<td>Group 2</td>
<td>10*</td>
<td>48.40</td>
<td>11.32</td>
<td>27</td>
<td>62</td>
</tr>
<tr>
<td>Group 3</td>
<td>10**</td>
<td>55.40</td>
<td>7.47</td>
<td>37</td>
<td>64</td>
</tr>
</tbody>
</table>

ANOVA: $F \ (df \ 2, \ 28) = 1.51; \ p = .239$

**MID-TREATMENT**

<table>
<thead>
<tr>
<th>Variable</th>
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<th>Mean</th>
<th>Std.Dev.</th>
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<tr>
<td>Group 1</td>
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<td>47.11</td>
<td>10.48</td>
<td>28</td>
<td>65</td>
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<td>Group 2</td>
<td>21*</td>
<td>44.81</td>
<td>9.68</td>
<td>27</td>
<td>61</td>
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<td>Group 3</td>
<td>10**</td>
<td>55.40</td>
<td>7.47</td>
<td>37</td>
<td>64</td>
</tr>
</tbody>
</table>

ANOVA: $F \ (df \ 2, \ 63) = 4.02; \ p = .023$

**END-TREATMENT**

<table>
<thead>
<tr>
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<th>Std.Dev.</th>
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<th>Max.</th>
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<tr>
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<td>Group 2</td>
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<td>62</td>
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<td>Group 3</td>
<td>10**</td>
<td>55.40</td>
<td>7.47</td>
<td>37</td>
<td>64</td>
</tr>
</tbody>
</table>

ANOVA: $F \ (df \ 2, \ 31) = 1.91; \ p = .17$

*Participants with Lie scores that are one standard deviation below the mean are not included.

**The total number of Self-Esteem scores in Group 3 is 10, not 11, because one subject refused to answer the questions.
Self-Esteem Mid-Treatment Stage:

The ANOVA of the Self-Esteem scores of the three groups in Mid-Treatment indicated a statistically significant difference among the groups (see Table 8); $F (df 2,63) = 4.02, p = .023$. Comparisons of the means reveal that the self-esteem scores of Group 3 no abuse, no treatment, are significantly higher than the mean scores of the other two groups. Mean levels of self-esteem scores in Group 1 and Group 2 do not differ from one another.

Self-Esteem End-Treatment Stage:

The ANOVA of the Self-Esteem scores of the three groups at End-Treatment stage show no statistically significant difference (see Table 8); $F (df 2, 31) = 1.91, p = .17$. Further analysis was not undertaken following these results.

In summary, the Self-Esteem scores of children in all three groups did not differ significantly at the Beginning or End-Treatment stages. The mean scores of Group 3 no abuse, no treatment, differed significantly from the sexually abused group and the other treatment group at the Mid-Treatment stage. The Self-Esteem scores of Group 1 sexual abuse, and Group 2 other treatment, did not differ significantly from one another at Mid-Treatment.
Informal Findings

Even though the data was not statistically analyzed, the following information has been included since the conceptual impact of the information is relevant to the study hypotheses. The comments were recorded by the child's therapist.

It is noteworthy that there were only ten comments on the RPS from Group 1 sexual abuse, at Beginning-Treatment, while Group 2 other treatment, made 70 comments at this stage (see Figure 6; Appendix F). The self-imposed silence on the part of the sexually abused children did not seem to interfere in their completion of the RPS but may indicate their hesitancy to verbalize personal feelings.

The RPS statements from Group 2 other treatment children, at Beginning-Treatment stage were much more expressive and imaginative than those of Group 1. These statements were full of symbolic meaning, mixed with the child's sense of reality:

RPS #1: "I'm always caught in the middle of things."
RPS #2: "I'd like to live in a big house with a big yard."
RPS #3: "I'm always getting cut off from things I like."
RPS #4: "I like rainbows and I try to find the charm at the end."
RPS #5: "I'm not used to birds getting for their young. I have to get everything for myself."
RPS #6: "I don't like rose buds because when you touch them it hurts."
There were an equal number of therapist comments for Group 1 and Group 2, Beginning-Treatment stage (see...
Appendix G-1). The therapists made mainly positive comments regarding both Group's reactions to the RPS, e.g., "...very much liked and responded to RPS," "...very thoughtful." None of the therapists responded negatively about the administration of this technique.

At Mid-Treatment, Group 2 other treatment children made twice as many spontaneous statements (n = 33) about the RPS pictures as Group 1 sexual abuse children (n = 16)(see Figure 6). Mid-Treatment Stage Group 1 statements contained a richer amount of information, much of which is representative of problems that sexually abused children face. For example, a feeling of being stigmatized was expressed by a sexually abused male in his response to RPS Picture 1, "Sometimes I feel like the only one among those who are different from me" (see Appendices D-2; F). The need to maintain self-protection and the lack of trust felt towards adults was shown by a male's response to RPS Picture 2, "This has a fence around me: it's like me." Gender conflict was expressed by a 7 year 11 month old male to RPS Picture 8, "This is like me...oh no, it's a girl; it's not at all like me." RPS Picture 6 possibly tapped into early memories of a young female who responded with, "When I was a baby."

According to therapist responses, the majority of Group 1 and Group 2 Mid-Treatment participants enjoyed
making the RPS selections (see Appendix G-2). In Group 2, a 10 year 2 month old female chose to draw her own picture of a rosebush upon completion of the RPS. Most children in both groups were reflective and cooperative. A few children were confused and reluctant. In Group 2 other treatment, an 11 year 7 month old male thought the pictures were effeminate and said, "People will think I'm a fag."

On reviewing the verbal comments from the Mid-Treatment children, Group 2 other treatment continued to be more expressive than Group 1 sexual abuse (see Appendix F).

End-Treatment, Group 2 other treatment participants made more than four times as many statements (n = 44) about the pictures than Group 1 sexual abuse participants (n = 10) (see Figure 5). Group 2 statements expressed a range of feelings and demonstrated the children's integration of symbolism and reality. Statements included the following (see Appendices D-2; F):

RPS #1: "The trees stand for everyone and I'm in the middle."
RPS #2: "The roses are for girls, not boys."
RPS #3: "Looks like someone's crying."
RPS #4: "It's snowing. I like rainbows...kind of Christmassy and I like Christmas."
RPS #5: "I like insects, so I can bug my mom."
RPS #6: "The roses are red, like my rosebush would be."
RPS #7: "The leaves are all falling off. Makes you feel fenced in. Spikes make you feel unwanted...like a grave yard."
RPS #8: "Whatever that thing is (pointing to flower), I'm not that small."
RPS #9: "Makes you feel like you're not wanted."
RPS #10: "Too dark, don't feel welcome. Looks like a mean plant with mouths on it."
RPS #11: "Like smiling sun. If I was one of the flowers, it would feel good."
RPS #12: "It's like somebody talking out loud to a bunch of people. I wish I had a friend."

As in the previous two treatment stages, Group 1 statements were mainly descriptive and limited in imagination. A Group 1, 10 year 11 month old sexually abused female, wanted to know if the shape in RPS Picture 5 was a hand. One child was more expressive at this stage of treatment. The young Group 1 male responded to RPS Picture 4, "Volcano tree and storm are like me." Difficulty with self-control and power issues appear to continue to affect this sexually abused young male, although his therapist perceived him to be at the End-Treatment stage. He responded to RPS Picture 8, "I hate 'Keep Out' because I always go in," and to RPS Picture 11 with, "It's light and that's not like me."

The therapist of a Group 2 male wrote, "Initially quite ambivalent in doing test. Once he realized that it was not threatening to his 'artistic' abilities, e.g., he did not have to do any drawing himself, he relaxed a lot more" (see Appendix G-3). The note from this therapist supports the non-threatening nature of the RPS for children.
Culture-Free Self-Esteem Inventory-2 (CFSEI-2) Informal Findings

The children's unsolicited comments at all three treatment stages on the CFSEI-2 were mainly concerned with their undecided responses to the yes/no questions. The therapists of Group 1 participants responded with comments about the children more often than the therapists of Group 2 participants (see Appendix G-4) in all three treatment stages. Some children had difficulty with double negative questions and others felt that the Inventory had too many items. However, most of the children became involved in this exercise and it helped the therapist to communicate with them about their problems, e.g., "...said, 'It was good to get that out of me';" "had problems of acknowledging her sadness and disappointment, but the questionnaire gave opportunity to reflect and recognize changes she's making...;" "the test gave us the opportunity to talk more about how she's changed over the three years I've known her."

Summary of Findings

The study sample consisted of 123 female and male elementary school-age children from 16 provincial communities. The largest number of participants in the three treatment stages dwell in a large metropolitan
area and are of Caucasian origin. The largest number of participants assigned to Group 1, 2 and 3 live in single parent families.

The mean age of participants in the Beginning-Treatment stage is 9 years 5 months. The mean age of participants in the Mid-Treatment stage is 9 years 3 months, and the mean age of participants in the End-Treatment stage is 9 years 7 months. The mean age and age range of the participants is similar to other studies that report a predominance of prepubertal abuse (Kendall-Tackett et al., 1993). Female participants made up 55% of the total sample. The majority of Group 1 participants experienced moderate sexual abuse. The majority of Group 2 participants experienced physical and emotional abuse, but none experienced reported sexual abuse. Group 3 participants were not in treatment and had not experienced known abusive circumstances.

The Phase One studies indicated that there were no gender differences in the Rosebush Picture selection scores, and that there were no significant differences found when comparing the means of the two treatment groups. There were no significant demographic differences that might influence the Phase Two analyses.
In the Phase Two analyses, MANOVA and DISCRIM differences were found in the Mid-Treatment stage when the three study groups were analyzed, but not in the Beginning or End-Treatment stage. Group 1 picture selection patterns for Pictures 2, 6, 8, and 9 differed from Groups 2 and 3 picture selection patterns.

As a cross check on the MANOVA and DISCRIM analyses, the three study groups were compared on the basis of response frequencies, using chi-square tests, at the stage of treatment. The chi-square results, however, must be viewed with extreme caution due to a number of cells with very small or zero frequencies.

There were three pictures that discriminated between groups. Beginning-Treatment stage Group 1 and Group 2 strongly identified with Picture 10, $p = .009$, while Group 3 did not. Group 3 did not identify with Mid-Treatment stage Picture 8, $p = .02$, while 43% ($n = 17$) of Group 1 did. End-Treatment stage Groups 1 and 2 strongly identified with Picture 5, $p = .098$, while Group 3 did not.

There were Self-Esteem score differences in the Mid-Treatment stage but not in the Beginning or End-Treatment stage Self-Esteem scores. Group 3 no abuse, no treatment, had significantly higher Self-Esteem scores than the other two groups.
In the three stages of treatment, Group 1, sexually abused children made significantly fewer, unsolicited Rosebush picture comments than Group 2 other children in treatment.
CHAPTER 5

DISCUSSION AND CONCLUSIONS

The general findings of this study offer a contribution to the literature on assessment procedures that discriminate sexually abused children from other children in treatment and from non-abused children, through the use of a non-threatening, non-verbal technique. This chapter examines the trends and significance of the demographic findings and the implications of the significant differences between the three groups in picture selections and self-esteem levels in relation to stage of treatment. The limitations of this study are also examined. The chapter concludes with suggestions for future Rosebush Picture Sort research.

DISCUSSION

Phase One Sample Characteristics

Reason for Referral

The reasons for referral of the sexual abuse and other treatment sample represent a broad range of characteristic sexual abuse behaviours and other types of child pathological behaviours that warrant clinical
intervention. This broad range of referrals permits a greater generalizability of the study findings.

**Gender**

As evidenced in Phase One, there are no gender differences in the Rosebush Picture Sort (RPS) profiles of female and male participants. This is similar to other study findings (Hibbard et al., 1987; Reinhart, 1987). In Mid-Treatment stage, Group 2 other treatment children, there is a higher percentage of male than female participants. This shift in gender distribution suggests that male participants in Group 2 other treatment have not yet disclosed their abuse. This reversed gender finding lends support to previously cited current and retrospective findings that indicate sexually abused, school-age males are reluctant to report their abuse and often do not report their abuse until mid-treatment or adulthood (Campis et al., 1993; Friedrich, 1993; McGrew & Teglasi, 1990; Reinhart, 1987).

**Age**

The age range of children in this study spans 6 years 0 months to 11 years 11 months. Children, ages 6 to 7 years of age and 10 years of age, are cited as being the most vulnerable to sexual abuse (Finkelhor,
1993). Other findings show that sexually abused children between the ages of 6 years 0 months to 11 years 11 months are less likely to make a purposeful verbal disclosure as (a) the children perceive that they are responsible for the abuse; (b) they are aware of the potential consequences of the disclosure; and (c) their defense mechanisms may have removed the abusive experience from their conscious awareness (Green, 1993; Livingston et al., 1993). The risk of sexual abuse for this age group, combined with the fact that it is less likely to disclose abuse, demonstrates the importance of using this age group in the development of a non-verbal, non-threatening technique. The results of this study can be used for the development of a technique by which sexually abused children in this age group can be identified without placing the children in a personally frightening or verbally threatening position.

Parent

Although Finkelhor (1993) has stated that living in single parent families is a sexual abuse risk factor for children, the single parent situation does not appear to be a discrepancy in the three groups of this study sample. The results in this study are
strengthened by the finding that all three Groups have similar single or two parent circumstances.

The Beginning and End-Treatment Group 1 sexual abuse have no step-parent category. It is conjectured that this circumstance may be related to a step-parent being the sexual offender, and that the step-parent was removed from the home at the time of disclosure, prior to therapy; or else the offender's identity came to light during treatment, and the step-parent left the home. This conjecture is supported by demographic findings showing no foster parent category in the Beginning-Treatment stage. In the Mid and End-Treatment stage, 16% of Groups 1 and 2 children are in foster placement.

Ethnic Heritage

Caucasians were the largest ethnic group represented in all three treatment stages and sample groups (see Table 5). As reported in current epidemiological studies (Finkelhor, 1993; Reinhart, 1987), race and ethnicity have not been found to be sexual abuse risk factors. The relatively small percentages of ethnic minorities in this study sample limit any interpretation of the ethnic similarities of picture selections within the treatment groups.
Geographic Area

Although the majority of the study population resides in a large metropolitan area, 16 areas of the province are represented by the sexual abuse and other treatment groups, covering all treatment stages. These 16 areas span the four major regions of the province. Therefore, the participants could be representative of the province as a whole, giving a broader range of generalization to the study findings. It appears that the sexual abuse of children is prevalent in all communities and is not necessarily related to rural isolation or crowded urban demographic factors.

In summary of the demographic findings, there were no significant differences in the study groups gender preference of pictures, age, or area of residence. The study findings of reversed gender ratio in Mid-Treatment Group 2, ethnic heritage limitations, and the type of parental status in treatment stages, provide possibilities for further Rosebush Picture Sort investigations.
Phase One Data Analysis

Treatment Group Analysis

There were no differences found when comparing the entire sample of Rosebush Picture Sort scores of the two treatment groups. Previous studies (Bowden, 1991; Carter et al., 1992) did find significant differences in Rosebush picture selections, comparing abused and non-abused children or sexually abused children with high and low self-concepts. These studies used Q-Sort methodology (ranking each picture against another picture) in contrast to Likert Methodology (rating identification with each individual picture) used in this study. Noting this difference in the two studies, it will be beneficial to carefully address the rationale underlying the methodology used in future Rosebush Picture Sort research.

Phase Two

Hypothesis 1

The Rosebush Picture Sort (RPS) selection of sexually abused children at different stages of treatment will not differ from those of other children in similar stages of treatment, and will not differ from non-abused, non-treatment children.
Rosebush Picture Sort (RPS) Beginning-Treatment Stage:

According to the MANOVA analysis, there were no statistically significant differences in the picture selections of Group 1, Group 2 or Group 3 at Beginning-Treatment.

The chi-square (df 6, p = .009) analysis of Picture 10 (see Appendices D-2; E-3) showed differences between the three groups of children at the Beginning-Treatment stage. Group 2 identified with Picture 10 (73%), Group 1 somewhat identified with Picture 10 (46%) and Group 3 somewhat rejected Picture 10 (46%). This picture selection preference is similar to the Bowden (1991) study, in which the abused children identified with this picture and other pictures containing dark, gloomy backgrounds. This finding may indicate that the sexually abused, and others, in the early stages of treatment closely identify with the darkness and the thorny stalks that they see in the picture, finding a correspondence with their own sense of emotional chaos.

The fact that there are limited significant differences in picture selections at the Beginning-Treatment stage may be a result of the interaction of children's primary process thinking, coping devices, developmental level, and affect-laden decision making skills. As suggested in previously cited studies
(Levine & Levine, 1986; Rabin, 1986; Russ & Grossman-McKee, 1990), children at the Beginning-Treatment stage are hiding behind their defenses and do not feel safe enough to uncover or disclose painful or anxiety producing material; e.g., therapists reported that two sexually abused participants were threatened with death if they disclosed their abuse. As reported in other studies, children do not necessarily disclose their sexual abuse during the initial interview, but do so at a later date (Conte & Schuerman, 1988; Friedrich, 1993; Herzog, Staley, Carmody, Robbins & vanderKolk, 1993).

The RPS assessment technique appears clinically valuable in providing children with a projective, non-threatening, non-verbal visual medium, but seems unable to tap into their internal working model without upsetting their conscious cognitive defenses. Comments on the RPS that were made by several of the sexually abused children at the Beginning-Treatment stage provided useful information for the therapist to incorporate into the assessment and treatment process; e.g., RPS Picture 1: "It's crammed up in a bunch of trees," RPS Picture 9: "I don't go in places where it says 'Keep Out!'" (see Appendices D-2; F). However, the majority of comments made by sexually abused children at Beginning-Treatment were abrupt and limited: e.g., "too black," "bird," "little girl."
It appears that sexually abused children have difficulty expressing themselves verbally at Beginning-Treatment. This assertion is supported by a comment from a therapist, "Child stated he didn't enjoy the Culture-Free Self-Esteem Inventory (CFSEI-2) as much as the RPS, perhaps due to the fact that this child is uncomfortable with verbal strategies" (see Appendix G-1).

As previously cited (Harper, 1991; Kaufman & Wohl, 1992; Mannarino et al., 1989), it is possible that the internal working models of sexually abused children are affected differently than the internal working models of children suffering from other types of abuse and trauma. In turn, sexually abused children create and employ alternative defense mechanisms to protect themselves. For example, most decision making of sexually abused children may be based on their own external environmental cues, to the exclusion of their internal feelings. They may have responded to the pictures in the manner that they thought the therapist would approve of, rather than recognizing or acknowledging how they truly felt about the picture.

Children initially process and organize information at a sensory level and then use higher cognitive processing abilities to label the information (Burgess & Hartman, 1993; Sturner et al., 1980). Acute
anxiety may tap into an inner psychic process that is internally processed in sexually abused children in a different way than their observable behavioural responses, similar to the findings of Stumer et al. (1980). This type of defensive response to external stimuli (Rosebush Pictures), may have originated in the child's early stages of development (Steele, 1983).

Rosebush Picture Sort (RPS) Mid-Treatment Stage:

Pictures 2, 6, 8, and 9 discriminated between Group 1 sexual abuse children, Group 2 other children in treatment and Group 3 no abuse, no treatment children (see Appendix D-2). These same pictures discriminated between abused/non-abused and high/low self-esteem children in the earlier Rosebush Picture studies (Bowden, 1991; Carter et al., 1992), e.g., sexually abused children with low self-esteem strongly identified with Picture 6. According to the discriminant analysis, 75.0% of Group 1 sexual abuse participants were correctly classified. In viewing the All-Groups Scatterplot (see Figure 4), Group 1 sexual abuse, falls to the left side of the plot; Group 2 other treatment, center around the middle; and Group 3 no abuse, no treatment, are entirely on the right side.

The chi-square (df 6, p .02) analysis of Picture 8 (see Appendices D-2; E-4) showed a significant
difference between the two groups of children in treatment and the children in Group 3, no abuse, no treatment. Ninety percent of Group 3 did not identify with Picture 8. Close to 43% of Group 1 sexual abuse and 32% of Group 2, other treatment, did identify with Picture 8. This picture shows an isolated, "sleeping"-faced figure. The children's level of identification with the picture may be a symbolic representation of the way they feel about themselves. The Mid-Treatment children in Group 1, who did not identify with Picture 8, appear to be representative of Group 1 sexual abuse Picture 8 selection in all treatment stages.

Of those in the Mid-Treatment stage Group 1 sexual abuse who were misclassified, the males (n = 7) outnumber the females (n = 2). Five males chose pictures more similar to the RPS selection of Group 2, and two males chose pictures more similar to the RPS selection of Group 3. Both females chose pictures more similar to those of the Group 2 selection. The demographics of the misclassified subset are typical of the total sample in geographic area, age range, and parent status categories. However, 22% of the subset are Aboriginal, in comparison to the 6% Aboriginal in the total Mid-Treatment stage.

A possible explanation for the misclassified, sexually abused males and females choosing pictures
more similar to those of Group 2 is because (a) their internal working model remains defended, and although the therapist knows they have been sexually abused and believes they are at Mid-Treatment stage, their defenses block the visual stimuli from tapping into their internal feelings regarding sexual abuse; (b) other abusive circumstances are less threatening for them to deal with and, in turn, serve as their focus and defense barriers against the sexual abuse issues; (c) they become dissociated when presented with any task they feel is threatening to their sense of self; or (d) their picture choices were merely chance selection.

In Mid-Treatment Group 2 other treatment, one male participant and one female participant made a selection of Rosebush Pictures similar to Group 1 sexual abuse. It is possible that these children may be withholding sexual abuse information. It is suggested that although these Group 2 participants have not verbalized sexual abuse events, their internal working models (psychological organization of thoughts, feelings, memories, and defenses) unconsciously identify Rosebush Pictures that are similar to those chosen by Group 1 sexual abuse participants.

The two male participants in Group 2 other treatment, and two male participants in Group 1 sexual
abuse, made selections similar to Group 3 no treatment, no abuse. Their ideal self image may be the part they are presenting in their picture selection, similar to responses in previously cited findings (Livingston, 1987; Stovall & Craig, 1990).

Within Group 3 no abuse, no treatment, the RPS selection by one male and one female participant is more similar to those of the Group 2 other treatment, sample. One female in Group 3 selected pictures similar to the selection of the Group 1 sexual abuse sample. It is possible that these three children have suffered some type of abuse that has not yet been disclosed.

Rosebush Picture Sort (RPS) End-Treatment Stage:

There were no significant differences in the RPS scores of the three groups at End-Treatment stage. The chi-square analysis showed a noticeable trend in Picture 5 (see Appendices D-2; E-5), with the sexually abused children and other children in treatment identifying with this picture more than did children not in treatment. The internal working models of Group 1 and Group 2 participants may be more sensitive to acknowledging positive qualities within themselves as a result of therapy and, in turn, identifying with the
positive aspects of Picture 5 more strongly than Group 3 no treatment, no abuse children.

A young sexually abused female told her therapist she did not like "m" birds [RPS Picture 2], or birds drawn like the letter "m". Children who have suffered anal penetration often draw this shape in their pictures (J. A. B. Allan, personal communication, Dec. 14, 1989). This 8 year old child was sexually abused by adults during her first two years of life. Her statement provides the therapist with an important area to investigate during treatment.

In summary, it appears that the format of the Rosebush Picture Sort was highly acceptable to the child participants and their therapists. Only 3% of the sample made set choice responses.

Three of the males who made set choice responses on the RPS were in the Mid-Treatment stage; two are from Group 1 sexual abuse, and one is from Group 2 other treatment. The fourth male is from Beginning-Treatment stage, Group 1 sexual abuse. According to the discriminant analysis, the four male RPS selections fit their Group placement, and although they made set choice responses (choosing option 4 for over 90% of the pictures), they were correctly classified within their diagnostic group.
The need for a projective technique that is sensitive to the effects of sexual abuse when compared with the effects of other types of abuse becomes more critical as the understanding of the short term and long term impact of sexual abuse on the personality development of the child is understood. The Rosebush Picture Sort provides a non-threatening, visual stimulus, allowing access to primary process thinking within the individual. The findings and information obtained in this study appear to support the use of the Rosebush Picture Sort as a diagnostic tool that addresses the need for a differential, psychodynamic, assessment technique.

Hypothesis 2

The self-esteem mean-scores of sexually abused children at different stages of treatment will not differ from those of other children at similar stages of treatment and will not differ from the mean-scores of non-abused, non-treatment children.

Culture-Free Self-Esteem Inventory-2 (CFSEI-2) Findings

Twelve percent of Group 1 sexual abuse CFSEI-2 scores were deleted from the analysis due to low Lie
scores. Lie scores below 40 were seen in only 6% of Group 2 other treatment. This defense mechanism is twice as significant in the sexually abused sample than in the other children in treatment sample. None of Group 3 had Lie scores below 40.

Self-Esteem Beginning-Treatment Stage:

According to the ANOVA, there are no differences in the self-esteem levels of the sexually abused, other treatment, or non-abused children at Beginning-Treatment, as measured by the CFSEI-2. This finding supports other study findings that have shown that low self-esteem is not always a distinguishing characteristic of sexually abused children (Kendall-Tackett et al., 1993). However, some studies analyze participant data following hospital in-take assessment or use previous hospital records for retrospective research. The study findings are based on data obtained either at the beginning of treatment, or at a stage in treatment that is unknown (Cosentino et al., 1993; Gomes-Schwartz et al., 1985; Gold, 1986; Mannarino et al., 1989; Miller et al., 1987; Stovall & Craig, 1990). This type of data collection leads one to question the reliability of the composite self-esteem findings in the literature.
Self-Esteem Mid-Treatment Stage:

The ANOVA of the self-esteem means reveal that the participants in Group 3 no treatment, no abuse, are significantly different than the other two groups. It appears that sexually abused children and other children in treatment have lower self-esteem than children not in treatment, according to their responses on Culture-Free Self-Esteem Inventory-2 (CFSEI-2), but the scores of the two groups of children in treatment do not significantly differentiate from one another.

There is a possibility that the normative school population on which the CFSEI-2 was standardized contained unidentified, sexually abused children and unidentified, other children in need of treatment or at different stages of treatment. This possibility could affect the strength of the test item selection in regard to discriminating the self-esteem levels of sexually abused children from other children, as shown in the Rosebush Picture Sort findings.

As stated earlier, many of the CFSEI-2 items reflect problems that sexually abused children experience. The fact that the two treatment groups do not differentiate when completing a verbal exercise, but do differentiate when completing a non-verbal exercise, strengthens support for the diagnostic value of the differential, non-verbal RPS technique.
Self-Esteem End-Treatment Stage:

There were no differences in the self-esteem levels of the three Groups at the End-Treatment stage. It is postulated that this situation may represent the consequences of the therapeutic healing that the sexually abused and other children in treatment have experienced.

In summary, the strengths of this study lie in: (a) the randomly selected population sample; (b) the application of a non-threatening, non-verbal measurement technique to the three sample groups at different stages of treatment; (c) the collection of sensitive demographic data from the child's therapist, rather than imposing this task on child participants or their parents; and (d) the comparison of participants' self-esteem at different stages of treatment. The demographic information about the three groups of participants indicates that the samples were comparable with respect to range of abuse, therapist background, child participant age range, parental status, ethnic origin, and residential area. This information enables comparisons with other studies to be made and the replication of this study in other settings.

The study findings show no differences in Rosebush Picture Sort selections or Culture-Free Self-Esteem
scores of no abuse, no treatment children, sexually abused children and other children at the Beginning or End-Treatment stage. Sexually abused children's RPS selections at the Mid-Treatment stage are different than both comparison groups. These findings indicate that sexually abused children identify RPS pictures differently than other children. The findings further suggest that sexual abuse may affect the internal working models of children differently than other types of abuse and trauma.

The CFSEI-2 scores of Group 1 and Group 2 in Mid-Treatment differ from the no abuse, no treatment Group 3, but not from one another. It is possible to reason that the verbal-auditory response mode of the CFSEI-2 instrument does not tap into the internal dynamics of the sexually abused child, although the Inventory is sensitive enough to discriminate the self-esteem levels of coping and non-coping children.

Limitations of Study

The demographic data was obtained from the caseloads of 31 therapists or psychologists. It is possible that the therapists or psychologists made diagnostic errors and mislabelled the stage of treatment, although according to the statistical analyses, the misclassified children represent only 12%
(n = 9) of the Mid-Treatment study sample. The size of the no abuse, no treatment sample was small, particularly in comparison with the Mid-Treatment groups. This small size influences the strength of the findings, particularly in the Mid-Treatment stage. The Beginning-Treatment stage was defined as one to three sessions with the assumption that the children would not have developed a strong relationship with the therapist during that time. This assumption might be incorrect. Because previous study findings of these pictures differentiated the abused and non-abused children, it is possible that the non-differentiating Rosebush Pictures in this study may hold greater significance with other participant samples or when presented to participants in a different format. The type of measurement of Rosebush Picture selection needs to be considered. For example, following the identification of significant Rosebush Pictures through Q-Sort measurement, the use of an interval measurement and weighted Likert scales with these same pictures would strengthen the technique.

To continue the development of this non-verbal, diagnostic, classification model, future RPS studies will benefit from using cross-validation procedures with data from this study, including an identified sample as a fourth comparison group.
The study sample is not representative of all children in therapy, but rather is representative of sexually abused children and other children in outpatient treatment and children whose parents are in health care professions in a Western Canadian province.

Finally, this RPS study is a preliminary work in an on-going research project. At this point in time, children's selection of a rosebush drawing or the selection of specific rosebush pictures cannot be considered as indicators of sexual abuse status.
CONCLUSIONS

This study (N = 123) contrasted a group of sexually abused children in treatment, aged 6 to 12 years, with two comparable groups—other non-sexually abused children in treatment, and non-abused, non-treatment children—to determine whether differences in Rosebush Picture selection could be demonstrated. All children underwent evaluation procedures that included completion of a 12 picture projective measure (the Rosebush Picture Sort) and the Culture-Free Self-Esteem Inventory-2. A demographic questionnaire for each child was completed.

Results showed no differences in picture selection or self-esteem scores of children at the Beginning and End-Treatment stage. Sexually abused children's Rosebush Picture Sort selections at Mid-Treatment were different than both comparison groups. The self-esteem scores of the two clinical groups in Mid-Treatment were significantly lower than the scores of the non-abused, non-treatment group, but did not differ from one another. The findings indicated that at Mid-Treatment, sexually abused children identify Rosebush Picture Sort Pictures differently than other children. The findings of this study further indicated that sexually abused children, in all stages of treatment, provided few
unsolicited verbal expressions of their personal opinions but they had no difficulty in responding to the RPS Pictures.

It is possible that sexual abuse affects the internal working models of children differently than other types of abuse and trauma.

In using the RPS findings, it is important to remember that the Rosebush Picture Sort findings are based on the interactions of the picture set, not a single picture within the set, and if a child selects pictures similarly to Group 1, Group 2 or Group 3, the picture selection alone is not sufficient information for a clinical diagnosis.

**Future Research**

It is hoped that future Rosebush Picture Sort research will identify a number of Rosebush Pictures that discriminate between sexually abused children and other children. Using a larger representative sample of three study groups, including minority groups, will also be of value in the continuing development of this classification technique. It is suggested that future demographic information include parental status and whether the abuse is intra-familial or extra-familial, as these variables may influence the degree of impact.
of sexual abuse on children. The intra-familial or extra-familial variable may influence the participant's Rosebush Picture Sort selection.

Accidental detection of sexual victimization of school-age children is less probable than in other age groups. It is important to have a non-threatening, diagnostic technique that will facilitate the possible detection of sexual abuse in this age population, to aid in the protection of children.

Learning from the stage of treatment findings in this study, it will be helpful in future sexual abuse studies to define and include the stage of treatment of the participants. Identifying Rosebush Pictures that tap into gender identity issues for this age group will be of diagnostic and therapeutic value. As reported in these findings, it would be interesting to compare histories of language development in sexually abused children and other children. The legal and social service system personnel need to be informed as to the possible limitations of verbal expression in sexually abused children, particularly when regarding children experiencing other kinds of abusive circumstances. Future research may need to investigate the formulation of sexually abused children's defense mechanisms when compared with the development of defense mechanisms of other children.
Future research in assessment of sexually abused children needs to continue to explore the development of a non-verbal projective measurement as a way of tapping into children's unconscious perception of self in relationship to their conscious perception of self. Learning to identify discrepancies between these two perceptions will be of great value to the clinical findings in the assessment process.
REFERENCES


Bretherton, I. (1990). Open communication and internal working models: Their role in the development of attachment relationships. In R.A. Thompson (Ed.), Socioemotional development (pp. 57-113). Omaha: University of Nebraska Press.


Lewis, H.P. & Livson, N. (1980). Cognitive development, personality and drawing: Their


APPENDICES
APPENDIX A - PRELIMINARY STUDY BAR GRAPH
BAR GRAPH FROM PRELIMINARY STUDY

Bar Graph Pictures correspond with Rosebush Pictures

| Picture #7 | = | RPS #1 |
| Picture #18 | = | RPS #2 |
| Picture #21 | = | RPS #3 |
| Picture #1 | = | RPS #4 |
| Picture #8 | = | RPS #5 |
| Picture #15 | = | RPS #6 |
| See Bowden (1991) | = | RPS #7 |
| See Bowden (1991) | = | RPS #8 |
| See Bowden (1991) | = | RPS #9 |
| See Bowden (1991) | = | RPS #10 |
| Picture #20 | = | RPS #11 |
| Picture #6 | = | RPS #12 |

FIGURE 5. BAR GRAPH OF PICTURE SCORES FOR TYPE 1 AND TYPE 2
APPENDIX B - RESEARCH APPROVAL FORMS
BEHAVIOURAL SCIENCES SCREENING COMMITTEE FOR RESEARCH AND OTHER STUDIES INVOLVING HUMAN SUBJECTS

CERTIFICATE of APPROVAL

INVESTIGATOR:  Allan, J.
UBC DEPT:  Counselling Psychology
INSTITUTION:  Community agencies; office of therapists
TITLE:  Rosebush picture sort
NUMBER:  B92-267
CO-INVEST:  Carter, M.A.
APPROVED:  OCT 9 1992

The protocol describing the above-named project has been reviewed by the Committee and the experimental procedures were found to be acceptable on ethical grounds for research involving human subjects.

Dr. R.D. Spratley
Director, Research Services
and Acting Chairman

THIS CERTIFICATE OF APPROVAL IS VALID FOR THREE YEARS FROM THE ABOVE APPROVAL DATE PROVIDED THERE IS NO CHANGE IN THE EXPERIMENTAL PROCEDURES.
July 6, 1992

Ms. Mary Ann Carter, M.A.
Registered Psychologist
Collingwood Professional Building
216 - 3540 West 41st Avenue
Vancouver, British Columbia
V6N 3E6

Dear Ms. Carter:

Thank you for your recent letter outlining your proposed research. I am pleased to provide you with my consent to my wards being interviewed and tested for your research purposes, with the following conditions applied:

1. That confidentiality of my wards will be maintained and nothing will identify them personally, or as wards of the Superintendent.

2. That interviewing will be conducted in a safe and supportive environment.

3. That interviewers will obtain any necessary parental or guardian consents for those children who are in the care of the Superintendent by agreement only; i.e. those for whom the Superintendent has custody only, not guardianship.

I wish you every success with your research and your doctoral work and will be most interested to hear of the results.

Yours sincerely,

Joyce Rigaux, RSW
Superintendent of Family and Child Service
November 17, 1992

Mary Ann Carter, M.A.
Registered Psychologist
Department of Counselling Psychology
Faculty of Education
5780 Toronto Road
Vancouver, British Columbia
V6T 1L2

Dear Ms. Carter:

I have reviewed your research project. I am satisfied that this research will not compromise client confidentiality and will be undertaken with written parent/child consent. Client access to services will not be compromised by virtue of their agreement or refusal to participate in the research project.

It is my understanding that this research has received approval from Fraser Valley/North Shore Regional Mental Health Office, and that this approval has being conveyed by the Regional Office to all Mental Health Centres involved in the study.

In recognition of the time to be spent by our therapists in gathering the data, I would appreciate the results being made available to staff in some verbal (symposium) or written form, eventually. All the best in completion of your research project.

Yours sincerely,

Clem Meunier, Ph.D.
Manager
Child and Youth Mental Health Services

cc: Mr. Paul Charron
Mr. David Brown
Director
Child and Youth Coordinator
Adult Services
Fraser Valley/North Shore Region

Ms. Christine Kline
Regional Director
Fraser Valley/North Shore Regional Office

Attachment
D:\DATAMEUNIER\ROSEBUSH.tr
APPENDIX C - THERAPIST LETTERS AND PERMISSION FORMS
Date

Name
Title or Firm
Street Address
City, B.C. Postal Code

Dear ,

As a psychologist or child abuse therapist in the Province of British Columbia, you are aware of the unexpected ordeal encountered by children following their disclosure of child abuse.

I am involved in a doctoral study program at the University of British Columbia under the supervision of Dr. John A.B. Allan, (604) 822-4625. We are developing a standardized, nonverbal paradigm (Rosebush Picture Sort) to discriminate types of abused children through their selection of rosebush pictures. As a psychologist or therapist, your participation in this study is of extreme importance. All therapists in private practice and health related employment who assess or treat six to twelve year old abused children, are being asked to participate in this research.

The picture sort has been reviewed and approved by some psychologists and therapists in the province who treat abused children. Your cooperation in administering the picture sort, the Culture-Free Self-Esteem Inventory and completing the individual questionnaire will be greatly appreciated. The time required for each child will be one hour.

Results from the questionnaires and picture sort will become part of child abuse research at the University. You can be assured the child's and your responses on the forms will remain anonymous, i.e. identified only by a code number. You are welcome to withdraw from this research at any time and such a withdrawal will not jeopardize your involvement in future university research.

I will call you within the next few days to find out if you are willing to participate in this research project.

Yours truly,

Mary Ann Carter, M.A.
Registered Psychologist
THERAPIST PARTICIPATION PERMISSION

Dear Psychologist / Therapist:

Please sign and return this agreement with the enclosed materials.

I [do] [do not] agree to participate in the data collection for the Rosebush Picture Sort research. I will obtain written permission from parents or guardians for their children to participate in this research. This permission will be kept with the client's record in my place of employment.

The Rosebush Picture Sort and the Self-esteem Inventory will be individually administered in a safe and supportive environment to clients who are six to twelve years old and of normal intelligence. The coded materials will be returned to the investigators, maintaining the confidentiality of the client at all times.

Name__________________________

Date__________________________
Dear

Thank you for agreeing to participate in the research project we discussed on the telephone on _________. I have enclosed _____ set(s) of materials. Each set contains a demographic sheet, a Rosebush Picture Protocol and a Culture-Free Self-esteem Inventory. The Picture Sort Cards are included and to be returned when you have completed your testing. Please sign and return the Therapist Participation sheet with the above forms.

Two Participation Permission forms are included and to be signed by the parent or guardian before the test materials are administered to their child. Make sure the parent or guardian has signed one form for your record and kept one for their records.

Directions for administering the Rosebush Picture Sort can be found inside the front cover of the Rosebush Picture Sort. If you wish further information on the use of Rosebush drawings in therapy, see Allan, J. (1988). Inscapes of the child's world. Dallas, Spring Publications.

PLEASE ADMINISTER THE MATERIALS IN THE FOLLOWING ORDER:

Once the child has established rapport with you and is relaxed, administer the Rosebush Picture Sort. Towards the end of the session or following the picture sort, administer the Culture-Free Self-Esteem Inventory.

Culture-Free Self-Esteem Inventory - Complete this yes/no form following the Rosebush Picture Sort. It will take no longer than 15 minutes.

Read the directions out loud to the child. Read the sentences out loud to the child marking their yes/no answers on the protocol. Upon completion, please check the form to make sure all questions are answered.

Note any unusual behaviors or comments the child makes.

Make as few comments to the child as possible, other than reading the self-esteem statements. If the child asks you what a word means, provide a simple synonym.

Please check each form to make sure all the sentences are answered.
Complete the demographic information sheet on each child.

Please administer the materials to the child (ren) within the next two weeks and return the forms to me. If, for some unforeseen reason, you are no longer able to participate, I would appreciate you returning the blank protocols and Card sort to me.

Thank you very much for participating in this study.

Yours truly,

Mary Ann Carter, M.A.
Registered Psychologist
PARTICIPATION PERMISSION

Dear Parent / Guardian:

We are from the University of British Columbia, Department of Counselling Psychology doing research which involves children sorting nonthreatening pictures and completing a paper/pencil questionnaire. The project is under the supervision of Professor John Allan (822-4625). We request your permission to allow your child to participate in the research. We will have no contact with your child or know their identity. The child's therapist will administer the questionnaire and pictures, recording the responses on a number coded page. With your permission, the therapist will complete one page of demographic information about your child including your child's age, gender, ethnic heritage, family grouping, geographic location, stage of treatment, and diagnostic considerations. The therapist will return the three numbered pages to us.

Should this research project be acceptable to you, please circle the appropriate word below and return this form to your child's therapist. Please understand that denying consent will not jeopardize any treatment that your child receives.

A copy of this consent form has been included for you to file with your own records.

I [do] [do not] consent for my child to participate in this research.

Name_______________________________

Date_______________________________
APPENDIX D - INSTRUMENTATION USED IN STUDY
Please fill in all requested information and check choices. Appendix D-1

<table>
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<th>DATE</th>
<th>THERAPIST</th>
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<th>female</th>
<th>highest degree earned</th>
<th>major</th>
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<table>
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<th>Vanc.</th>
<th>Island</th>
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<td></td>
<td>B.C.</td>
<td>Island</td>
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<th>female</th>
<th>age-yr./mo.</th>
<th>I sessions with therapist</th>
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</table>

Please check if child is in assessment or treatment and indicate what stage:

- beginning rx
- middle rx
- end rx
- assessment

<table>
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<tr>
<th>ETHNIC HERITAGE</th>
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<th>Asian</th>
<th>Caucasian</th>
<th>Indian</th>
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<thead>
<tr>
<th>CHILD RESIDENCE</th>
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<th>1 parent</th>
<th>foster par.</th>
<th>step par.</th>
<th>other</th>
<th>(specify)</th>
</tr>
</thead>
</table>

| REASON FOR REFERRAL: ____________________________________________________________ |

From the background and your clinical impression, please check the degree of severity of suspected abuse that you believe the child has experienced: (check only one on each row, i.e. for emotional, check either severe, moderate or mild.)

**THERAPIST’S OPINION REGARDING DEGREE OF SUSPECTED ABUSE**

<table>
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<th>SEXUAL</th>
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<td>(broken bones)</td>
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<tr>
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<td>(sporadic neglect)</td>
<td>(bruising)</td>
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<tr>
<td>MILD</td>
<td>(verbal put downs)</td>
<td>(consequential spanking)</td>
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*see attached sheet for further description of abuse categories

**CHECK TYPE OF ATTACHMENT CHILD HAS WITH PARENT/GUARDIAN (check only one)**

*secure | anxious/ambivalent | anxious/avoidant | anxious/disorganized

*see attached sheet for description of attachment categories

__ Participation Permission Sheet signed by parent/guardian and on file. yes no

**COMMENTS REGARDING CHILD’S ATTITUDE BEFORE, DURING AND AFTER ROSEBUSH PICTURE SORT AND SELF-ESTEEM INVENTORY:** e.g. sleepy, in angry mood, silly (use back of page if you need more space).
DESCRIPTIONS OF ABUSE CATEGORIES

MILD EMOTIONALLY ABUSIVE BEHAVIORS

CRITICISM - The adult often negatively refers to the child when speaking to the child or to others about the child.

SELF-CARE - The adult does not provide the child with clean, mended, appropriate seasonal clothing or self-care guidelines, e.g. routine toothbrushing, bathing.

AVOIDANCE - The adult makes limited eye contact with the child and has little conversation with him or her.

MODERATE EMOTIONALLY ABUSIVE BEHAVIORS

SPORADIC NEGLECT - The adult is unreliable in meeting the overt needs of the child, e.g. attends very few school functions, shows little interest in child's activities.

INTIMIDATION - The adult threatens to "put the child in a foster home", "out on the street" etc.

DENOUNCING - The adult constantly belittles any accomplishments of the child.

SEVERE EMOTIONALLY ABUSIVE BEHAVIORS

THREATS - The adult threatens to kill or maim the child.

ABANDONMENT - The adult leaves the child unsupervised for long periods of time.

CASTIGATION - Any interaction between the adult and the child is peppered with strong, undermining statements from the adult that consistently attack the ego defenses of the child.

SPECTRUM OF PHYSICALLY ABUSIVE BEHAVIORS

MILD PHYSICALLY ABUSIVE BEHAVIORS

SPANKING - The adult uses their hand or an object to hit the child with once or twice, on the child's clothed or unclothed body or buttocks.

RESTRICTION - The adult physically prevents the child from moving by pinning their body or body parts to a surface or forcefully holding the child, against their will.

SLAPPING, PINCHING, EAR PULLING - The adult slaps the child on the face or head, pinches the child's body or limbs or leads the child by pulling the ear.
MODERATE PHYSICALLY ABUSIVE BEHAVIORS

BRUISING - The adult hits the child severely enough to leave bruise marks on the child’s skin.

HAIR LOSS - The adult pulls the child’s hair with enough force to remove clumps of hair, possibly causing scalp abrasions.

CONFINEMENT - The adult ties or chains the child to a stationary object.

SEVERE PHYSICALLY ABUSIVE BEHAVIORS [the situation is severe enough to require hospitalization]

BROKEN BONES - The adult intentionally breaks bone(s) of the child.

BURNING - The adult intentionally burns the skin of the child by using cigarettes, hot liquids or heating elements.

STARVATION - The adult denies the child access to any nutrition.

SPECTRUM OF SEXUALLY ABUSIVE BEHAVIORS (Sgroi, Blick, Porter, 1985)

MILD SEXUALLY ABUSIVE BEHAVIORS

NUDITY OR DISROBING - The adult parades nude around the house in front of all or some of family members. The adult may disrobe in front of the child.

OBSERVATION OF THE CHILD - The adult surreptitiously or overtly watches the child undress, bathe, excrete, urinate.

KISSING - The adult kisses the child in a lingering and intimate way.

MODERATE SEXUALLY ABUSIVE BEHAVIORS

GENITAL EXPOSURE - The adult exposes his or her genitals to the child.

FONDLING - The adult fondles the child’s breasts, abdomen, genital area, inner thighs or buttocks.

MASTURBATION - The adult masturbates while the child observes, the adult observes the child masturbating; the adult and child observe each other while masturbating themselves or each other.

SEVERE SEXUALLY ABUSIVE BEHAVIORS

FELLATIO OR CUNNILINGUS - The adult has oral-genital contact with the child.

DIGITAL PENETRATION OF THE ANUS OR THE VAGINA. Inanimate objects may also be inserted.

PENILE PENETRATION OF THE ANUS OR THE VAGINA.
**SECURE ATTACHMENT** - The children show genuine pleasure in being with adults, making good eye contact, smiling and conversing. Children are able to express their positive and negative feelings openly with adults. Children seem secure in their own identity. These children use and respond to reason and are eager to learn. They seem to have a vital, lively energy.

**ANXIOUS/AMBIVALENT ATTACHMENT** - Children have ambivalent feelings towards adults, sometimes showing sadness or fear of the adult and other times being joyous when they are together. They show a lack of trust in adults and will have little verbal communication with them. Although they seem to comply with the wishes of the adult and at time almost "take care of them," there is an underlying chronic anxiety that is evident in their play, drawings, peer relationships and verbal expression. They may seem eager to please, obedient and compliant to adult requests. They seem to day dream a lot and are shy and reserved.

**ANXIOUS/AVOIDANT ATTACHMENT** - Children avoid their parent in a neutral and nonconfrontational manner by playing at friend's homes, staying late at school and spending a lot of time in their rooms or watching T.V.. Children do not play with their parent, show little shyness with strangers and show no distress when separated from their parent. They may have a seemingly excessive sense of self-reliance and put an emphasis on their independence of any need for help or support. Though these children seem detached and aloof, professionals often sense a core of anger.

**ANXIOUS/DISORGANIZED ATTACHMENT** - Children show contradictory behavior patterns. They may appear to be in a good mood while playing but will compulsively and unexpectedly strike out and hit or make derogatory remarks. These children have undirected, misdirected, incomplete and interrupted movements and expressions during play. After long periods of contented play, they may burst into tears or express anger without any logical rationale. These children will not seek out parental comfort or protection when in fearful or threatening situations. They often appear dishevelled, incoherent at times, unkempt and unsocialized. They are restless and fidgety.
ROSEBUSH PICTURE SORT

DO NOT GIVE THE CHILD ANY PROMPTING REGARDING THEIR CHOICE OF PICTURES

At the beginning of the session, once rapport is established with the child, and you feel the child is relaxed, say, "NOW, I AM GOING TO SHOW YOU A PICTURE." [show child the sample picture] "BELOW THIS PICTURE ARE FOUR STATEMENTS: [read statements out loud] "THIS IS VERY MUCH LIKE ME, THIS IS LIKE ME, THIS IS NOT LIKE ME AND THIS IS NOT AT ALL LIKE ME. WHICH ONE OF THESE STATEMENTS MATCHES THE WAY YOU FEEL ABOUT THIS PICTURE?" Once child has made a selection, thank them and go to picture one.

If the child has difficulty making a choice on the sample, encourage their participation saying, "THINK OF YOURSELF AS A FLOWERING BUSH...(pause)...WHAT KIND OF PICTURE WOULD YOU BE LIKE? HOW DO YOUR FEELINGS ABOUT YOUR PICTURE COMPARE WITH YOUR FEELINGS ABOUT THIS ONE?"

Follow with "HERE ARE OTHER PICTURES I WANT YOU TO LOOK AT VERY CAREFULLY AND DECIDE HOW YOU FEEL ABOUT EACH ONE. TAKE YOUR TIME AND MARK YOUR ANSWER THE SAME WAY YOU DID FOR THE FIRST PICTURE"

[point to answered response].

Sit quietly while the child completes the task, noting the child's behavior and verbal comments.

Once the child has finished, check the protocol to make sure all of the answers are completed. Thank them for completing the task. If the child absolutely refuses to cooperate, ask the child if he or she is willing to complete this activity in your next meeting. If the child continues to be uncooperative, note what the child finds objectionable about the task.
ROSEBUSH PICTURE SORT ANSWER SHEET
(size 8 1/2 x 11)

ROSSBOSH PICTORB SORT OPTIONS

1. A.______ B.______ C.______ D.______
2. A.______ B.______ C.______ D.______
3. A.______ B.______ C.______ D.______
4. A.______ B.______ C.______ D.______
5. A.______ B.______ C.______ D.______
6. A.______ B.______ C.______ D.______
7. A.______ B.______ C.______ D.______
8. A.______ B.______ C.______ D.______
9. A.______ B.______ C.______ D.______

Therapist Comments:

RPS SAMPLE PAGE
(all picture pages laminated, 8 1/2 x 11)

5. A. THIS IS VERY MUCH LIKE ME.
6. THIS IS LIKE ME.
7. THIS IS NOT LIKE ME.
8. THIS IS NOT AT ALL LIKE ME.
FORM A

Age Date

School / Class Date of Birth

Total G S A P L

Directions

Please mark each statement in the following way: If the statement describes how you usually feel, make a check mark (\(\checkmark\)) in the “yes” column. If the statement does not describe how you usually feel, make a check mark (\(\\checkmark\)) in the “no” column. Check only one column (either yes or no) for each of the 60 statements. This is not a test, and there are no right or wrong answers.
1. I spend a lot of time daydreaming..............................................................
2. Boys and girls like to play with me..........................................................
3. I like to spend most of my time alone.....................................................
4. I am satisfied with my school work........................................................
5. I have lots of fun with my mother...........................................................
6. My parents never get angry at me.........................................................
7. I wish I were younger..............................................................................
8. I have only a few friends.........................................................................
9. I usually quit when my school work is too hard.......................................$
10. I have lots of fun with my father..............................................................
11. I am happy most of the time....................................................................
12. I am never shy..........................................................................................
13. I have very little trust in myself..............................................................
14. Most boys and girls play games better than I do....................................$
15. I like being a boy / I like being a girl.......................................................$
16. I am doing as well in school as I would like to.......................................$
17. I have lots of fun with both of my parents.............................................$
18. I usually fail when I try to do important things......................................$
19. I have never taken anything that did not belong to me.........................$
20. I often feel ashamed of myself..............................................................$
21. Boys and girls usually choose me to be the leader.................................$
22. I usually can take care of myself.............................................................$
23. I am a failure at school..........................................................................$
24. I find it hard to make up my mind and stick to it....................................$
25. My parents make me feel that I am not good enough.........................$
26. I never get angry.....................................................................................$
27. I often feel that I am no good at all.......................................................$
28. I have many friends about my own age...............................................$
29. Most boys and girls are smarter than I am...........................................
30. Most boys and girls are better than I am..............................................$
31. My parents dislike me because I am not good enough.......................$
32. I like everyone I know............................................................................$
33. Children pick on me very often..............................................................$
34. I like to play with children younger than I am......................................$
35. I like to be called on by my teacher to answer questions.....................$
36. I would change many things about myself if I could.........................$
37. There are many times when I would like to run away from home........$
38. I am as happy as most boys and girls....................................................$
39. I can do things as well as other boys and girls.....................................$
40. I often feel like quitting school..............................................................$
41. I worry a lot.............................................................................................$
42. My parents understand how I feel.........................................................$
43. When I have something to say, I usually say it.....................................$
44. I never worry about anything...............................................................$
45. I am as nice looking as most boys and girls.........................................$
46. Other boys and girls are mean to me....................................................$
47. I know myself very well........................................................................$
48. I am doing the best school work that I can..........................................$
49. People can depend on me to keep my promises....................................$
50. My parents think I am a failure............................................................$
51. I always tell the truth.............................................................................$
52. I need more friends................................................................................$
53. I always know what to say to people.....................................................$
54. My teacher feels that I am not good enough.......................................$
55. My parents love me................................................................................$
56. I never do anything wrong....................................................................$
57. Most boys and girls are stronger than I am..........................................$
58. I am proud of my school work..............................................................$
59. I often get upset at home......................................................................$
60. I am never unhappy.............................................................................
APPENDIX E - ROSEBUSH PICTURE SORT STATISTICS
PHASE ONE MEAN & STANDARD DEVIATION SCORES*

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* Score 1 - "very much like me", 2 - "like me", 3 - "not like me", 4 - "not at all like me".
PHASE TWO RPS MEAN AND STANDARD DEVIATION SCORES*

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* Score 1 = "very much like me", 2 = "like me", 3 = "not like me", 4="not at all like me".
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Chi-Square, 6 df = 7.94
\[ P = 0.24 \]

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Chi-Square, 6 df = 17.11
\[ P = 0.0089 \]

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Chi-Square, 6 df = 5.87
\[ P = 0.44 \]

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Chi-Square, 6 df = 3.34, P = 0.77

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| Chi-Square, 6 df = 7.62 | P = 0.27 |

| Picture 3 |    |    |    |    |       |
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| 3         |    |    |    |    |       |
| Chi-Square, 6 df = 2.17 | P = 0.90 |

| Picture 4 |    |    |    |    |       |
| 1         | 9  | 13 | 7  | 7  | 36    |
| 2         |    |    |    |    |       |
| 3         |    |    |    |    |       |
| Chi-Square, 6 df = 5.57 | P = 0.47 |

| Picture 5 |    |    |    |    |       |
| 1         | 11 | 11 | 6  | 8  | 36    |
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| Picture 8 | 2 | 1 | 4 | 6 | 13 |
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|           | 0 | 1 | 5 | 5 | 11 |
| Total     | 2 | 4 | 12| 18| 36 |
| Chi-Square, 6 df = 5.06 | P = 0.54 |

| Picture 9 | 4 | 3 | 2 | 4 | 13 |
|           | 2 | 3 | 3 | 4 | 12 |
|           | 2 | 7 | 2 | 0 | 11 |
| Total     | 8 | 13| 7 | 8 | 36 |
| Chi-Square, 6 df = 7.85 | P = 0.25 |

| Picture 10 | 5 | 2 | 3 | 3 | 13 |
|            | 2 | 3 | 6 | 1 | 12 |
|            | 0 | 6 | 3 | 2 | 11 |
| Total      | 7 | 11| 12| 6 | 36 |
| Chi-Square, 6 df = 10.14 | P = 0.12 |

| Picture 11 | 3 | 6 | 2 | 2 | 13 |
|            | 5 | 3 | 2 | 2 | 12 |
|            | 5 | 4 | 2 | 0 | 11 |
| Total      | 13| 13| 6 | 4 | 36 |
| Chi-Square, 6 df = 3.55 | P = 0.74 |

| Picture 12 | 4 | 6 | 3 | 0 | 13 |
|            | 2 | 3 | 4 | 3 | 12 |
|            | 1 | 3 | 4 | 3 | 11 |
| Chi-Square, 6 df = 6.32 | P = 0.39 |
APPENDIX F - CHILD PARTICIPANT COMMENTS
CHILDREN'S COMMENTS ABOUT PICTURES

General Comments

Group 3 - No Abuse, No Treatment -
10.3 female - "Some I knew it was like me...Lots of background & grass, not just one thing. I like having things around me and having lots of colour."

Picture 1

Group 3 - No Abuse, No Treatment -
11.3 male - "Some looked odd to me, something not quite right [#1,6,12], something missing."

Beginning-Treatment

Group 1 - Sexual Abuse -
9.8 male - "It's crammed up in a bunch of trees."

Group 2 - Other Treatment -
11.11 female - "I really like trees."
10.7 female - "Too much forest."
11.10 male - "I'm always caught in the middle of things."
6.10 male - "I don't like grass."
9.11 male - "I like to play in forests."
7.7 male - "I couldn't go traveling in the forest."

Mid-Treatment

Group 1 - Sexual Abuse -
8.2 female - "Too colourful."
6.1 female - "That's all alone, that's not like me."
8.6 male - "Sometimes I feel like the only one among those who are different from me."

Group 2 - Other Treatment -
8.0 female - "I like trees and grass."
9.6 male - "Nobody to talk to."
10.2 female - "It's all trees. I'd be very lonely."

End-Treatment

Group 2 - Other Treatment -
7.8 female - "Bush isn't fluffy."
11.7 male - "Looks very crowded in the picture."
11.11 male - "The trees stand for everyone and I'm in the middle."
10.4 male - "Makes you feel crowded in by all the trees."

**Picture 2**

**Beginning-Treatment**

Group 1 - Sexual Abuse -
9.7 female - "Birds."

Group 2 - Other Treatment -
11.1 female - "It's bare...should have lots of pretty things around it."
10.7 female - "I like to play outside and watch T.V. in the house."
6.10 male - "I don't like smoke."
7.6 male - "The tree looks good...a good drawing."
9.11 male - "I'd like to live in a big house with a big yard."

**Mid-Treatment**

Group 1 - Sexual Abuse -
6.1 female - "I like these birds."
7.9 female - "I like rain because it makes everything grow."
7.11 male - "This has a fence around me." It's like me."

Group 2 - Other Treatment -
8.0 female - "I like house, trees, birds, sunshine and flowers."
9.6 male - "Nobody to talk to."

**End-Treatment**

Group 2 - Other Treatment -
7.8 female - "It's a skinny bush."
11.11 male - "The roses are for girls, not boys."
9.7 male - "There's a house."
10.4 male - "Nice feeling that you're finally home. That it's a nice day."

**Picture 3**

**Beginning-Treatment**

Group 2 - Other Treatment -
11.10 male - "I'm always getting cut off from things I like."
11.1 female - "Seems so plain, House seems
disfigured. Seems sad."
10.7 female - "Don't know why [I don't like it]."
6.10 male - "I don't like watering plants."
7.6 male - "I wouldn't go outside near any flowers."
9.11 male - "I don't like to garden."
7.11 male - "No way."

Mid-Treatment
Group 1 - Sexual Abuse -
8.2 female - "Too black."
7.11 male - "That's a lawn mower."

Group 2 - Other Treatment -
9.6 male - "Someone always looks after me."

End-Treatment
Group 2 - Other Treatment -
7.8 female - "Bush has no leaves."
11.7 male - "Looks like someone's crying."
10.4 male - "Everything is white. It feels cold, like there's nothing in it."
11.11 male - "I don't live in a house like that."

Picture 4

Group 3 - No Abuse, No Treatment -
11.11 male - "Half cold/half warm. Don't like raining out.

Beginning-Treatment
Group 2 - Other Treatment -
11.1 female - "I like rainbows, I like the colours."
10.7 female - "I like rainbows and I try to find the charm at the end."
6.10 male - "I like the rainbow."
9.11 male - "I don't like rainbows or the rain."
7.11 male - "The sides kind of flat...sort of."

Mid-Treatment
Group 1 - Sexual Abuse -
7.5 female - "Nice rainbow."
7.9 female - "I like this picture."

Group 2 - Other Treatment -
8.0 female - "It gives you a heart warming feeling."
10.2 female - "This would grow lots because of purple rain. I really like this."
9.9 male - "Like me but I don't like it."

**End-Treatment**

Group 1 - Sexual Abuse -
6.1 male - "Volcano tree & storm are like me."

Group 2 - Other Treatment -
7.8 female - "Rainbows, nice but the bush doesn't have red roses."
11.11 male - "I like the water."
10.4 male - "It's snowing. I like rainbows...kind of Christmassy and I like Christmas."

**Beginning-Treatment**

Group 1 - Sexual Abuse -
9.7 female - "Bird."
9.8 male - "I like birds."

Group 2 - Other Treatment -
11.10 male - "I'm not use to birds getting food for their young. I have to get everything for myself."
11.1 female - "Like colours, bugs."
10.7 female - "I like the bugs and birds."
6.10 male - "I like the bugs."
9.11 male - "I like collecting bugs & like to watch birds."
7.6 male - "I don't like looking at insects."
7.4 male - "If I were a flowering bush."

**Mid-Treatment**

Group 2 - Other Treatment -
8.0 female - "I like birds, ants, grass and trees."
9.9 male - "Like me but I don't like it."
10.2 female - "I really love it."

**End-Treatment**

Group 1 - Sexual Abuse -
6.1 male - "Like to collect bugs."
10.11 female - "Is that a hand?"

Group 2 - Other Treatment
7.8 female - "I don't like bugs."
11.11 male - "Because of bugs and stuff."
9.7 male - "I like insects so I can bug my mom."
10.4 male - "It has birds and animals. I like the forest but not too many trees."

**Picture 6**

**Beginning-Treatment**
Group 1 - Sexual Abuse -
9.7 female - "Flowers."

Group 2 - Other Treatment -
11.1 female - "They should have more colour."
10.7 female - "I like roses."
6.10 male - "I like roses and the birds and sky."
7.6 male - "The blue sky is sort of blackish."
9.11 male - "I don't like rose buds because when you touch them it hurts."

**Mid-Treatment**
Group 1 - Sexual Abuse -
6.1 female - "When I was a baby."

Group 2 - Other Treatment -
8.3 female - "Lots of friends...no."

**End-Treatment**
Group 1 - Sexual Abuse -
6.1 male - "Black clouds and black birds."

Group 2 - Other Treatment -
7.8 female - "The roses are red, like my rose bush would be."
11.11 male - "Roses, I don't like flowers."
10.4 male - "It's got the sun and flowers."

**Picture 7**

**Beginning-Treatment**
Group 2 - Other Treatment -
11.10 male - "The leaves falling remind me of me because I'm so clumsy and break things a lot."
11.1 female - "Like how tree stands out."
10.7 female - "I don't like Fall because the trees are so bare."
6.10 male - "I like the colour black."
9.11 male - "I like climbing trees and I like windy days."
7.6 male - "The trees looks kinda weird."

**Mid-Treatment**

Group 2 - Other Treatment -
  8.3 female - "What's this one...losing things? Somebody always there."
  10.2 female - "I would be right next to the trees. It's a beautiful one. I really love it."

**End-Treatment**

Group 1 - Sexual Abuse -
  6.1 male - "I like black and I like green leaves and green sun and blue clouds."

Group 2 - Other Treatment -
  7.8 female - "I don't like trees without leaves."
  11.11 male - "I like Fall."
  9.7 male - "I like the fence so I can punch it."
  10.4 male - "The leaves are all falling off. Makes you feel fenced in. Spikes make you feel unwanted...like a grave yard."

**Picture 8**

Group 3 - No Abuse, No Treatment -
  8.4 female - "One with rose was not like me. Sunny faces and people smiling not like me."

**Beginning Treatment**

Group 1 - Sexual Abuse -
  9.7 female - "Flowers."

Group 2 - Other Treatment -
  11.10 male - "I do have someone to talk to when I want to."
  11.1 female - "Would rather have lots of flowers & trees and not the open space."
  6.10 male - "It's drawn nicely."
  7.6 male - "I wouldn't want to be a flower because if anybody picks me then I'd be ...it would hurt."
  9.11 male - "I don't like flowers."

**Mid-Treatment**

Group 1 - Sexual Abuse -
  7.11 male - "This is like me oh no, it's a girl, it's not at all like me."
Group 2 - Other Treatment -
  8.0 female - "It has clouds, blue sky and a bit of sunshine."
  8.3 female - "All alone."
  9.9 male - "Like me but I don't like it."

End-Treatment
Group 1 - Sexual Abuse -
  6.1 male - "It's a happy face, flower and it's sunny."

Group 2 - Other Treatment -
  7.8 female - "The stem is blue."
  11.11 male - "Whatever that thing is (pointing to flower) I'm not that small."
  9.7 male - "I've never seen a face on a rosebush."
  10.4 male - "It's like you're caved in...the flower has no others to keep it company."

Beginning-Treatment
Group 1 - Sexual Abuse -
  9.7 female - "Cat."
  9.8 male - "I don't go in places where it says 'Keep Out.'"

Group 2 - Other Treatment -
  11.10 male - "It reminds me of my Mom. She doesn't put up 'Keep Out' signs when she has a problem. She talks to me."
  11.1 female - "Looks harsh. Looks mean."
  10.7 female - "'Keep Out' signs scare me because I think of there being weird people out there."
  6.10 male - "I don't like cats. I can't see any words on the bottom sign."
  7.6 male - "The people should be allowed to go in there if it isn't dangerous."
  9.11 male - "I like cats."

Mid-Treatment
Group 1 - Sexual Abuse -
  8.4 female - "Don't like 'Keep Out' building."

Group 2 - Other Treatment -
  8.0 female - "I like cats, flowers, sunshine and I also like the whole picture."
  8.3 female - "Won't let me be in the group."
10.2 female - "That's pretty."
9.9 male - "Like me but I don't like it."

End-Treatment
Group 1 - Sexual Abuse -
6.1 male - "I hate 'Keep Out' because I always go in."

Group 2 - Other Treatment -
7.8 female - "I don't like to see 'Keep Out' signs.
11.11 male - "I like this because of the water and the cat."
9.7 male - "I would 'Keep Out' if I saw a sign like that."
10.4 male - "Makes you feel like you're not wanted."

Beginning-Treatment
Group 1 - Sexual Abuse -
9.8 male - "It's too dark."

Group 2 - Other Treatment -
11.1 female - "Like prickles because they stand out. Sun and house also stand out."
6.10 male - "I like prickle bushes because they grow raspberries."
9.11 male - "I like this because I play with my friends alot at night."
10.7 female - "I like to play in the dark."
7.6 male - "I don't feel like looking at dead flowers."

Mid-Treatment
Group 2 - Other Treatment -
8.3 female - "All alone at night."
10.2 female - "Everyone would say how beautiful I was right next to the house."
9.9 male - "Like me but I don't like it."

End-Treatment
Group 1 - Sexual Abuse -
6.1 male - "I like dark."

Group 2 - Other Treatment -
11.11 male - "Because of darkness I like black."
9.7 male - "I can draw a house just like that."
10.11 male - "Too dark, don't feel welcome. Looks like a mean plant with mouths on it."
7.8 female - "The house is flying."

**Picture 11**

**Beginning-Treatment**

**Group 1 - Sexual Abuse -**

9.8 male - "I don't go outside much."
9.7 female - "Little girl."

**Group 2 - Other Treatment -**

11.10 male - "This person is playing with an animal and I always play with my cat."
11.1 female - "Like smiling sun. If I was one of the flowers, it would feel good."
9.11 male - "I like to climb trees and I like pets."
6.10 male - "I like rats because it's raining."
10.7 female - "I don't like picking our fences. If you touch a cat you may get a disease."
7.6 male - "The sun is smiling. The squirrel is going to run up the tree."

**Mid-Treatment**

**Group 2 - Other Treatment -**

8.0 female - "The tiny cat is nice."
8.3 female - "People looking at other things."
9.9 male - "Like me but I don't like it."

**End-Treatment**

**Group 1 - Sexual Abuse -**

6.1 male - "It's light and that's not like me."

**Group 2 - Other Treatment -**

7.8 female - "The sun's up, it's shiny, there's a nice blue sky."
10.11 male - "It's a nice day...it's just started."
9.7 male - "I have a cat."
11.11 male - "Everything looks happy."

**Picture 12**

**Beginning-Treatment**

**Group 2 - Other Treatment -**
11.10 male - "I don't like flowers."
11.1 female - "I feel like there should be something around me."
6.10 male - "I like the roses."
9.11 male - "I don't like flowers."
10.7 female - "I like being small. If there's a big bush, I like to crawl under it."
7.6 male - "The sun isn't whole."
7.11 male - "I guess" [chose positive response].

Mid-Treatment
Group 2 - Other Treatment -
  8.0 female - "I just like flowers."
  8.3 female - "No one to talk to."
  10.2 female - "The most like me. I really love it."

End-Treatment
Group 1 - Sexual Abuse -
  6.1 male - "It's very little (the flower) and there's a yellow, good sun."

Group 2 - Other Treatment -
  11.11 male - "Flower!"
  9.7 male - "I don't like roses."
  10.11 male - "It's like somebody talking out loud to a bunch of people. I wish I had a friend."
  7.8 female - "Makes me feel good."
APPENDIX G - THERAPIST COMMENTS
THERAPIST COMMENTS

Note: 2 therapists sent rosebush pictures that were drawn by the child following the research exercise.

BEGINNING TREATMENT

Group 1 - SEXUAL ABUSE

7.10 male - "Child responded very well to RPS-identified with many of the pictures- [cfsei-2] child stated it took too long, he didn't enjoy it as much as the r.b., perhaps due to the fact that this child is uncomfortable with verbal communication, responds more to art therapy strategies- child participated seriously- did not have adverse behaviour afterwards."

11.5 male - "Looked through pictures very quickly, almost without thought."

11.7 female - "Child seemed to answer question with thoughtfulness & seriousness - no evidence of negative behaviours."

7.7 male - "Difficulty focusing at first, agitated, wanting to move about physically."

10.9 female - "To most items with the exception of #8, very quick response."

11.2 female - "Before very comfortable, interested & curious - during very much liked & responded to RPS."

Group 2 OTHER TREATMENT

7.11 female - "The child seemed to find many of the pictures looking happy & sad. 'this looks happy so this is like me' for at least 2 of her pictures."

7.11 male - "7,8,9 done fast- #10 short thoughtful pause."

7.11 male - "Attitude was 'that's over, it was easy."

10.6 female - "#6 slow to choose (positive), #7 fast to choose (negative)."

9.1 female - "Eager to please, fluctuations of certainty, was impulsive."
11.6 female - "Very thoughtful of #4."

MID TREATMENT

Group 1 - SEXUAL ABUSE

6.4 female - "She is looking to me for nurturing while she's in foster home - quite sure none of pictures were like her."

8.9 female - "She often responded to the overall feel of the picture - that's a pretty one - that's like me a lot, or I don't like that one, that's not like me." (#1 & #5)

7.2 male - "Told therapist it was fun - pictures are nice, nice how they blend in the colours & they draw really nice, who drew the book?"

7.5 male - "Seemed to be balancing choices rather than choosing based on pictures."

8.6 male - "Very reflective."

7.3 female - "The basis of choice did not give me confidence - it seemed related to the 1's and 4's only and was made quickly."

9.4 male - "Ill at ease."

6.4 female - "Liked rosebush - it was fun, very reflective & cooperative."

11.4 female - "Before RPS relaxed, cooperative, during involved, quick, definite responses."

10.1 female - "Child was somewhat reluctant to do RPS. stopped at #6, encouraged to go to #10, then said enough, however did go on to complete #11 & #12. Reluctant behavior is an overall pattern with the child but is changing over time."

8.9 female - "Appeared happy, cooperative, always eager to please, accommodate."

7.11 female - "Cooperated throughout."

8.1 male - "Hesitant to cooperate - after, was proud,
during sleepy & sick."

10.1 female - "Approached tests in a positive manner, enjoyed self during testing, was content & settled afterward."

7.2 male - "The child was very cooperative, the parents had spoken to him prior to him doing the exercise with me. He thought it was a test, so I explained that it wasn't, we were doing it to help other children by collecting data information from 'our' kids. He seemed relaxed & eager."

7.5 male - "This child approached task in a positive cooperative manner. My impression was that choices were made to balance the RPS answers rather than on reaction to pictures. However, there was no resistance to this task."

10.1 male - "Very keen & interested in testing. His attitude was positive. His approach was lively & confident. Afterwards painted picture of house."

7.3 female - "Child was nonchalant about doing RPS. Not visibly affected."

9.6 male - "This boy can hardly read & spent most of time looking at the words vs. pictures. Often I wondered if he knew what was written there. He is quite non-verbal."

7.3 female - "Child excited about completing research. In good happy mood. Found RPS too abstract for her."

7.3 female - "This child was willing to cooperate."

6.0 female - "This child was willing to cooperate."

Group 2 - OTHER TREATMENT

11.10 female - "Mild tension, unsure worried before about ability to be successful - after relaxes. Pictures seemed very affirming for her, relaxed smiling."

11.7 male - "Cooperative seemed somewhat insulted by the RPS."

8.3 female - "Attitude o.k. Let's get this over with so
I can get to the good modelling clay [would much prefer to be a boy]."

8.7 male - "Eager to do activity."

9.9 male - "Liked happy pictures. He confused some of pictures he didn't like with 'not Like me.'"

8.1 male - "Rather guarded approach at first, but became emotionally engaged fairly quickly. Thoughtful & talkative immediately afterwards. Aggressive play followed testing."

8.8 female - "Anxious to perform task. Cheery disposition. Confused about some of pictures. Had trouble understanding them."

9.0 female - "Child cooperative throughout process. She completed all pictures in approx. 5 min."

11.7 male - "Child thought the pictures were 'effeminate' except for the last two. Said 'people will think I am a fag.'"

9.3 male - "Sometimes seemed as though choices were varied just for the sake of variation."

9.6 male - "He commented on most as he first saw them 'What's this supposed to mean?' By 1/2 way he would just make the statement."

10.2 female - "When finished inventory chose to draw her own picture of a rosebush."

6.6 male - "Spent little time on pictures."

9.0 female - "She really looked at the pictures & made very thoughtful selections. Was very enthusiastic about doing this."

11.4 male - "Thoughtful."

END TREATMENT

Group 1 - SEXUAL ABUSE

8.4 female - "Very clear on choices. Took time & pronounced answer."
8.11 female - "Said she did not like the 'm' birds."

Group 2 - OTHER TREATMENT

11.3 female - "Very definite on Rosebush. Trouble yes/no on self esteem."

7.0 female - "Thoughtful & pensive. Discrepancies reflect conflicts in her situation."

9.11 female - "Bright, spontaneous, became quite serious & thoughtful."

11.1 male - "Initially quite ambivalent in doing test. Once he realized that it was not threatening to his 'artistic' abilities i.e. he did not have to do any drawing himself, he relaxed a lot more."

9.7 male - "Some confusion initially re: what part of picture he was to focus on but once given flowering bush example, he responded easily."
CFSEI THERAPIST COMMENTS

BEGINNING TREATMENT

Group 1 - SEXUAL ABUSE

7.0 male - "He didn't seem to enjoy it as much as Rosebush. He stated it took too long. Perhaps due to the fact that this child is uncomfortable with verbal communication, responds more to art therapy strategies."

7.1 female - "I don't believe she understood the double negative kinds of questions."

11.9 male - "He was able to concentrate & challenged the redundancy of some questions."

11.7 female - "Child seemed to answer questions with thoughtfulness and seriousness. No evidence of negative or reactive behaviours."

7.7 male - "Approached Inventory guarded. After testing, made up story about spending last evening with girl friend while her mother died & mother was buried same evening. Agitated after testing as well."

Group 2 - OTHER TREATMENT

9.1 female - "Quite anxious, fluctuations of certainty versus impulsive, no thought put into response or maybe covering over incomprehension of questions. Painted picture after of happy family, but excluded her sister. Noted to be guarded about sharing angry feelings in family. Started to break out of this through art."

MID TREATMENT

Group 1 - SEXUAL ABUSE

8.8 female - "She commented that she wished she was a newborn again."

7.5 male - "His approach to the Self-Esteem Inventory was cooperative and thoughtful."

10.1 male - "Experienced anxiety over some of the items in the Self-Esteem Inventory. Would lay his head on
the table & think. The questions involving father were anxiety provoking for him but he worked it through. After the test, Steven readily engaged himself in physical play and painted a picture of a house."

7.3 female - "Thoughtful about questions on self-esteem."

9.6 male - "Was far too long for him. At the end he said, 'Thank God.' Several I wondered if he comprehended. At about #50 he began playing with a kaleidoscope."

9.4 female - "A little ill at ease but answered readily."

11.4 female - "Somewhat guarded affect/tone flat. Except for #37 there are many times when I would like to run away from home...resounding YES- after exercise she went to clay. Built a large volcano. Talked about feelings of anger toward peers. Possible sexual overtones during amplification of the volcano symbol."

8.8 male - "Thoughtful about self-esteem but did not understand all the words."

10.1 female - "Seemed to like doing the self-esteem. Appeared to think about items. Asked for repetition & I think answered to the best of her ability."

8.1 male - "Cooperative, proud."

11.2 female - "Was concerned with the purpose of the questions after the test."

Group 2 - OTHER TREATMENT

9.9 male - "Troubled with questions of self identity."

8.7 male - "Liked questions. A little silly and hyper became serious. At one point said 'it was good to be able to get that out of me.'"

9.3 male - "I would question some of his answers to the Inventory, as he has developed many defense in response to experience."

11.7 male - "Seemed self-aware during Inventory."
11.6 female - "Responded with quite a bit more confidence than she anticipated. Had problems of acknowledging her sadness & disappointment but the questionnaire gave opportunity to reflect & recognize changes she's making, sense of hope."

7.3 female - "She seemed very self-aware during the Inventory."

END TREATMENT

Group 1 SEXUAL ABUSE

8.2 female - "Gave thoughtful answers. Did not become bored or withdrawn with the exception of showing slight discomfort when a word was used that she did not understand, i.e., ashamed. When the word was explained to her she regained her comfort level."

7.10 female - "Seemed a little uncomfortable at first but within minutes was telling me about herself without prompting."

9.10 female - "Became very engaged while doing the self-esteem. Her feelings about friends led into a new area of discussion, which was extremely open for this child."

6.1 male - "Self-esteem questions too difficult for him."

Group 2 OTHER TREATMENT

11.3 female - "Unable to answer many of the absolutes as yes or no."

9.6 female - "Became quite serious & thoughtful during process & occasionally asked for clarification. The test gave us opportunity to talk more about how she's changed over the 3 yrs. I've known her. This is her second time with me at M.H. and a good experience."

9.8 male - "Calm & assured in responding to self-esteem Inventory."