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**THE IMPACT OF MALTREATMENT AND SEXUAL ABUSE ON CHILDREN'S
DRAWINGS**

by

KRISTA I. BRISTOW

**A thesis submitted to
the Faculty of Graduate Studies and Research
in partial fulfillment of
the requirements for the degree of**

Master of Arts

Department of Psychology

Carleton University

Ottawa, Ontario

April 29, 1993

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degree of Master of Arts

Thesis Supervisor

Chair, Department of Psychology

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Abstract

This study investigated the clinical utility of using drawings obtained from House-Tree-Person and Kinetic Family Drawing techniques as diagnostic tools to assess the developmental impact of intrafamilial child maltreatment and sexual abuse. The ability of four raters to correctly classify the drawings of three groups of children (normal, maltreated, sexually abused) was evaluated to determine if expertise with such drawings enhanced performance. Findings support the use of these techniques by an experienced clinician with knowledge of developmental issues. Results also support the contention that it is the abusive milieu rather than specific acts of abuse which disrupts development. The implications of this research are discussed in light of developmental theory and the child maltreatment and sexual abuse literature.

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THE IMPACT OF MALTREATMENT AND SEXUAL ABUSE ON CHILDREN'S DRAWINGS

This study investigated the utility of using children's drawings to assess the emotional and psychological damage resulting from various forms of intrafamilial child maltreatment and sexual abuse. A review of the research underscores the need for such an assessment tool and shows that children's drawings are particularly appropriate for diagnostic work with victims of child maltreatment and sexual abuse. Finally, this study explored the relationship between the differing forms of intrafamilial child abuse (physical abuse, neglect and sexual abuse) and the developmental effects.

Child maltreatment and sexual abuse have become alarmingly familiar in our society. The devastation experienced by so many adult survivors of child abuse and the perpetuation of the abusive cycle across generations are eloquent testimony to the untreated effects of childhood victimization. The number of children, adolescents and adults who have been victims of some type of maltreatment has demanded recognition of the problem and action by the medical, clinical, legal, political and research communities.

Response to such a complex and widespread problem by disparate sectors of the community, each with a private agenda, has resulted in investigative endeavours riddled with definitional and philosophical inconsistencies (Chandler, 1982). A further complication stems from the fact that there are different types of

abuse subsumed under the rubric of child maltreatment (physical, emotional, psychological abuse and neglect) each of which has generated a specific body of research and clinical lore. There have been few attempts to integrate these various tangents within a cogent theoretical framework. Consequently, some fundamental questions regarding both the etiology and sequelae of child maltreatment remain steeped in controversy.

A pivotal issue centres around whether or not specific types of abuse precede differing effects, or whether seemingly different effects are related to some common underlying developmental (psychological) damage which is attributable to the emotional and psychological milieu in which most abuse takes place. The difficulties in understanding the relationship between child maltreatment and the psychological outcome of the victim are exacerbated by a number of factors. For instance, most investigators treat physical abuse, neglect and psychological abuse as discrete categories, rather than a series of events which may not only occur in the same household, but all of which may contribute to the ensuing psychological outcome. Also, most of the research simply describes behaviours associated with various forms of abuse without investigating what may underlie them. Furthermore, research questions and methodologies within the child maltreatment literature differ markedly, making it an odious task to compare findings. Clearly, this research area is in need of a unifying theoretical framework (Wachtel, 1988).

Children's Drawings 3

Compounding the problem is the fact that the sexual abuse of children is treated separately in the literature from other forms of maltreatment. This divergence has a historical basis. Whereas the recognition of the physical maltreatment of children originated with Henry Kempe in 1962 from the medical diagnosis of suspicious injuries (The Battered Child Syndrome), recognition of child sexual abuse as a social problem has been precipitated by the numerous retrospective reports of adult survivors, mostly women. As a result, the child maltreatment literature (which includes physical, emotional, psychological abuse and neglect) and the sexual abuse literature not only differ from one another in orientation, but also have little in the way of theory to link them; this is despite increasing evidence that children most often do not suffer from just one form of abuse at the hands of their caretakers (Briere & Runtz, 1988; Calam & Franchi, 1987; Claussen & Crittenden, 1991; Martin, 1976).

Recently, recognition of the urgent need to appropriately address the problems of child victims has generated interest in a developmental approach to the problem of intrafamilial child maltreatment (Sroufe, 1979; Steele, 1986; Wachtel, 1989). Attention is now starting to focus on the psychological and emotional milieu in which abuse takes place as a significant factor in the psychological outcome of the child. This is based on research which suggests that intrafamilial abuse of any kind is characteristic of a family in which the primary emotional, psychological and/or physical needs of the child are not being met. Such deprivation places vital aspects of the developmental process in jeopardy

(Martin & Beezely, 1976; Pianta, Egeland & Erickson, 1988; Wachtel, 1988). Developmental difficulty may then manifest in the variety of ways described by both the child maltreatment and sexual abuse literature (Wolf, 1987). These disrupted processes are thought to be the vehicles through which the intergenerational transmission of child abuse is perpetuated. Hence, the importance of assessing the individual development of the abused child and the abusive parent is now echoed throughout the literature (Cicchetti & Rizley, 1981; Cornett, 1985; Martin & Beezeley, 1976; Pianta et al., 1988; Wachtel, 1988). Although the importance of developmental assessment has been recognized, this remains a relatively uncharted frontier. While there is much literature devoted to assessing the credibility of child testimony, or establishing whether or not a child has been abused, there is little devoted to actual assessment of the child's psychological functioning.

The reasons for this paucity in the literature are not difficult to understand. Beyond the definitional and methodological problems inherent in this kind of research, (such as lack of consistent operational definitions, no control groups and extremely small sample sizes) child abuse is typically a covert activity and not very accessible to those interested in empirical investigation. Furthermore, assessment of the psychological functioning of an abused child poses a number of challenges.

Children are not cognitively or emotionally sophisticated enough to face what has happened, hence they are often unable to articulate their experiences or

even to conceive of the fact that they have been abused by a beloved caretaker. In some instances, when abuse has been extremely traumatic children will cope by excluding painful memories from everyday awareness (Summitt, 1983; van der Kolk, 1987). Therefore, psychological assessment of the abused child requires a diagnostic tool capable of tapping his/her psychological functioning without further traumatization and must not rely completely on verbal responses from the child. Furthermore, the use of diagnostic tool must be consistent with the developmental approach to the problem of child maltreatment and sexual abuse.

This study attempted to establish whether the House-Tree-Person drawings and the Kinetic Family Drawing reveal anything about the developmental impact of intrafamilial child maltreatment and sexual abuse. As projective tests, drawings are thought to be particularly useful in working with abused children. Drawings are thought to access the psychological functioning of the child and be sensitive to covert material without requiring verbal responses from the child. Historically drawings have been explained within developmental psychoanalytic theory (Miller, Veltkamp & Janson, 1987). While drawing and other kinds of expressive therapies are prevalent in clinical practice (Spring, 1985), little has been done to establish an empirical basis for the use of children's drawings as a diagnostic tool (Burgess & Hartman, 1993). What follows is a review of the research on child maltreatment and sexual abuse, as well as the use of drawings with these populations. A research methodology will then be presented followed by the results and discussion of the findings.

CHILD MALTREATMENT AND SEXUAL ABUSE

Prevalence

There is no Canadian or American central registry responsible for compiling statistics on the prevalence of child maltreatment or sexual abuse. Therefore, the available statistics deal only with reported abuse, the definitions of which may vary and may reflect only the most extreme cases. Despite such limitations the statistics are revealing. The most recent American national survey indicates that 27% of women and 16% of men are victims of sexual abuse (Finkelhor, Hotaling, Lewis & Smith, 1990). The Canadian Badgley Committee (1984) on child sexual abuse estimates that 53% of females and 31% of males have been victims of one or more unwanted sexual acts. There is increasing awareness that the sexual abuse of young males is under reported, the identification and treatment of which poses a special challenge for professionals (Hunter, 1991).

A national survey on family violence conducted in the United States estimated that seven million children are physically abused each year. A Nova Scotian Task Force on Family and Children's Services found that 70% of the children on child welfare caseloads had suffered or were suffering from neglect. For Ontario alone, Children's Aid Society statistics in 1986 indicated that there were 5,824 investigations for physical abuse of children. Despite the inconsistencies of the methods and definitions used to obtain these statistics and the fact that many adults deny or are unable to recollect their abusive childhoods

(Femina, Yeager & Lewis, 1990), these statistics certainly suggest a social problem of almost epidemic proportions.

Effects

Rather than delineate an exhaustive list of conflicting findings which are inconclusive at best, this discussion will focus on the major trends in the child maltreatment and child sexual abuse literature. This discussion will be based upon converging evidence from recent reviews which also consider the methodological and definitional shortcomings noted previously. Where appropriate, the findings from separate literatures will be compared.

As noted previously, much of what is known about the effects of sexual abuse is based upon the retrospective reports of adult women and concerns the psychological impact of the experience. Hence, much information is available regarding the long term effects of sexual abuse (Briere, 1989) but data on short term effects are sketchy (Brown & Finkelhor, 1986; Dube & Hebert, 1988).

The long term effects of sexual abuse are thought to include: poor self-esteem, post traumatic stress disorder, depression, somatic complaints, anxiety, self-injurious behavior, suicidal ideation, inability to trust others or sustain satisfying interpersonal relationships, feelings of shame and isolation, a tendency toward further emotional and sexual re-victimization in the form of battering relationships and an inability of victims to protect their own children from sexual victimization (Briere, 1989; Briere & Runtz, 1988; Brown & Finkelhor, 1986).

In addition, a history of sexual abuse in childhood is often associated with future substance abuse, prostitution, delinquency, various psychiatric disorders including eating disorders, borderline personality disorder and dissociative states (Briere & Runtz, 1988; Ryan, 1989; Steiger & Zanko, 1990; van der Kolk, 1987). The relationship between childhood sexual abuse and multiple or borderline personality disorder has not been confirmed by all reviewers (Beitchman, Zucker, Hood, DaCosta, Akman & Cassavia, 1992). Reviewers have consistently noted that it is exceptionally difficult to separate the effects of sexual abuse per se from the impact of living in chaotic or dysfunctional family environments. This seems understandable given the evidence suggesting most victims of sexual abuse, especially victims of intrafamilial sexual abuse, grew up in extremely unhappy families (Finkelhor et al., 1990).

It should be stressed that the bulk of these reviews are concerned with the effects of sexual abuse as attested to by women. While there is no question that females comprise most of the victims of sexual abuse, there is an increasing awareness of the limitations in the literature regarding the specific effects of sexual abuse as experienced by males (Gordon, 1990; Vander Mey, 1988). This is an issue of no small import given that the majority of sexual offenders are male and have been sexually abused themselves (Longo, 1986). We do know, however, that males are more likely to be abused by a stranger outside the home, are less likely to report it, and that their abuse is more likely to be very severe (Beitchman, Zucker, Hood, DaCosta, & Ackman 1991; Finkelhor, 1984; Gordon,

1990; Tong, Oates & McDowell, 1987). There are indications that male victims of sexual abuse show disturbed sexual functioning as adults (Beitchman, Zucker, Hood, DaCosta, Akman, & Cassavia, 1992).

The short term effects of sexual abuse in childhood (meaning those effects visible within two years of the termination of abuse) include: poor self esteem, guilt, shame, anger, poor social skills, anxiety, somatic complaints, sexual pre-occupation, impaired ability to trust, depression, poor academic performance and difficulty with self regulation (exhibiting either under-controlled aggressive behaviours or over-controlled depressive behaviours). If one includes adolescents within the definition of childhood then substance abuse, delinquency, prostitution, running away, suicidal ideation and self injury can be added (Alter-Reid, Gibbs, Lachenmeyer, Sigal, & Massoth, 1986; Beitchman et al., 1991; Browne & Finkelhor, 1986).

The reviewers noted that the research on both short term and long term effects of sexual abuse had methodological shortcomings which make the findings subject to interpretative constraints. Most striking was the lack of definitional homogeneity among studies which included any kind of unwanted sexual activity within the rubric of sexual abuse (including non-physical contact like exhibitionism) without drawing distinctions between intrafamilial or extrafamilial abuse. There is evidence which suggests that abuse at the hands of a stranger is much different than abuse at the hands of caretaker, hence there should be discrimination between the two situations (Brown & Finkelhor; Hindman, 1989).

Also, very few studies used clinical as well as normal comparison groups; some did not use any comparison groups at all. Moreover, most studies used subjects of widely varying ages, with no thought given to the specific vulnerabilities associated with different developmental stages. Finally, much of the research on long term effects is based on retrospective accounts which are subject to distortion (Briere, 1988). Factors such as these may account for many of the equivocal findings on issues like impaired sexual functioning in adult survivors and the amount of psychological harm which can be specifically attributed to the experience of sexual abuse in childhood.

A further obstacle to understanding the effects of childhood sexual abuse is that clinicians do not necessarily agree with the findings of research. For example, some empirical research has suggested that certain factors combined with sexual abuse in childhood will increase the traumatic impact of the experience. These are thought to include: the use of force, acts which include anal or vaginal penetration, frequency and duration of the sexual abuse, relationship of abuser to the child and age of onset of the sexual abuse. One clinician experienced in the treatment of victims of sexual abuse suggests that these factors are not necessarily related to a worse outcome for the child, but are significant in building a strong legal case for prosecution of the offender (Hindman, 1989).

However, results of both clinical and empirical research support the contention that sexual abuse by a trusted caretaker such as a father or father figure and early onset of abuse are more detrimental to the child (Beitchman et

al, 1991; Browne & Finkelhor, 1986; Hindman, 1989). These latter findings concur with the literature which maintains that the younger the child the more developmentally vulnerable s/he is (Erikson, 1963; Mahler, Pine & Bergman, 1975; Miller, 1981; Winnicott, 1960).

Unlike the research on child sexual abuse, the research on other forms of maltreatment is concerned solely with abuse or neglect which takes place within the context of the family, therefore there is much emphasis on family dynamics. As a result, the long term effects of child maltreatment tend not to be treated as a particular area of research, but are implied from the literature on the intergenerational transmission of abuse (Briere & Runtz, 1988). Accordingly, only initial effects of child maltreatment will be addressed here.

Initial effects of child maltreatment are thought to include: poor academic performance, aggression, poor peer relationships, impaired ability to trust others, poor self esteem, difficulty with self control, delinquency, and poor attachment in the very early years of life (Augostinos, 1987; Lamphear, 1985; Toro, 1982; Wolf, 1987). These reviewers discovered difficulties similar to those found in the sexual abuse literature such as lack of definitional homogeneity and few adequate controls. An added complaint centred around the paucity of studies concerned with the psychological consequences of child maltreatment. Despite the sparseness of this kind of research relative to sexual abuse, the family systems approach on research into the maltreatment of children yielded important findings.

Several researchers attempted to study the emotional and cognitive development of maltreated children, taking as their premise that research should focus on those problems which appear to be shared by abusive parents and their children. Findings have confirmed that, from a very young age, maltreated children display the same constellation of emotional and cognitive deficits as do their abusive parents. Specifically, physically abused children not only were unable to respond empathically to distress in age-mates, but attacked them instead (Klimes-Dougan & Kistner, 1990; Main & George, 1985). Their social interactions with friendly care givers or peers reflected patterns of avoidance and mistrust (George & Main, 1979; Kinard, 1980). Abused children were found to be emotionally maladjusted (Straker & Jacobson, 1981), egocentric, insensitive to socio-emotional contexts and limited in their ability to take the perspective of others (Barahal, Waterman & Martin, 1981). Finally, abused children were found to be relatively unindividuated with a poorly formed sense of self (Kinard, 1980) and with little confidence in their ability to impact on or direct their own experience of the world (Barahal, Waterman & Martin, 1981).

Unfortunately, parallel research on shared characteristics between abusive parents and victims has not been done with respect to sexual abuse. However the clinical literature on incest supports the implication that the development of empathy and the individuation of self are compromised as a result of sexual abuse. Treatment programs for child victims of sexual abuse often focus their interventions on strategies which will facilitate the development of empathy in

both mother and child (Melnechuk, 1988; Sgroi, 1982). Clinicians have identified these areas of development as the ones most compromised in both victims and perpetrators of sexual abuse.

An analysis of the research on family dynamics in both the maltreatment and the sexual abuse literature reveals yet another point of convergence. Parents who are unable to meet their children's need for a safe, nurturing, and stable environment also display low levels of empathy, are more egocentric, are relatively undifferentiated and respond negatively to distress in their own children. This particular constellation of difficulties appears to form the nexus through which abuse is perpetuated across generations.

The Intergenerational Link

Much of what we know about the long term effects of child maltreatment is derived from the literature on abusing parents, which reveals a strong consensus that abusing parents were themselves maltreated as children (Spinetta & Rigler, 1972; Wolf, 1987). The implication is not that all children who have experienced abuse or neglect will necessarily abuse their own children (Kaufman & Zigler, 1989), but rather that they may have certain vulnerabilities which predispose them to do so (Wolf, 1987).

Attempts to establish a consistent pattern of personality characteristics or pathology in abusive parents have not been successful. However, a recent shift in emphasis from the study of static personality traits based on the psychiatric model of maltreatment, to the study of interactive processes of which the parent

is a critical component (Pianta, Egeland & Erickson, 1989) has been more fruitful. This paradigm considers the abusive parent to be enmeshed within a multi-problem family, which may encompass a wide range of dysfunction (Pianta, Egeland & Erickson, 1989; Wolf, 1987). Within this framework the personal development of the individual parent is considered along with the multiple forces at work in the family, in the community and in the culture (Belsky, 1980).

The research on abusive parents has dominant themes which pivot around the abusive parents' inability to relate to other adults or to their own children (Wolf, 1987). Within the family context, abusive and neglectful parents demonstrate little empathy (Cornett, 1985; Letourneau, 1981), show a low level of differentiation which results in an inability to see their children's needs as separate from their own (Hunter & Kilstrom, 1979; Jones, 1987; Newberger, 1980), exhibit little emotional expressiveness overall (Burgess & Conger, 1978) and have been found to be unable to identify accurately the emotional cues of their children (Kropp & Haynes, 1987).

The literature on incestuous family dynamics concurs with these findings, although the level of conceptual analysis differs. For example, characteristics of incestuous families tend to be described in terms of problems on the dimensions of autonomy and intimacy (Carson, Gertz, Donaldson & Wonderlich, 1990), rather than the more molecular level of study in which the parents' ability to discriminate affective cues is examined. What draws unanimous agreement is the finding that families in which incest takes place are characterized by the lack of

generational boundaries (Evans, 1988; Koch & Jarvis, 1987; Sgroi, 1982; Sroufe, Jacobvitz, Mangelsdorf, DeAngelo & Ward, 1985). That is to say that children in these families are treated in such a way as to fulfil the emotional, physical and psychological needs of their parents.

Incestuous families resemble those families in which other forms of maltreatment take place, in that there is a higher level of conflict, and low cohesion and expressiveness (Smith, Webber & Robinson, 1991). Mothers in incestuous families have often been sexually abused themselves (Pianta, Egeland & Erickson, 1989) and often have difficulty in perceiving their children as separate from themselves (Koch and Jarvis, 1987; Sgroi, 1982). Such lack of individuation, and boundary ambiguity results in role reversal, lack of empathy and insensitivity to the needs of their own children. These deficits often are a consequence of the mother's own emotional deprivation which she tries to remedy by attempting to meet her needs through her children. Within this developmental framework much of the psychological damage experienced by incest victims is thought to be a result of the emotional deprivation associated with the characteristic role reversal between parents and children (Evans, 1988; Koch & Jarvis, 1987).

Summary of child maltreatment and sexual abuse

Converging evidence from the research on maltreatment and sexual abuse reveals profound similarities among the victims and perpetrators of the various forms of child maltreatment and child sexual abuse. Specifically, the constellation of shared difficulties centres around problems with the development of the self,

social and emotional sensitivity and the establishment of boundaries, all of which are related to the development of empathy (Feshbach, 1989; Hoffman, 1984). Clinicians and researchers suggest that it is the disruption of such key developmental domains which underlies these commonalities and forms the nexus through which intergenerational abuse is perpetuated. There is an increasing consensus that, precluding any life threatening acts of abuse or neglect, abusive acts themselves may not necessarily be the primary contributing factor/s to the psychological problems of child victims; it is more likely that the major source of the problem lies in the nature of the parent-child relationship (Augostinos, 1987; Pianta, Egeland & Erickson, 1989; Wolf, 1987). The abusive acts are seen as additional blows to the development of a child who has already been seriously compromised by the concomitant psychological abuse (Evans, 1988; Wolf, 1987).

Consequently, Developmental theories based on psychoanalytic concepts have enjoyed a resurgence because they provide a meaningful context in which findings can be examined and can help determine appropriate interventions. One such explanation, which is based upon attachment theory, proposes that families characterized by role reversal and lack of boundaries rob the child of developmental energy as s/he attempts to meet the needs of parents, who were themselves deprived as children (Sroufe et al., 1985). Poor quality of attachment between mother and child is often a good predictor of future abuse, or of the mother's inability to protect the child from abuse at the hands of her partner (Bowlby, 1980; Main & Goldwyn, 1984). Hence, researchers have now begun to

recognize the importance of the abusing parent's own relationship history, developmental struggles, and resultant feelings about -and ability to meet- the psychological and emotional needs of another individual (Pianta, Egeland & Erickson, 1989).

An emerging literature on trauma also proffers explanations regarding the mechanism by which the developmental process may be impaired. Traumatization occurs in the face of uncontrollable, terrifying events, wherein both internal and external resources are inadequate to cope with the external threat (van Der Kolk, 1989). Clinicians and researchers have come to recognize that victims of child abuse suffer devastating psychological effects similar to those of Vietnam veterans and victims of natural disasters such as post traumatic stress syndrome (Brende & McCann, 1984; Burgess & Hartman, 1993; Putnam, 1993; van der Kolk, 1987). However, children are thought to be particularly vulnerable to the effects of psychological trauma because they do not yet have a firm sense of identity which is thought to buffer the effects of trauma (Erikson, 1963; Mahler, Pine & Bergman, 1975; van der Kolk, 1987; Winnicott, 1960).

The defence mechanisms typically used by all victims of trauma to preserve psychological integrity involve interference of the normal integrative processes so that parts of the self associated with the event (affect/memory) are encapsulated and set apart from the rest of the self (Johnson, 1987; Putnam, 1993). Because children are in the process of developing, defensive splitting actually interrupts the process of consolidation of the self (Erikson, 1963; van der Kolk,

1987; Winnicott, 1960). Therefore, it is not surprising that both adult and child victims show deficits on dimensions related to the development of the self (empathy, individuation) along with a proneness to dissociative states (Evans, 1988; Briere, 1989; Putnam, 1993; van der Kolk, 1987; Young, 1992). In fact, there is evidence to suggest that the key to the interruption of the intergenerational transmission of child abuse lies in the ability of the abusive parent to process and integrate her/his own childhood trauma, and in essence complete development (Main & Goldwyn, 1984; Pianta, Egeland & Erikson, 1989).

It is noteworthy that literature on Adult Children of Alcoholics, and on the children of battered women, demonstrates that even those individuals who have not been targets of abuse, but have been enmeshed in dysfunctional family systems, also display marked difficulty with empathy, interpersonal relationships and issues associated with the individuation of the self (Black, 1986; Hinchey & Gavelek, 1982). This lends further support for the position that the psychological environment in which the abuse takes place plays a vital role in the subsequent suffering of child abuse victims. There is evidence now that child abuse does not occur in a vacuum, but is usually accompanied by psychological and emotional abuse (Briere & Runtz, 1988; Claussen & Crittenden, 1991). But, the issue of whether it is the emotional context in which the abuse takes place, or the actual physical experience of various types of abuse which is responsible for the documented effects continues to be a controversial one (Bagley & McDonald, 1984).

If there is an underlying coherence to the experience of child sexual abuse and the various forms of child maltreatment it likely rests in the fact that all child victims are in the process of developing. According to developmental theories which are psychoanalytically based, necessary conditions must exist for the process of development to unfold along natural lines; if these conditions are not met there are consequences (Erikson, 1963; Mahler, Pine & Bergman, 1975; Miller, 1981; Winnicott, 1960).

Current evidence suggests that children who have suffered some form of maltreatment or sexual abuse do sustain developmental damage as a result. What this damage is attributable to remains to be proved. For clear answers we must look to the child. But first a tool must be found which can circumvent the defence mechanisms of the child and tap his/her emotional life without inflicting further trauma. Such a diagnostic tool must invite expression on the part of the child without resorting to words. As a projective technique, drawing has proved invaluable in the uncovering of and processing of traumatic events which have been relegated out of conscious awareness (Johnson, 1987; Hartman & Burgess, 1993; van der Kolk, 1987) and hence, may have some potential as a diagnostic tool in work with abused and maltreated children.

CHILDREN'S DRAWINGS

Historical Overview

Art has long been recognized as a form of symbolic expression. Primitive humans attempted to give permanence to their feelings, thoughts and actions

entirely in the form of pictures long before they employed the use of symbols that recorded specific words. Exploration of the universal roots of such ancient symbolic art, coupled with the discoveries concerning the workings of the unconscious helped establish the drawings of modern day humans as vehicles for projections from the unconscious (Hammer, 1978; Naumburg, 1955). The belief that acts of creativity reveal more directly the inner worlds of the creator than any other activity is central to the notion of projection. A French psychologist, Luquet, surmised that the goal of both the primitive and of the modern human in creating a drawing is mental realism as opposed to objective realism. That is, the designer is forced to choose between two modes of representation, that which s/he sees, or that which s/he knows (Naumburg, 1955). Thus, the psychological processes at work in projection are similar to the process of an artist when attempting to capture an internal experience or image and place it into the outside world (Hammer, 1978; Burgess & Hartman, 1993).

As early as 1888, a French psychiatrist, Max Simon, was shocked by the overt sexual symbolism displayed in the drawings of his patients (Naumburg, 1955). Psychological evaluation of this kind of art was probably the forerunner of modern projective techniques. The advent of psychoanalytic concepts precipitated interest in the art of the insane or abnormal (see Anastasi & Foley, 1940) and gradually evolved into an awareness that symbols are the language of the unconscious (Hammer, 1978).

In 1926, Florence Goodenough, in the process of devising an intelligence scale based on the number of details put into the drawing of a man, noticed that her test was tapping not only intellectual capabilities but personality factors as well. In the 1940s Karen Machover, using the work of Goodenough, was developing her own figure drawing technique. Similarly, Buck, intent on devising his own intelligence scale at approximately the same time abandoned his endeavour when the Weschler Intelligence Test was introduced. Instead, he began developing the House-Tree-Person drawing technique. Both Machover and Buck, working independently, had concluded that children's drawings provided a window into the psychological world of the child; they were to become the chief spokespersons and pioneers of the projective drawing field (Buck & Hammer, 1969; Buck, 1978; Hammer, 1978).

Further research established the relationship between children's human figure drawings and their general concepts, thus replacing the idea of intelligence with conceptual maturity (Burgess & Hartman, 1993). Elizabeth Koppitz (1968), demonstrated that human figure drawings are not only reflective of a child's cognitive functioning but also are sensitive indicators of a child's psychological functioning. Increasing support for the usefulness of children's drawings as a projective technique gave rise to efforts at standardizing their use.

Koppitz (1968) developed The Draw-A-Person technique. This work was extended by the inclusion of the drawing of a tree and a house, in addition to the drawing of a male and female person (Buck, 1978). The house is thought to elicit

associations regarding the home environment and the relationship among family members. The tree is thought to be particularly reflective of the subject's deeper and more unconscious feelings about her/himself, while the drawings of the human figures reflect body image, self-concept, emotional and cognitive functioning (Buck, 1978; Hammer, 1978; Koppitz, 1968).

Two investigators were particularly interested in the realm of interpersonal relationships and began developing a projective drawing technique which would provide information about this dimension of a child's life. The Kinetic Family Drawing is an elaboration of the Draw a Family Technique. It evolved from research in which ten thousand children's drawings were studied and it was discovered that there were a cluster of symbols, actions and styles which could help deepen the understanding of the interaction of the disturbed child and his family. The investigators postulated that the addition of movement to the traditional method of asking a child to draw her/his family, would mobilize not only the child's feelings about his/her self, but also feelings in the interpersonal domain (Burns & Kaufman, 1972). Presently, the Kinetic Family Drawing technique involves the child drawing his/her family all doing something. The contention is that this projective drawing provides a quick indication of any primary disturbances within the family, an insight which is not afforded by most other psychological assessment techniques (Burns & Kaufman, 1972).

Before discussing the merits of the the House-Tree-Person and the Kinetic Family Drawing techniques when used with a special population like abused children, it is first necessary to outline the projective hypothesis upon which all projective techniques are based. Furthermore, because projective techniques have not always held up to scientific rigor (Anastasi, 1988), it is important to underscore their usefulness under special conditions.

The Projective Hypothesis

The fundamental premise of all projective techniques is that ambiguous stimuli serve as a blank screen on to which respondents project their characteristic thought processes, anxieties and other significant, enduring personality attributes (Anastasi, 1988). The objective of projectives is the assessment of the personality as a whole, as opposed to measurement of separate aspects of the personality. Interpretation of the results of these procedures is an inductive process in which clinical judgement is a critical component. Hence, their merit cannot be assessed independently of the clinician's skill. Their value lies in the broad band approach associated with projective techniques, the wealth of information which they afford, and in their special sensitivity to covert or unconscious material (Anastasi, 1988).

Reliability and Validity

As this study is concerned with the use of the House-Tree-Person (H-T-P) protocols and Kinetic Family Drawings from children, this brief discussion of reliability and validity will deal exclusively with these techniques. Relatively little

research has been conducted on the reliability or validity of the H-T-P. Gittelman (1980) reports that a French investigator used the H-T-P in an attempt to discriminate normal children from those with psychiatric disorders, and was apparently successful. This same investigator extended his work to the study of normal school children and those with emotional disturbances and again found that the H-T-P successfully discriminated between these two groups. He also established that these drawings revealed enduring personality traits (Engelhart, 1985).

Torem, Gilbertson & Light (1993) examined Buck's assertion that the presence of scars, knotholes and/or broken branches on the tree drawings are indicators of previous traumas in the subjects' lives. The authors did find a statistically significant relationship between a self-reported history of abuse and the presence of these indicators. Furthermore, they found a significant relationship between duration of abuse and the presence of multiple indicators of trauma. The authors noted the limitations of their study admitting that they had not collected the data in a uniform manner. Also, they recognized that restriction of their definition of trauma to the experience of some kind of physical or sexual abuse was overly narrow and that trauma might also constitute experiences in the psychological realm. However, despite these limitations validity for Buck's assertion was supported. In another study the test-retest reliability of the house drawing was examined using Buck's scoring system. It was found that even when given different instructions a second time, subjects tended to score the

same on the second houses they drew as they had on the first. Hence, the indications are that the scoring system demonstrates reasonable consistency and that the house drawing appears to reflect enduring personality traits (Wu, Rogers, Searight & Russell, 1991).

The introduction of the Kinetic Family Drawing generated a flurry of interest attributable to the recognition of the importance of the family in the etiology and treatment of emotional difficulties in children (Reynolds, 1978). However, the technique was harshly criticized because of the lack of a precise scoring system (Tharinger & Stark, 1990). What ensued were various attempts to create objective scoring systems based on the features outlined by Burns and Kauffman. While McPhee & Wegner (1976), O'Brian & Patton (1974) and Myers (1978) all concurred that the technique was quantifiable, they did not agree on which particular items were most important in identifying children with emotional difficulties. In a more recent Danish article, (Soes, 1984), the psychological evaluations of Kinetic Family Drawings of 11 school children were correlated with teacher evaluations with excellent results.

The emphasis in the research reviewed appears to be centred on examining the validity or reliability of particular items as opposed to the diagnostic utility of the drawings themselves as a whole. This was noticed by Tharinger and Stark (1990), who devised a study to compare a qualitative approach to evaluating human figure drawings and kinetic family drawings with a quantitative approach. They postulated that the clinical usefulness of drawings may lie in their ability to

reflect the overall psychological functioning of the individual and the family, rather than an interpretation based on single or many specific emotional indicators. To ensure that their findings could be objectively evaluated, they used various standardized psychometric instruments to measure self-esteem, family functioning and depression in conjunction with the drawings. They found that the qualitative, wholistic approach was able to discriminate between normal children and those children with mood disorders, and mood/anxiety disorders. When the quantitative scoring systems were used no significant mean differences were obtained among the groups. In addition, it was found that there were significant relationships between the reflection of self concept revealed through human figure drawings and the psychometric instruments measuring self-concept, as well as between measures of family functioning and what was revealed in the Kinetic Family Drawings.

The research on child abuse and sexual abuse suggests that such abuse is perpetuated across generations, hence for applied clinicians the interest is in understanding how best to treat the child, and plan for the child's future in the hopes of repairing damage and breaking that cycle. In the hands of a skilled clinician, many projective techniques have proved to be invaluable (Anastasi, 1988). "The question is no longer - 'are they good?' It is - 'in what situations and for what problems are they good?'" (Hammer, 1978, p. 599). Given the potential diagnostic utility of drawings, they may be particularly helpful when working with a special population such as abused children.

Projective Techniques and Special Populations

The previous review of research on child maltreatment and child sexual abuse indicates clearly that assessment of the psychological functioning of child victims is a vital, albeit difficult task given the special challenge they pose because they are developmentally immature and often traumatized. The bulk of studies thus far have concentrated their efforts on describing static behaviours and symptoms associated with the experience of child maltreatment and sexual abuse. Also, much of the research reviewed has utilized achievement-oriented rather than process-oriented assessment tools (Cicchetti & Rizley, 1981). For example, behaviour checklists, self esteem checklists and family functioning checklists abound in the literature, but they do not access the required level of functioning, nor do they explain the underlying relationships which may exist across types of abuse. As Anastasi, (1988) points out, the trouble with these kind of indices lies in the fact that they tend to classify environments along a single continuum of higher or lower, or better or worse. Differing environments, however, reinforce particular kinds of behaviour, and hence, differ in their effects on specific individual characteristics. Therefore, what is required is a diagnostic tool which is capable of discerning the forces which drive the observed behaviour.

The use of projective techniques with abused children appears to be entirely appropriate; the use of expressive techniques such as children's drawings may be particularly useful. Unlike other projective techniques such as the Rorschach and Thematic Apperception Test, projective drawings do not rely upon

verbal responses. Also, drawings are thought to tap a deeper and more primary level of the unconscious than verbal projectives (Hammer, 1978). Yet another feature recommending the use of drawings as a diagnostic tool with abused children is that pictorial expression is more congruent with the way that children store traumatic events in memory (Buck & Hammer, 1969; Johnson, 1987; van der Kolk, 1987). Also, children's drawings can be interpreted within a developmental framework.

Current Research

The need for an assessment tool which is noninvasive, non-leading, developmentally appropriate and capable of circumventing the defence mechanisms typical of abused children, has precipitated a surge of interest in the use of projective techniques with this population (Miller, Veltkamp & Janson, 1987). However, not all researchers incorporated the use of children's drawings as their choice of projective tool.

In comparing physically abused children with controls, Kinard (1980) and Straker & Jacobson (1981) used a variety of projective tools including: the Test of Emotional Development; the Children's Apperception Test and the Affective Situations Test. These studies, along with those of Main and George (1979) and (1985) which used observational methods, formed the core of research in the maltreatment literature which showed that abused children were low in empathy, were relatively unindividuated, had difficulty in perspective taking and relating to others. Research on the effects of trauma on cognition in abused children

obtained similar findings. Using story telling techniques and pictures to evaluate cognitive functioning in both abused and normal children, Fish-Murray, Koby, and van der Kolk (1987) discovered that the abused children lacked empathy and were unable to take the perspective of others. Findings also suggested that abused children were very restricted in their abilities to verbalize and showed heightened ability to dissociate.

Stovall and Craig (1990) assessed the perceptions and object relations of sexually abused females, physically abused females, and non-abused, distressed controls using the Thematic Apperception Test. Results indicated that both groups of abused children showed less specificity when describing their representations of others, and that their interactions were more likely to be experienced as temporary and impersonal than the control group. This study lends further support to the idea that abused children are less differentiated than children who have not been abused, and hence, are more compromised in their ability to sustain meaningful interactions with peers. However, this study was limited to female subjects only.

Harper (1991) attempted to assess the differential effects of intrafamilial physical and sexual abuse using a play technique called the Lowenfeld World Technique. Although her findings suggested that there were differences in play associated with the differing types of abuse, she also found the sexually abused group to be the most integrated and well adjusted. She notes, to her credit, that

she felt uneasy with the presentation of the sexually abused group and strongly suspected a deeper disturbance which was not revealed by this method.

A number of studies with differing objectives, all of which have methodological flaws, incorporated the use of drawings with children. Howe, Burgess and McCormack (1987) investigated the differences in the human figure drawings of runaway adolescents who had been physically abused, sexually abused, and both physically and sexually abused with drawings of runaways who did not report any kind of abuse. Results indicated that there were no significant differences between the groups on the presence of graphic sexual indicators. While the study had many limitations such as unequal and small groups, no identification of the perpetrators, no normal controls and no way to rule out abuse in the non-reporting group, a valuable observation was made. Graphic sexual indicators may only be evident in those drawings wherein victims have either just recently experienced sexual abuse, or they have been victims of particularly extreme forms of sexual abuse. The investigators concluded that the adolescents in their study appeared to have developed defensive methods of coping with the sexual abuse which made it difficult to identify them on the basis of graphic indicators of sexual abuse. The authors, in an attempt to better understand their results, review the findings from yet another study (which cannot be reported here as the study is written in Czechoslovakian) which suggests that it is the evidence of emotional damage which identifies children and adolescents who have been sexually abused.

Manning, 1987 used a Favourite Kind Of Day drawing technique to determine if the amount of aggression depicted in these drawings done by physically abused children would differ from the drawings done by a distressed, but non-abused control group and a control group of children from violent families who had not been abused. There were ten children in each group, all between the ages of five and nine years of age. Findings indicated that the abused group reflected more aggression in their drawings than either of the two control groups. The author surmises that it is the abuse per se which is the problem, and not the family environment. The limitation of the study lies in assessing only one dimension of children's functioning (aggression), small sample size and in using only one drawing. There is some suggestion in the literature that the finer and broader the projective net, the more valid the study (Wolman, 1978).

In another study, the human figure drawings of 82 children, between the ages of 5 and 14 years, reporting ritualistic sexual abuse in the preschool setting were compared with the human figure drawings of 37 matched controls. In addition, a subset of the sexually abused group (15 children) were contrasted with 15 children who had experienced sexual abuse in a similar setting, but without the ritualistic components. Results indicated that the children who had suffered ritualistic abuse showed significantly more emotional indicators on the drawings (using Koppitz's scoring system) than either of the control groups. Kinetic Family Drawings were also completed by these groups of children. Not surprisingly, no indications of family conflict were found in the drawings as none of the children

had been abused in their homes. However, it was noted that there was more frightening and bizarre content in the Kinetic Family Drawings of those children who had suffered ritualistic sexual abuse (Waterman & Lusk, 1993). In this study there were no developmental considerations as the age of the subjects varied widely. Again, just human figure drawings were used when there are other methods available which cast a wider projective net. Furthermore, while research of this kind is important it does not shed any light on the problem of child abuse in the home and results cannot be compared.

Two studies directed their attention to the study of incest victims, but differed radically in their use of children's drawings (Cohen & Phelps, 1985). Yates et al. (1985) rated human figure drawings on fifteen dimensions drawn from the clinical literature on incest and compared them to the human figure drawings of a control group comprised of individuals who had sought psychiatric help for non-sexual issues. Results suggested that incest victims had poor impulse control, had a defensive structure which emphasized repression and were less able to regulate their own anxiety. While these findings are useful, the design of the study could have been dramatically improved. Once again the age range of the subjects was wide (3 to 17 years) and no normal controls were employed. Only one drawing was used, thus the projective net could be considered somewhat meagre.

Cohen & Phelps (1985) attempted to establish the existence of uniform markers of incest in the House-Tree-Person drawings, Kinetic Family Drawings

and spontaneous drawings of incest victims. The control group was comprised of emotionally disturbed individuals who had no known history of sexual abuse. Both the House-Tree-Person drawings and the Kinetic Family Drawings of incest victims contained markers of incest as determined by the researcher, e.g., red house, obvious violent content. There were no normal controls in this study and the age range of subjects was enormous (4 to 18 years). Also, as there was no maltreated control group we cannot be sure that these markers are exclusive to incest victims. Item analysis of projective results has been cautioned against (Anastasi, 1988) as it encourages a cookbook approach to identifying and working with victims. Research of this kind does not investigate the use of drawings as a diagnostic tool, but is concerned solely with identifying victims of incest. Hence, the underlying meaning of the presence of various symbols is not understood. Consequently, such research does not help with determining what therapeutic interventions would be best for child victims.

Similarly, Blain, Bergner, Lewis and Golstein (1981) investigated the use of the House-Tree-Person Technique as a means of objectively identifying children who had been physically abused. Three groups of children between the ages of 5 and 12 years of age were chosen to participate. The first group consisted of 32 children whose therapists judged them to be physically abused. The second group consisted of 32 children who were receiving psychological treatment but were thought not to have been physically abused. The control group consisted of 45 children drawn from an elementary school who were judged by their teachers to

be extremely well adjusted. The items chosen as potential discriminators between the groups were based on the personal experience of the clinicians involved, and included features such as smoke present from the chimney of the house and absence of feet on the person. There were a total of 15 items which were scored as either present or absent in the protocols of all the children. The results indicated that the 15 items taken individually discriminated between the normal controls and the physically abused children, but not between the normal controls and the other clinical group. Six items collectively were found to discriminate between the normal controls and the two clinical groups. As with the previous study, the use of objective items to identify abused children (in this case physically abused children) does not provide any information as to how best treat child victims. Also, as there was no sexually abused group included in this methodology there is no way of ascertaining whether these items are indicators of physical abuse exclusively. Furthermore, assignment to the groups was based purely upon the clinical judgement of the investigators with no corroboration from other sources, hence it is difficult to be certain of the status of the participating children.

It is evident from the research reviewed thus far that the drawings of children provide important information regarding their psychological functioning, thus making their utilization with abused populations particularly cogent. However, many of these studies had methodological limitations which included no consideration of potential developmental differences among varying age

groups, the use of just one drawing (Human Figure Drawing), small uneven sample sizes and no normal controls. Furthermore, despite indications from the maltreatment and sexual abuse literature suggesting the need to investigate the underlying relationship between types of intrafamilial abuse and the developmental outcome of the child, there continues to be a paucity of research of this kind. Although drawings appear to have great potential as a developmentally sensitive assessment tool, research which investigates the diagnostic utility of drawings in this manner has not advanced (Burgess & Hartman, 1993).

The present study investigated the developmental impact of both intrafamilial sexual and physical abuse using the drawings of children as the diagnostic tool. Specifically, Kinetic Family Drawings and drawings obtained from the House-Tree-Person technique were used to ascertain their diagnostic utility in assessing the psychological functioning of sexually abused children, maltreated children and children with normal childhoods.

METHOD

Subjects

Sixty children, between the ages of 6 and 10 years of age, served as subjects for this research. This developmental period was chosen because latency aged children have the necessary skills with which to draw, and are thought to be in the process of consolidating important aspects of the developing self (Winnicott,

1960). Furthermore, children in this age range are not yet in the grips of the potentially eclipsing developmental surges associated with the biological and psychosexual changes of adolescence.

Instruments

The House-Tree-Person Technique

The items in this technique are thought to have symbolic significance in terms of the unconscious. Specifically, the house elicits associations regarding the home environment and the relationships among family members. Both the tree and person are thought to tap those parts of the personality known as body image and self-concept; the drawn tree is particularly reflective of the subject's deeper and more unconscious feelings about him/herself, while the drawn persons convey the "closer-to-conscious" view of her/himself (Hammer, 1978 p.172). The standardized administration procedure for both the achromatic and chromatic phases of this technique were employed in which the child draws a house, tree, female and male person in both pencil and crayon, for a total of eight drawings per child. The administration procedure is listed in Appendix A.

The Kinetic Family Drawing

The Kinetic Family Drawing technique is thought to tap not only the child's feelings about him or herself, but also associations regarding the realm of interpersonal relations (Burns & Kaufman, 1972). Given the nature of family dynamics in all abusive environments, this was thought to be a particularly useful addition to the projective battery.

PROCEDURE

Each of the children who participated in the study was assigned to one of three groups.

Group 1. This group was comprised of 11 females and nine males, between the ages of six and ten, who, as far as it is reasonable to ascertain, have not suffered from any form of child maltreatment. The mean age of this group was eight years, two months, with a standard deviation of one year, two months. The maximum age was ten years, four months, the minimum age was six years, five months.

Group 2. This group was comprised of nine females and 11 males, between the ages of 6 and 10, who have suffered from some form of maltreatment serious enough to warrant the intervention of protective services. All cases of abuse or neglect have been confirmed and documented by professionals outside of the participating clinician's office. The mean age of this group was eight years, five months, with a standard deviation of one year, three months. The maximum age was ten years, ten months, the minimum age was six years, four months.

Group 3. This group was comprised of eleven females and nine males, between the ages of 6 and 10, who have been sexually abused. All cases of sexual abuse have been confirmed and documented by professionals outside of the participating clinician's office. The mean age of this group was eight years, seven months, with a standard deviation of one year, four months. The maximum age was ten years, eleven months, the minimum age was six years, six months.

Definitions of Child Maltreatment and Sexual Abuse

For the purposes of this study child maltreatment and sexual abuse will be limited to acts of neglect and/or abuse by parents, relatives, and parental surrogates which include step parents, romantic partners of the parents and foster parents. This decision was based on suggestions in both the clinical and empirical literature that the child's relationship to the offender was a significant variable in the subsequent associated trauma, a factor which has not often been considered in research methods. Furthermore, potential commonalities underlying the experience of intrafamilial abuse can be determined only if the groups are homogeneous on this dimension. The following definitions are those used in publications from The National Clearinghouse on Family Violence, Health and Welfare Canada.

Sexual Abuse. Child Sexual Abuse occurs when a child is used for the sexual gratification of an adult or adolescent. It involves the exposure of a child to sexual contact, activity or behaviour, and may include invitation to sexual touching, intercourse or other forms of sexual exploitation.

Physical Abuse. Physical Abuse is the deliberate application of force to any part of the child's body which results in, or may possibly result in, a non-accidental injury. It may involve a single incident or a series of incidents.

Neglect. Neglect describes acts of omission which significantly impede a child's emotional, psychological, or physical development. Physical neglect consists of the failure to adequately meet a child's needs for nutrition, clothing,

accommodation, medical care and protection from harm. Emotional neglect is defined as the failure to satisfy the developmental needs of a child to feel loved, wanted, secure and worthy. It ranges from passive indifference to outright rejection.

Emotional Abuse. Emotional Abuse involves persistent attacks on a child's sense of self, and is often associated with a chronic pattern of dysfunctional child rearing. It can involve habitual humiliation, rejection, forced isolation, intimidation, exploitation, terrorizing or routinely making unreasonable demands on a child.

Drawings from both abused groups were collected from the files of one of the participating clinicians, thus avoiding the involvement of the children themselves. Social histories, results of intelligence testing, clinical interviews and observations were reviewed in detail to ensure that drawings from children who were psychotic, retarded, brain damaged or epileptic would not be included in the study. If there was the slightest suspicion that a child had been sexually abused, but the suspicion was not confirmed, the drawings of that child were not included. Each set of nine drawings was placed in a brown envelope along with a sealed envelope containing the identifying information about that child. The only information placed on the outside of the brown envelopes was the age and sex of the child.

The non-abused children were recruited from after-school programs in the city. With the permission of the directors of these programs, the information

sheets and consent forms were sent home to all parents (Appendix B). The signed consent forms were then filtered to the investigator through the individuals working at the centre to ensure that the investigator did not connect a particular consent form with a specific child. Child care workers then pointed out the children who had been given permission to participate in the study. Hence, the anonymity of each participant was protected.

Drawings were then collected individually from the participating children on the premises of the after four programs. An area was set up in a different location of the centre so that each child was able complete the standardized format of the drawing techniques, as outlined in Appendix A, in privacy with the examiner. When the drawings were completed they were placed in a brown envelope with another sealed envelope containing group membership information and answers to the post investigative questions. The only identifying information placed on the outside of the envelope was the age and sex of the child who had drawn the pictures. Older paper was used for the collection of these drawings because it was thought new paper might somehow distinguish these drawings from those which had been collected from files in the clinician's office.

Once all the data had been collected, the drawings were carefully scrutinized for cues to group membership which might be evident. As some of the assessors in the participating clinician's office had written dates and names on the drawings, all 540 drawings were made to look uniform with the aid of corrective tape. When this task was completed a pilot study was conducted with

three separate individuals to ensure that the drawings from the three groups were indistinguishable from each other. Then the 60 brown envelopes were presented in random order to four separate raters with the objective that they classify the drawings into the three categories (sexual abuse, maltreated, normal). No rater was aware of how many sets of drawings were in each group.

Rater one is a practicing clinician with 25 years experience in the area of child assessment, particularly with children who have been maltreated or sexually abused. He is considered to be an expert in his field and is often called upon to deliver expert witness testimony in child abuse cases. Dr. G is also specifically skilled in the interpretation of House-Tree-Person drawings (H-T-P) and Kinetic Family drawings of children. Rater two is a practicing clinician of longstanding, who works primarily with adults. She has been trained as an art therapist and is skilled in the interpretation of the (H-T-P) protocols of adults. Dr. L is also considered to be an expert rater. Rater three is a female M. A. candidate in psychology who was initially to participate as a naive rater for comparison purposes. However, she subsequently disclosed that she had been a victim of child sexual abuse during the same developmental period as the children from whom the drawings had been collected. It was decided that a fourth rater should be enlisted so that any potential influence arising from rater three's childhood experience could be detected. Rater four has completed her M.A. in psychology and has no known history of sexual abuse. She is also considered to be a naive rater.

Raters were individually presented with the 60 brown envelopes in random order. The drawings were removed from the envelopes in front of the investigator and considered carefully. Once the rater had made a decision, it was recorded on a separate index card with the name of the rater attached and placed back inside the brown envelope. Raters were not permitted to see the decisions of the other raters. Then on a second occasion all raters were again presented with a subset of 20 sets of drawings randomly selected from the total sample. Each rater was provided with a different random sample of 20 sets of drawings. They were asked to classify these drawings again so that a consistency score could be computed. Decisions were recorded on the index cards which had been previously allocated to individual raters. The performances of each of these raters was then examined statistically, using a chi square statistic, to determine if they had performed better than what could be expected by chance.

Each rater completed the same procedure when rating the drawings with one exception. Instead of simply classifying the drawings into the three groups rater one was asked to give a full interpretation of each set of drawings, which was recorded by the investigator. Dr. G's interpretation was qualitative and global in nature. His interpretation of the drawings was an assessment of the psychological functioning of each child as seen through their drawings, based upon developmental psychoanalytic concepts. It was hoped that through a content analysis of his interpretations, variables which underlie much of the behaviour and symptoms associated with child abuse could be detected. Furthermore, by

subjecting these variables to statistical analyses any similarities or differences among the three groups could be explored. Any variables which proved to be good discriminators might be considered a valuable contribution to both help understand the maltreated and sexually abused child and to guide appropriate therapeutic interventions. Also, by examining these underlying variables some insight may be gained on the debate surrounding differential effects of various types of abuse on the development of children.

Once all the participants had completed their ratings, each brown envelope was assigned a five digit number by the thesis advisor, so that when completing the content analysis the investigator would be unaware of the group membership of the child whose drawings were the subject of interpretation. Each interpretation was given a matching five digit number and then all the interpretations were placed in a separate file folder.

Before beginning the content analysis of the clinician's interpretations, decisions regarding the best method of quantifying the available information had to be made. Quantification seemed the best choice because the results would be more objective and could be subjected to statistical analyses. In addition to reviewing material written by a leading authority on the subject (Holsti, 1969), there were numerous consultations with individuals in both statistical consulting and computing services. It was decided that counts of frequency would be the most appropriate choice.

In this instance the unit of analysis was each actual word used by Dr. G., an approach which has been used previously in assessing the progress of psychotherapy (Holsti, 1969). Hence, the frequency of occurrence for each word was used as the system of enumeration for this content analysis. Words were coded as either present or absent (1,0) based upon a dichotomous judgement by the investigator, a method which is thought to be the most reliable (Holsti, 1969). The assumptions underlying this choice are that every word should be given equal weight, and that each word (not including prepositions) is in fact a variable (Holsti, 1969).

The investigator then coded all of the content of the interpretations of Dr. G three separate times to establish reliability. Forty variables were extracted from this process. However, after several consultations with Dr. G, the number of variables was reduced to 29, as in some instances several different words had been used to describe the same attribute. Establishing inter-rater reliability for the coding was considered, but after further consultation on the matter it was decided that the investigator having completed the content analysis three times was sufficient to demonstrate reliability.

The investigator was advised to reduce the number of variables but, as this research is exploratory there was no previous research on which to base the selection of variables for statistical analyses. However, closer inspection of the variables showed that 10 of the 29 variables occurred less than four times for the entire sample. It was assumed that variables which occurred so infrequently

would not make good discriminators, hence they were discarded leaving 19 variables with which to work. These variables are listed in Appendix C. Univariate measures of association, based upon Goodman and Kruskal's lambda statistic (Siegel, 1988), were computed to ensure that variables which had been discarded were not significantly associated with group membership. A correlation matrix of the 19 variables was also computed to ensure that each variable was measuring a different attribute.

Due to the unusual data set and quasi-experimental nature of the research, careful consideration was given to the choice of statistical analyses. Based upon the best judgements of the investigator in conjunction with consultative services the decision to use both logistic regression and discriminant function analysis was made. It was thought that converging evidence from both procedures would provide a stronger argument for the discriminatory power of variables which were found to be important in both analyses.

Logistic regression is a multivariate technique which predicts the probability of an event occurring based on the best nonlinear combination of variables known as the model. The parameters of the model are estimated using the maximum-likelihood method, in which regression coefficients are chosen based on their ability to make the observed results more "likely". This procedure is particularly suited to binary data as it is based on the binomial distribution and does not require that assumptions of normality or equal covariance matrices be met (Hosmer, 1989), hence it seemed the most appropriate choice. As this research

was exploratory there was no previous research suggesting which variables may prove to be the best predictors, therefore, a stepwise procedure was used which statistically selects the best combination of variables with which to predict group membership. To facilitate comparison with results from the stepwise discriminant function analysis the same criteria were used for entry and removal of variables.

However, once the procedure was completed it was evident that the logistic regression coefficients were not reliable. It was confirmed that this was a result of some of the variables in the chosen model (aggression, impulsiveness) having no variation across groups (the attributes in question were only present in the abused groups). In this circumstance the regression coefficients cannot be reported, but it is permissible to report the combination of variables (model) which was selected in the stepwise procedure and the degree of accuracy with which it classified cases.

Discriminant function analysis is also a multivariate technique which predicts group membership on the basis of the best linear combination of predictor (discriminating) variables. Because these data were binary it was understood that violation of the assumption of normality would occur and that requirements of equal group covariance matrices would not be met. However, there is evidence in the literature that this analysis has certain characteristics which make it acceptable to use even with binary data. Specifically, this technique is thought to be quite robust (Klecka, 1984) especially when the smallest group is comprised of at least 20 cases and when violation of the assumption of

normality is associated with skewedness as opposed to outliers (Tabachnick & Fidell, 1983), which was the case in this situation. In such cases the solution is degraded but still can be trusted as the results would only improve if there had been no violation of the assumption of normality. The integrity of the F statistic is compromised, so statements regarding significance must be made with caution. However, it has been noted that if the main objective of the research is a model which best describes the real world the percentage of correct classifications is the best guide. If the percentage is high, it can be assumed that the violation of assumptions was not that detrimental (Klecka, 1984). A stepwise procedure was used for the reasons cited earlier.

When the study is completed, letters outlining the results will be distributed to the after-four programs. Parents will then be able to pick up the letters or have them brought home by their children. The contents of the letter are outlined in Appendix D.

RESULTS

Performance of Raters

Results indicated that the clinician who is experienced in assessing children (Rater one) was the only rater to do significantly better than chance based on the number of correct classifications overall. The second participating clinician displayed a bias in her evaluation of the drawings as she viewed most of the children as abused (either maltreated or sexually abused), including 70% of the normal sample. The naive rater with a history of child sexual abuse (rater three)

demonstrated a surprising and statistically significant ability to identify the drawings of normal children (80%). The remaining naive rater (rater four) exhibited a bias in her evaluation of the drawings as she saw most of the children as being normal, including 45% of the total abused sample (n=40). All analyses were based upon the chi square statistic. The details of the analyses for each rater are as follows:

Rater one

Dr. G correctly classified 40 of the 60 (67%) sets of drawings into the three groups which resulted in a significant chi-square of $X^2 (1, N = 60) = 6.667, p < .01$. When classification was based upon the ability to discriminate the drawings of normal children from those of children who had suffered some form of maltreatment or sexual abuse, he correctly identified 53 of the 60 cases (88%), with a chi-square of $X^2 (1, N = 60) = 35.27, p < .001$.

He did significantly better than chance correctly identifying the drawings of the normal children, $X^2 (1, N = 20) = 7.20, p < .01$, and the drawings of maltreated children, $X^2 (1, N = 20) = 9.80, p < .001$. However, he did not do better than chance in distinguishing the drawings of the sexually abused children, $X^2 (1, N = 20) = 1.80, p > .05$, although he did know that 19 of these 20 children had suffered some form of abuse. Table 1 provides the exact numbers of cases which were correctly classified in each group along with the respective chi square statistic and level of significance.

Table 1

Performance of Rater One

GROUP	JUDGEMENTS			Total	X ²	Prob.
	Normal	Mal-treated	Sexually Abused			
Normal	16	3	1	20	7.20	$p < 0.01^*$
Mal treated	2	17	1	20	9.80	$p < 0.001^{**}$
Sexually Abused	1	12	7	20	1.80	$p > 0.05$

Of the 20 sets of drawings which were reclassified to derive a consistency score, Dr. G. made the same decision 16 times (80%).

Rater two

Dr. L correctly classified 23 of the 60 sets of drawings (38%) into the three groups, which resulted in a non-significant chi square of $X^2 (1, N = 60) = 3.27, p > .05$. When classification was based on the ability to discriminate the drawings of normal children from those of children who had suffered some form of maltreatment or sexual abuse, she correctly identified 40 of the 60 cases (67%) which resulted in a significant chi square of $X^2 (1, N = 60) = 6.67, p < .01$.

However, this is not a demonstration of expertise with this population but rather is a reflection of her tendency to see most subjects as abused, as is evidenced by her inability to accurately discriminate the drawings of the normal

children, $X^2 (1, N = 20) = 3.20, p > .05$, the drawings of the maltreated children, $X^2 (1, N = 20) = 1.8, p > .05$. or the drawings of children who had been sexually abused, $X^2 (1, N = 20) = .200, p > .05$. Table 2 provides the exact number of cases which were classified into each of the three groups, accompanied by the respective chi square statistic and level of significance.

Table 2

Performance of Rater Two

GROUP	JUDGEMENTS			Total	X^2	Prob.
	Normal	Mal-treated	Sexually Abused			
Normal	6	7	7	20	3.20	$p > 0.05$
Mal treated	5	7	8	20	1.80	$p > 0.05$
Sexually Abused	1	9	10	20	0.20	$p > 0.05$

Dr. L consistently reclassified 12 (60%) of the 20 sets of drawings.

Rater three

This naive rater correctly classified 36 of the 60 cases (60%), which resulted in a non-significant chi square of $X^2 (1, N = 60) = 2.40, p > .05$. Although her performance was not statistically significant, it should be noted that she accurately identified only four less than rater one. When classification rested upon the ability to discriminate the drawings of normal children from those of children who had

suffered some form of maltreatment or sexual abuse, she correctly distinguished the drawings of 47 of the 60 cases (78%), which resulted in a statistically significant chi square of $X^2 (1, N = 60) = 19.27, p < .001$.

Closer examination of the data shows that this rater exhibited a rather uncanny ability to pick out the drawings of the normal children, $X^2 (1, N = 20) = 7.20, p < .01$. However, it appears as though her talents are exclusive to this group as she did not accurately identify the drawings of the maltreated children $X^2 (1, N = 20) = .200, p > .05$, or of the sexually abused group $X^2 (1, N = 20) = .200, p > .05$. Table 3 provides the exact number of cases correctly classified into each of the three groups, along with the respective chi square statistic and level of significance.

Table 3

Performance of Rater Three

GROUP	JUDGEMENTS					
	Normal	Mal-treated	Sexually Abused	Total	X^2	Prob.
Normal	16	2	2	20	7.20	$p < 0.01^*$
Mal treated	7	9	4	20	0.20	$p > 0.05$
Sexually Abused	2	7	11	20	0.20	$p > 0.05$

This rater consistently re-classified 16 of the 20 cases (80%).

Rater 4

This naive rater correctly classified 30 of the 60 cases into the three groups, exactly what would be expected by chance, which resulted in a non-significant chi square of $X^2 (1, N = 60) = 0.01, p = 1.0$. When classification rested upon the ability to discriminate the drawings of normal children from those of children who had suffered either sexual abuse or some other form of maltreatment, she correctly classified 39 of the 60 cases (65%), which resulted in a non-significant chi square of $X^2 (1, N = 60) = 2.60, p > .05$.

This rater demonstrated an inclination to evaluate all of the children's drawings as being from normal children, which resulted in a significant chi square of $X^2 (1, N = 40) = 9.80, p < .01$. However, unlike the other naive rater, this was not a reflection of good ability in identifying the drawings of normal children. This fact is made clear when one recognizes that she mistook almost half of the entire abused sample's drawings (45%) as drawings from normal children as well. Closer examination of the data indicates that she did not accurately identify the drawings of the maltreated children $X^2 (1, N = 20) = 1.8, p > .05$, or the sexually abused children $X^2 (1, N = 20) = 1.6, p > .05$. Table 4 provides the exact number of cases correctly classified into each of the three groups, along with the respective chi square statistic and level of significance.

Table 4

Performance of Rater Four

GROUP	JUDGEMENTS			Total	X ²	Prob.
	Normal	Mal-treated	Sexually Abused			
Normal	17	3	0	20	9.80	$p < 0.01^*$
Mal treated	10	7	3	20	1.80	$p > 0.05$
Sexually Abused	8	6	6	20	1.60	$p > 0.05$

Rater four consistently re-classified 16 of the 20 cases (80%).

Results of logistic regression and discriminant function analyses

As noted previously, a content analysis of Dr. G's interpretation of the children's H-T-P protocols and Kinetic Family drawings rendered 29 potential discriminating (predictor) variables, which were subsequently reduced to 19. Before any variables were discarded univariate measures of association between all the variables and group membership were computed to ensure that important variables would not be eliminated.

First, univariate associations between the predictors and membership in one of two groups, i.e., the normal and collapsed abused group, were computed. Results of this analysis indicated that there were four predictors which had a high enough degree of association to group membership to obtain significance levels

better than .05. They were as follows: body anxiety, problems with emotional development, aggression and impulsiveness. Then univariate measures of association between the predictor variables and group membership in one of the two abused groups were computed. The results of the second analysis identified only one predictor as having a high degree of association ($p < .05$), which was identified as impotence. None of these predictors had been considered for removal, hence the group of 19 variables, which are listed in Appendix C, remained the same.

The results of a correlation matrix based on the 19 predictor variables (using the the phi coefficient) indicated that there were no multicollinearity problems, meaning that correlations among the 19 variables were not high enough to cause problems with data analyses.

The results of the stepwise logistic regression procedure which included all of the 19 predictors, suggested that a combination of four variables provided the best model on which to base classification into the normal group and the collapsed abused group (since logistic regression procedure requires a binary outcome, the two abused groups were collapsed to form one larger group). These predictors are the same as the ones which had high univariate associations to group membership, and include body anxiety, aggression, emotional development problems and impulsiveness.

As noted earlier, the logistic regression coefficients are uninterpretable because of the lack of variation of the variables aggression and impulsiveness

across groups, therefore, only the accuracy with which the cases were classified based on this combination of variables will be reported. The logistic regression model accurately classified 75% of the normal group (15/20) and 87.5% of the larger abused group (35/40) for an overall classification rate of 83.3% (50/60).

Two stepwise discriminant function analyses were performed using the same 19 predictor variables. To facilitate comparison of results from the first discriminant function analysis with those of the logistic regression the two abused groups were collapsed to form one larger one. The first analysis used the 19 variables as predictors for group membership into the normal and larger abused group. Results indicated that a combination of five variables contributed to the function which discriminated between the two groups. These predictors are emotional development problems, aggression, body anxiety, fragmentation and expansiveness. Examination of the within structure coefficients suggested that body anxiety (0.436) is related most highly to the canonical discriminant function, followed by aggression (0.398), emotional development (0.367), fragmentation (0.229) and expansiveness (0.203). When the simultaneous contribution of all the variables is considered as well through the standardized canonical discriminant function coefficients, the order of importance changes somewhat. Emotional development problems contributed most to the discriminant function (0.736), followed by body anxiety (0.653), aggression (0.562), fragmentation (0.525) and finally expansiveness (0.493).

While all the univariate F 's corresponding to these five variables were significant at the .01 probability level or less, the violation of the assumption of normality makes them difficult to interpret with any degree of confidence. Table 5 provides a list of the five predictor variables with their accompanying univariate F statistic, level of significance, standardized canonical discriminant function coefficient and within structure coefficient.

Table 5

Stepwise Discriminant Procedure

Variable	F	Probability	Standardized Disc. Coeff.	Within Structure Correl'n Coeff.
BODY ANXIETY	9.9(1, 58)	$p < 0.01^*$	0.653	0.436
AGGRESSION	9.5(2, 57)	$p < 0.001^{**}$	0.562	0.398
EMOTIONAL DEVELOPMENT	10.4(3, 56)	$p < 0.001^{**}$	0.736	0.368
FRAGMENT -ATION	10.2(4, 55)	$p < 0.001^{**}$	0.525	0.300
EXPANSIVENESS	9.7(5, 54)	$p < 0.001^{**}$	0.490	0.203

Examination of the adequacy of classification, however, suggests that these five variables discriminated well between the normal and abused groups. Overall classification was 85%, with 75% of the normal group correctly classified (15/20) and 90% of the abused group correctly classified (36/40). It appears that the

discriminant function analysis provided a slightly better model for overall classification (85%) than did the logistic regression (83%) with one more abused child correctly identified. Both procedures suggested that body anxiety, emotional development and aggression made important contributions to the discrimination between the control and collapsed abused groups for this sample. The difference between the logistic regression procedure and discriminant procedure was the inclusion of the variable impulsiveness in the logistic regression, whereas the discriminant procedure included fragmentation and expansiveness. Results of the logistic regression support those obtained by the univariate measures of association, which indicated that impulsiveness was more highly related to group membership than either expansiveness or fragmentation.

A second stepwise discriminant function analysis was performed, which used all 19 variables for classification into the maltreated and sexually abused groups. Results suggested that only one variable was a useful discriminator in this case, which was consistent with the univariate measure of association indicating that impotence was highly related to group membership based on the two abused groups. The variable impotence alone classified 100% of the sexually abused group on the basis of its absence from this group, but only 25% of the maltreated group (5/20) for an overall classification of 62.5% (25/40).

Examination of the canonical discriminant function evaluated at group means showed them to be identical (0.398), indicating that there is no real difference between the two groups on the dimensions measured by the other 18

variables. The standardized canonical discriminant function coefficient for impotence was 1.0. Similarly, the within structure coefficient for impotence had a value of 1.0. The potency of this variable can be attributed to the fact that it had no variation across the two groups, that is the attribute of impotence was only present in the maltreated group. Table 6 provides the exact frequency of occurrence for each of the 19 predictor variables and their distribution across the three groups.

Table 6

Frequencies of Predictors across Groups

PREDICTORS	GROUPS		
	Normal	Mal-treated	Sexually Abused
Body Anxiety	3	12	10
Nurturing	5	8	7
Emotional development problems	2	9	8
Anxiety	5	6	8
Trauma Indicators	5	7	7
Learning Disability	4	9	4
Emotionally Disturbed	2	7	6
Self Consciousness	6	5	4
Aggression	0	6	6
Hostility	3	4	4

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Fantasy	2	5	3
Oppressive Environment	1	4	4
Immaturity	2	5	1
Poor Self Esteem	2	4	2
Impulsiveness	0	5	3
Impotence	2	5	0
Anger	1	4	1
Fragmentation	0	4	1
Expansiveness	0	1	3

Small sample sizes precluded useful statistical examination of gender differences on each of the variables which proved to be good discriminators between the groups. However, for the information of the reader a brief summary of the gender breakdown for the variables in question will be provided.

For the variable body anxiety 2 normal males, 7 maltreated males and 6 sexually abused males were identified as having this attribute. Also, there were 5 maltreated females, 1 normal female and 4 sexually abused females identified as having this attribute. In total 15 males and 10 females were described as experiencing body anxiety. No normal children were described as impulsive, however, 4 maltreated males, 1 maltreated female and 3 sexually abused females were identified as reflecting this characteristic, for a total of 4 males and 4 females. One normal female, 4 maltreated females and 5 sexually abused females were described as having emotional development problems. Also, one normal

male, 5 maltreated males and 3 sexually abused males reflected this characteristic, for a total of 10 females and 9 males. No normal children were described as aggressive, but 3 maltreated and 4 sexually abused females were identified as having this characteristic. Also, 3 maltreated and 2 sexually abused males were identified as reflecting this characteristic, for a total of 7 females and 5 males.

No normal children were described as being fragmented, but 2 maltreated females were. Also, 2 maltreated and 1 sexually abused male were described as having this characteristic for a total of 2 females and 3 males. Only females were described as being expansive with 1 maltreated and 3 sexually abused females reflecting this attribute, no normal children were described as expansive. Finally, two normal males were identified as impotent, as were 3 maltreated males. Only two maltreated females were described as impotent, for a total of 5 males and 2 females.

DISCUSSION

The present research investigated the utility of using the House-Tree-Person drawing technique and the Kinetic Family drawing technique as diagnostic tools to assess the developmental effects of child maltreatment and child sexual abuse. As a precursor to this research the ability of four raters to correctly classify the drawings of three groups of children (normal, maltreated, sexually abused) was assessed, to determine if expertise with such drawings enhanced performance. Results suggest that not only is expertise with these techniques

required for good performance, but there must also be an understanding of developmental issues.

The expert rater experienced in working with drawings of adults did not perform better than chance. While rating the drawings she often commented that she was unable to identify the drawings of normal children, and noted that there was a substantial difference between the drawings of adults and children. The implication is that to use these drawings successfully as a diagnostic developmental tool it is necessary to have an understanding of the developmental issues specific to children, and to be familiar with the type of drawings which may reasonably be expected at different age levels.

It should be understood that while Dr. G classified the drawings with impressive accuracy under artificial conditions, this does not imply that drawings can be used as the sole means of assessing a child. They are meant to be used in conjunction with a comprehensive assessment battery. That he performed so well despite the fact that he was unaware of group membership and without the added benefit of pertinent information usually available, is a testimony to his skill as a clinician and to the diagnostic utility of drawings obtained from the H-T-P and Kinetic Family drawing techniques.

Although Dr. G performed significantly better than chance in overall classification and in the discrimination of normal and maltreated children, he did not do better than chance in identifying the drawings of sexually abused children specifically. This supports the findings of other researchers who have discovered

that graphic indicators of sexual abuse rarely occur in drawings unless the abuse was particularly recent and traumatic (Howe, Burgess & McCormack, 1987). In light of this it has been suggested that clinicians look instead for indications of psychological damage which are reflected in the drawings. Given that this rater knew that the children in this group had suffered some form of abuse, but not that it was specifically sexual in nature, he clearly was aware of the underlying damage.

This lends some support to the hypothesis that maltreated children and sexually abused children share underlying commonalities with respect to the developmental damage incurred as a result of the psychological environment in which most intrafamilial abuse takes place (Augustinos, 1987; Pianta, Egeland & Erickson, 1989; Wolf, 1987). His performance was predictable and lends support for a holistic, qualitative approach to the interpretation of children's drawings (Tharinger & Stark, 1990). However, as there was no distressed but non-abused control group in this research, it is still not known if the experience of some kind of physical or sexual abuse affects development differently than does just psychological abuse.

Another issue with regard to the rating of the drawings needs to be addressed. A serendipitous discovery was made in relation to the performance of the naive rater with a history of child sexual abuse. This rater demonstrated a remarkable ability to classify the drawings of the children in this sample and showed a specific ability to identify the drawings of normal children. Although

her overall performance was not significant, it certainly was surprising, especially if compared to the performance of the other naive rater who classified the drawings only on the basis of chance. When the data are examined closely, it is clear that this rater also had an unusual sense about the sexually abused group. She only misidentified two of these cases as being from the normal sample whereas in the maltreated group she mistook seven cases as drawings from normal children.

The obvious question is whether this rater's particular sensitivity to the drawings of normal and sexually abused children is somehow connected to her own childhood experience of sexual abuse. She did note a particular sensitivity to the house drawings which elicited a identifiable response within her, thus cueing her to the absence or presence of some kind of abuse. While no conclusions can be drawn from these findings, they do pose an interesting avenue for future research. For instance, if it were statistically established that individuals with a history of child sexual abuse were able to identify the drawings of abused children (without training) better than individuals without such a history, an unusual kind of support could be accorded to the validity of the projective hypothesis.

Results from both the logistic regression and the discriminant analysis based upon the normal and collapsed abuse groups suggest that body anxiety, emotional development problems and aggression are the three attributes which appear to be common to both abused groups and discriminates them from the

normal children. There was some discrepancy between the two analyses in regards to three other variables. Results of the logistic regression procedure indicated that impulsiveness was an important discriminator in combination with the other three, while the results of the discriminant procedure indicated that fragmentation and expansiveness had important contributions to make to the discriminant function in combination with the other three. While this inconsistency may be an artifact of the difference in these techniques, it is more likely that fragmentation, expansiveness and impulsiveness are related constructs, as will be discussed later.

As there has been no previous research which has specifically explored the differential developmental effects of intrafamilial maltreatment and sexual abuse on latency aged children through the use of drawings, it is difficult to relate these findings to similar research. However, these findings can be interpreted in light of developmental theory. It is understood that these results are based upon exploratory research with a small, select sample which is not necessarily representative, hence generalization to the population would be imprudent.

Evidence of body anxiety in children's drawings often reflects rejection of the body, or anxiety about the body, on the part of the child because of fear of personal harm which can stem from a wide variety of circumstances. Typically, it is literature on the sexual abuse of children which discusses the need of sexually abused children to metaphorically leave their bodies to escape the horror of what is happening to them (Summit, 1986; van der Kolk, 1987). Young, (1992)

in an attempt to explain the underlying phenomenological coherence of the many serious effects associated with long term sexual abuse surmised that the basis to all of these problems lies in the inability of many survivors to live comfortably in the human body. Young calls this the problem of embodiment. She postulates that the symptoms typically associated with sexual abuse survivors are a response to the problem of living "with (but not in) a dangerous, damaged, or dead body" (p. 90). For instance, she contends that anorexia may be a means to starve the body and self-mutilation and suicide a means to punish the body.

While Young puts forth an articulate and lucid argument for the problem of embodiment as it applies to sexual abuse survivors, it is not a modern idea, nor is its application restricted to survivors of sexual abuse. One theorist and practitioner in the area of child development described the process of "personalization", literally living in the body, as a vital and basic developmental process. Without bodily integrity further personality, emotional and cognitive development may be severely compromised (Winnicott, 1960). Hence, if a child is unable to use the body as the definitive boundary between the self and the rest of the world, or turns on it in anger and confusion as described by Young, serious problems are likely to ensue.

However, it is not just sexual abuse victims who live in fear of physical harm. Children who are neglected and maltreated also often live in circumstances which are unpredictable and terrifying. One would expect then that these children would also evidence body anxiety. In fact, results from the present research

suggest that maltreated children do experience body anxiety. The frequency of this variable is 10 in the sexually abused group and 12 in the maltreated group. This may be one underlying commonality which explains some of the variety of symptoms and disorders seen in child victims of both sexual abuse and maltreatment.

While research does not specifically delineate body anxiety as a symptom associated with sexual abuse or child maltreatment, these disparate literatures do make reference to a variety of observable behaviours such as somatic complaints and features such as enuresis (inability to control the bladder), encopresis (inability to control the bowel), self-mutilation and suicide attempts. It is likely that the use of drawings has revealed an underlying developmental problem which gives rise to these behaviours which is the experience of body anxiety, resulting from the interruption of the developmental process of personalization. The implication is that maltreated children also suffer from the lack of body integrity and hence, would be subject to similar difficulties. Hence, any future research on such attributes as body anxiety should include maltreated as well as sexually abused children.

If a child is unable to continue in the process of personalization as a result of fear or rejection of the body, it is likely that s/he will have problems with boundaries of all kinds. If a child is no longer certain (or never knew) where s/he ends and others begin, the ability to engage in interpersonal relationships will be severely compromised. It is interesting to note that the literature on incestuous

families suggests that the lack of generational boundaries is a primary characteristic of many of these families (Evans, 1988; Koch & Jarvis, 1987; Sgroi, 1982; Sroufe, Jacobvitz, Mangelsdorf, DeAngelo & Ward, 1985). Similarly, the literature on physically abusive parents indicates an inability for these parents to separate their own needs from those of their children, insensitivity to the needs of their children and lack of empathy (Cornett, 1985; Hunter & Kilstrom, 1979; Kropp & Haynes, 1987). Clearly, there is ample support for the problems associated with lack of boundaries throughout the child maltreatment and sexual abuse literature. One clear implication from these findings is that therapy which centres on re-establishing a sense of body integrity and which can contribute to the process of personalization may be an appropriate means by which to aid child victims.

Lack of empathy has been implicated in abusive parenting, in incestuous families and has been identified in child victims of both sexual abuse and maltreatment (George & Main, 1979; Melnechuk, 1988; Sgroi, 1982). It is interesting to note that both Hoffman (1984) and Feshbach (1989), key figures in the work on empathy, have stated that it is necessary to have developed a self-other boundary before one is able to experience empathy. Converging evidence from various developmental theorists suggest that the development of the self-other boundary rests upon the integration and consolidation of the processes involved in the formation of the self (Erikson, 1963; Mahler, Pine & Bergman, 1975; Miller, 1981; Winnicott, 1960). In essence, to be able to experience

empathy one must have a fully functioning integrated self which is capable of self-regulation. Because empathy and problems with social competence is a problem for all involved parties in child maltreatment and sexual abuse, it might be deduced that the developmental processes involved in the formation of the self are affected by any form of child abuse or neglect, one of which is the process of personalization. Without proper intervention these same attributes are seen in adult victims who may then be predisposed to perpetuate the cycle.

The other six variables implicated by this research lend support to this hypothesis. Emotional development problems indicate that the individual in question has not developed the internal processes required for self-regulation. Aggression, impulsiveness and expansiveness are all manifestations of difficulties with regulation of affect. Fragmentation is particularly indicative of serious boundary problems as it reflects the lack of an integrated self. Impotence reflects an inability to get one's needs met in the world (helplessness) and is also related to problems in emotional development. As noted previously the ability to be self-regulating is one marker of a fully integrated self and is a prerequisite to the formation of a self-other boundary. The presence of these variables suggests that both maltreated and sexually abused children in this sample have experienced interruptions with the processes which are associated with the integration and consolidation of the self. As these attributes are associated with vital aspects of the development of the self and hence, are also vital to the formation of the self-

other boundary, it is not surprising that problems with empathy and interpersonal relationships are common to child victims and their parents.

It is interesting to note that research based on a developmental paradigm which assesses the quality of the mother-child relationship (attachment) has indicated that children of insensitive and rejecting care givers express anger and aggression inappropriately in social situations and are described by teachers as both impulsive and helpless (Main & Stadtman, 1981; Sroufe, 1983). Hence, there is more evidence to suggest that if children do not get their developmental requirements met significant developmental processes associated with personalization and the formation of the self are interrupted. These interrupted developmental processes may underlie the many difficulties which are documented in the child literature. Furthermore, research from this study suggests that drawings are able to access these vital dimensions of children's functioning and therefore, can be an invaluable tool in any assessment battery.

This constellation of difficulties with empathy and personal intimacy has been the subject of investigation for a different type of research, and as a result another piece of a complex picture has come into focus. Hartman & Burgess (1993) contend that there is a neurobiological basis to this particular cluster of problems based on their understanding of how the experience of trauma affects all aspects of a child, including his/her physiology (information processing of trauma). They conclude that as a result of an imbalance in the alarm/dissociative process which occurs during and after sexual abuse episodes, the development

of information processing necessary for the discerning of intentionality, personal responsibility, and trust in others is severely compromised. The end result is a child with a severely limited ability to engage in interpersonal relationships.

The wide range of difficulties experienced by victims of child maltreatment and child sexual abuse are well documented. Little research has attempted to integrate findings to discover the similarities which might exist because the assumption has typically been that differing forms of abuse result in different effects. The above noted similarities between victims of sexual abuse and maltreatment on dimensions related to the process of personalization and the development of the self suggest that developmental damage may be more attributable to the emotional deprivation inherent in abusive environments than to the specific acts of abuse themselves. Evidence supporting this hypothesis comes from research on Adult Children of Alcoholics and on the children of battered woman which suggests that individuals who have not been the targets of abuse, but have been enmeshed in dysfunctional family systems also display marked difficulty with empathy, interpersonal relationships and issues associated with the formation of the self (Black, 1986; Hinchey & Gaveleck, 1982).

Results of the second discriminant function analysis certainly suggest that the maltreated and abused children in this sample tended to look more alike than different on the 19 variables measured. Examination of the original data shows that the frequency of occurrence of these variables are fairly evenly distributed between the two groups. If anything, the sexually abused group demonstrates a

marginally smaller number of occurrences of these variables. These findings echo those of another study which suggests that maltreated and sexually abused children do not differ from each other in their internal representations and self-concept (Stovall & Craig, 1990). Furthermore, there have been numerous studies which have indicated that sexually abused children often do not present as more pathological than distressed but non-abused controls and sometimes even normal controls. For instance, the use of the Louisville Behaviour Checklist in conjunction with human figure drawings did not accurately discriminate between sexually abused children and non-abused distressed controls (Chantler & Pelco, 1993). Similarly, sexually abused girls did not score significantly higher on the Child Depression Inventory than either the clinical or normal controls (Waterman & Lusk, 1993). In one instance sexually abused children were rated as significantly more maladjusted on the Child Behaviour Checklist than a nonclinical normal sample, but significantly less maladjusted than the clinical normal group (Waterman & Lusk, 1993). This phenomenon has occurred even when using a play technique to assess the differential effects of intrafamilial physical and sexual abuse. Researchers found that the sexually abused group actually presented as the most integrated and well adjusted of the groups investigated (Harper, 1991). Another study which compared the ego development of women with a history of child sexual abuse to those of women with no reported history of child sexual abuse found that the group with sexual abuse histories had a higher level of ego development. The investigators hypothesized that the women in the sexually

abused group may have been particularly resilient as a result of intervening factors such as obtaining professional help, which may have provided the opportunity for exceptional growth and integration not typically achieved by most individuals (Jennings & Armsworth, 1992).

One plausible explanation for such findings is that the research instruments utilized were not sufficiently comprehensive and did not access the dimensions of psychological functioning which might reveal underlying differences among the groups. Furthermore, many of the studies reviewed did not indicate the ratio of female to male subjects and often studies used only female subjects. Hence, little is known about gender differences as they relate to the developmental impact of different types of abuse. Unfortunately, small sample sizes in this research precluded an investigation of this kind, however research does suggest that boys suffer more extreme types of abuse (Hunter, 1991). Therefore, this may prove a fruitful avenue of research.

The results from the present research suggest that victims of maltreatment and sexual abuse showed similar developmental problems, which lends credence to the position that developmental damage is attributable to the deprivation of developmental requirements inherent in abusive environments. However, both abused groups have suffered some form of physical violation, so in some senses it is still not possible to be entirely sure that the observed developmental damage is wholly attributable to the abusive milieu. As noted previously, children who have not suffered physical acts of violation also show similar characteristics to

those of maltreated and sexually abused children hence, it is quite possible that bodily invasion is not the key determinant of developmental damage.

One potential means of further exploring this question lies in a variable which was discovered in the present research, that is body anxiety. The presence of body anxiety was noted in both abused groups but it is not clear what the presence of this variable is attributable to. If a study was conducted in which drawings were utilized as the diagnostic tool and also incorporated a distressed, non-abused control group as well as a maltreated group and a sexually abused group, it would be possible to ascertain whether body anxiety was present in only those groups which had suffered some form of body invasion. If this variable was present in the non-abused, distressed control group then it could be inferred that body anxiety is a function of the elements in environments which do not facilitate the process of personalization, and is not a result of violation of the physical boundary per se.

It would be then possible to examine the other ways in which a child may be depersonalized and come to a better understanding of the developmental requirements of children. For instance, there is some suggestion in the maltreatment and sexual abuse literature that the role reversal between the parent and child so often observed in dysfunctional families, underlies many of the problems which are observed in children of these families. Also, such research would lend further clarification to the controversy surrounding whether

developmental damage is related to specific acts of abuse, or to the milieu in which the abuse takes place.

While the findings of this research suggest the maltreated and sexually abused children do not differ from each other in terms of the developmental impact of their abusive experiences as assessed through their drawings, this is not incontrovertible evidence that sexual abuse has exactly the same developmental impact as other forms of maltreatment. It must be remembered that the subjects in this research were latency aged children and this developmental period has been recognized as a particularly calm one (Winnicott, 1960), therefore, the full effects of damage may not be visible. Adolescence, with its accompanying dramatic psycho-sexual changes and emphasis on establishing interpersonal intimacy, may restimulate memories of past abuse and prove particularly taxing for those individuals with problems related to self-control and lack of boundaries. It is important that research of a similar kind be conducted with children in this developmental period to ascertain whether the developmental impact of various forms of maltreatment continues to be the same, and to understand the full range of potential developmental damage.

Most importantly, there is a need for research which examines the individual characteristics of children who have been abused and the features of their unique environments, so that insight is gained into the intricate combinations of circumstance and characteristics which buffer children from developmental damage (resilience) or make them more vulnerable to it. It is

through study of the individual child that we can learn what children need and how best to provide it, and their drawings have proved to be an invaluable tool which can aid professionals in this task.

The pattern of the future will be woven by the hands of all children, happy or sad, damaged or not. Each child carries within them an original design which will take shape as his/her life unfolds. In the face of adversity it is the responsibility of all adults, and especially of concerned professionals to ensure that each child is still able to make their unique contribution. Although the treatment and prevention of child maltreatment and sexual abuse seem almost overwhelmingly complex, our future rests on the ability to protect and aid children who cannot yet do so for themselves. As long as there are dedicated and compassionate people who care about children there will be hope, for as Shakespeare so astutely observed "We know now what we are, but know not what we may be" (Hamlet).

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Appendix A

Administration Procedures

House-Tree-Person-Person Technique

Achromatic Phase: The basic procedure consists in presenting the subject with a medium soft pencil with eraser and a blank sheet of white paper 8 1/2 x 11 inches in size. The first sheet of paper should be placed in front of the subject with the long side horizontal to her/him. The subject is asked "to draw as good a House as you can". The subject is told that s/he may draw any kind s/he chooses, may erase as much as s/he likes, and may take as long as s/he wishes. Upon completion of the House, the drawing is removed and the subject is given a second sheet with longer axis placed vertically to the subject. The child is then asked to "draw as good a Tree as you can". When completed it is removed and a third sheet is placed before the child with the longer axis presented, and the subject is asked to "draw as good a person as you can". The choice of the sex of the person to be drawn is left up to the subject. When completed, the drawing is removed and a fourth sheet of paper is presented in the same manner and the subject is asked to draw a person of the opposite sex to the one just drawn.

Post-Drawing-Interrogation Phase: When the second human figure is completed it is left before the subject and the following questions are asked:

1. How old is that person?
2. What is the best part?

3. What is the worst part?
4. What does that person need the most?
5. Tell me a story about that person.

The drawing is removed and the first drawn figure is presented to the subject.

The above five questions are asked and the responses recorded. It is removed and the Tree drawing is presented and the following questions asked:

1. How old is that tree?
2. What is the best part?
3. What is the worst part?
4. What does that tree need the most?
5. Is it alive or dead?
6. (If dead) What caused it to die?
7. Is it alone or with other trees?

The Tree drawing is removed and the House drawing presented. The following questions are asked and the responses recorded.

1. What is the best part?
2. What is the worst part?
3. What does that house need the most?

Chromatic Phase: After the achromatic set of drawings and the post-drawing interrogation have been completed, the pencil is taken away and a set of Crayola crayons consisting of eight crayons (red, green, yellow, blue, brown, black, purple, and orange) is presented to the subject along with a fresh blank

sheet of paper (positioned in the same way as for the pencil drawings - horizontally for House and vertically for the Tree and Person drawings). The subject is instructed "now, will you please draw a House in crayon" with parallel instructions then following for the Tree and Person drawings at the appropriate time. The subject is deliberately not asked to draw another Houses, another Tree, or another Person because most subjects would interpret "another" to mean they should draw something different than they did with the pencil.

The subject is allowed to use any or all the eight crayons. Any questions s/he asks with regard to procedure are tactfully handled in a non-directive manner so as to maximize self-structuring. Each drawing is removed upon completion except the last figure drawing. The post-drawing interrogation is conducted in the same manner as with the pencil drawings.

The Kinetic Family Drawing

The drawings are obtained from children individually. The child is presented with a plain sheet of white, 8 1/2 x 11 inch paper. A No. 2 pencil is placed in the centre of the paper (positioned horizontally in front of the subject), and the child is asked to "Draw a picture of everyone in your family doing something, including you, all doing something. Try to draw whole people, not cartoons or stick people. Remember, make everyone doing something- some kind of action." No time limit is given.

Appendix B
LETTER TO PARENTS

Dear Parent:

I am asking for your help in obtaining a large sample of drawings from normal children between the ages of six to ten. I am investigating what children's drawings can tell us about the emotional needs of children who have been abused. Therefore, I must first collect a standard set of drawings as a basis for comparison. This standard set of drawings taken from a normal population will then be compared to those of children who have been physically or sexually abused. This research project is being carried out through the psychology department at Carleton University.

PROCEDURE

All parents of age appropriate children enrolled in the McNabb After Four Program will be asked for their child's participation. Should you allow your child to participate, oral consent will be obtained from the child before the drawing begins. If for some reason a child does not wish to participate, or does not want to continue drawing, there will be no pressure to do so. Then s/he will be asked to do one sequence of drawings including a house, a tree and a person. Once these drawings are completed, some questions, which help further describe the drawings, will be asked. One additional drawing will be required, in which each child will depict and identify family members involved in some activity. Total time of participation will be about 45 minutes. Typically, children find this experience enjoyable, so there is no need to be concerned about this being a difficult or arduous task! All drawings will be collected at the McNabb Community Centre between Monday, June 1 and Friday, June 5, 1992.

ANONYMITY

Participation in the study is entirely voluntary, and any information and drawings obtained will be held in the strictest confidence. All participants will remain anonymous; only the birth date, gender and grade of each child will be required (no children's names please). It will be impossible to identify your child's drawings. Access to these drawings will be limited to those individuals directly connected to the project.

PARENT/CHILD INFORMATION

Attached to this letter is a consent form and a request for some information about you and your child. You are not obliged to answer the questions, but it

will be greatly appreciated if you do so, as this information will help us better understand the kind of sample we have collected.

OUTCOME

Once the study has been completed, all participants will be provided with a written description of the results. To protect anonymity, sealed envelopes containing this information will be dropped off at the McNabb Community Centre. Children who participated in the study can then simply pick them up and take them home.

CONSENT

If you agree to your child's participation, please sign the attached consent form, enclose it in the envelope provided and have your child bring it with her/him to the McNabb Community Centre. If you should have any questions or concerns regarding this project, please do not hesitate to contact me at 731-4141 or my supervisor Dr. Tom Ryan, Department of Psychology, Carleton University, 788-2600, extension 4025.

Thank you very much for considering this request,

Sincerely,

Krista I. Bristow

INFORMED CONSENT FORM

I agree to have my child participate in the Children's Drawings study. This will consist of my child providing a series of drawings on an individual basis, and answering questions pertaining to these drawings. Estimated time of my child's participation is approximately 45 minutes. Participation is strictly voluntary, and no stress or deception is involved. I understand that:

1. There will be no payment for participation.
 2. My identity and that of my child will not be disclosed, and the outcome of the study will be described only in general terms.
- The Children's Drawing study has been approved by the Ethics Committee of the Department of Psychology, Carleton University, which adheres to the ethical guidelines set forth by the Canadian Psychological Association.

Signature:

Date:

CHILD INFORMATION

Birth date:

Gender:

Grade:

Has your child been identified as learning disabled by a professional?

Does your child suffer from any malady which might interfere with his/her ability to draw?

PARENT INFORMATION

Level of education completed (highest grade completed and any additional degrees or certificates):

Mother (or any alternate female primary care giver):

Father (or any alternate male primary care giver):

Are you a single parent? yes: No:

Appendix C

DEFINITION OF VARIABLES

Body Anxiety:

anxiety about the body

Nurturing:

strong unmet dependency needs

Emotional Development Problems:

incomplete emotional development

Anxiety:

unpleasurable emotional state associated with psycho-physiological changes in response to a threat which is not real

Trauma:

intense experience which overwhelms the individual's ability to cope

Learning Disabled:

learning difficulties in the presence of normal intelligence

Disturbed:

emotionally disturbed

Self-Consciousness:

heightened sensitivity about the acceptability of the self

Aggression:

emotional consequence of frustration and conflict when it has exceeded limits of tolerance

Hostility:

focused anger

Fantasy:

thinking by means of fabricated mental pictures

Oppressive Environment:

milieu characterized by excessive real and imagined threats to a person's well-being

Immaturity:

failure to achieve the capacity to function at a level commensurate with chronological age

Poor Self-Esteem:

negative self-regard

Impulsiveness:

poor regulation of impulse to act or move

Anger:

hot displeasure

Impotence:

feelings of powerlessness

Fragmentation:

experience of self as un-integrated (discontinuities in thoughts, feelings and actions)

Expansiveness:

failure to establish appropriate boundaries

Appendix D
DEBRIEFING LETTER

Dear Parent/s:

The results from the Children's Drawings Project suggest that children's drawings do reveal useful information about the psychological functioning of maltreated and sexually abused children. We found that the drawings of both the abused groups of children reflected aggression, impulsiveness and difficulties with emotional development. We also found that abused children experience anxiety about their bodies. This is a new finding which may make a valuable contribution in explaining some of the problems experienced by these children which have proved so difficult to understand in the past. As these attributes were not present in the group of control children (your children) we can tentatively conclude that these problems are a product of some aspect of the abusive experience.

We would like to take this opportunity to extend our heartfelt thanks to you for allowing your children to participate in this study and help make it a success. We could not have conducted this study without the co-operation of both you and your children.

Sincerely,

Krista I. Bristow

Department of Psychology

Carleton University

END

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