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MENTAL HEALTH PROFESSIONALS' USE OF DRAWINGS

IN THE ASSESSMENT OF CHILDREN

A DISSERTATION

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in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

By

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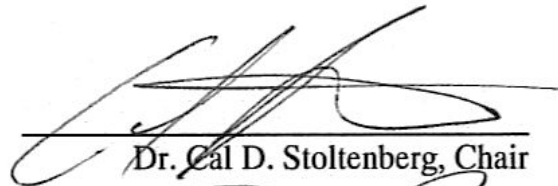
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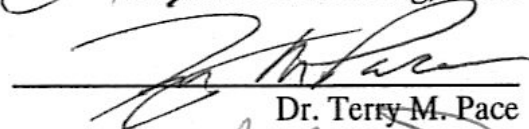
MENTAL HEALTH PROFESSIONALS' USE OF DRAWINGS  
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A DISSERTATION APPROVED FOR THE  
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

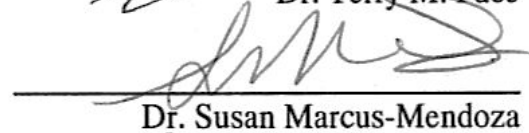
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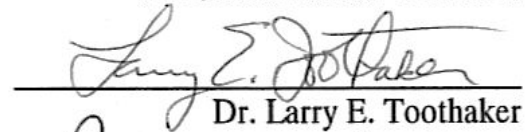
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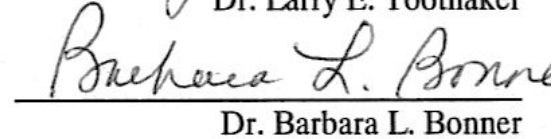
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## Abstract

This study examined the decisions made by mental health professionals when receiving background information and assessment information about a fictitious 8-year-old client. All participants received identical information except for information about a drawing. Group 1 received a drawing with some indicators of emotional problems and possible abuse according to one scoring system (Peterson & Hardin, 1997). Group 2 received a drawing without indicators. Group 3 did not receive a drawing. Analysis focused on decisions regarding symptoms/circumstances the client might be experiencing, possible referrals to be made, and the usefulness of the assessment information received. No significant differences were found regarding ratings made by the participants with the exception of the likelihood of making a referral for a neurological evaluation. Ratings of the likelihood of making a referral for a neurological evaluation were significantly lower for the participants who received a drawing with indicators than for either of the other two groups of participants.

## Introduction

Drawings have had a long history of use in clinical settings. They have also had a long history of controversy. Questions have been raised regarding their psychometric properties and their appropriate role in assessment. This review of the literature will examine a brief history of drawings, some of their uses in the assessment of children, research regarding their frequency of use, and several areas of controversy regarding drawings.

### *Projective Drawing History*

The first use of the term “projective methods” is generally credited to L. K. Frank (Frank, 1939 as cited in Chandler, 1990), however, drawings were being used clinically prior to that time. The use of drawings in assessment initially focused on intelligence with the development of the Draw-A-Man Test (Goodenough, 1926). The use of this test was expanded with the development of a specific scoring system (Harris, 1963). Researchers, though, began to believe early on that other factors in addition to the individual’s intellectual ability were influencing the drawings. Machover (1949) created a description of emotional indicators and developed the Draw-A-Person (DAP). Later, a scoring system was developed for use with emotional indicators by Koppitz (1968). Although a wide variety of projective drawing techniques exist, the three most commonly referred to in the literature are the previously mentioned DAP, the House-Tree-Person (HTP), and the Kinetic Family Drawing (KFD). The HTP (Buck, 1948) was developed to assess aspects of personality, but also provided an IQ score. It was initially used with adults. As the name indicates, the examinee also draws a house and a tree in addition to drawing a



person. With the KFD (Burns & Kaufman, 1970) an examinee is asked to draw a picture of his or her family doing something.

*Uses of projective drawings with children*

Many studies have examined the use of drawing tests (primarily the DAP, HTP, KFD) with different child populations. The majority of these studies can be placed into one of three categories: (a) cognitive/educational assessment, (b) social/emotional, and (c) abuse evaluation. Cognitive/educational studies of drawings include the investigation of their use in the assessment of intelligence (Abell, Horkheimer, & Nguyen, 1998; Abell, Von Briesen, & Watz, 1996; Ables, 1971; Aikman, Belter, & Finch, 1992; Harris, 1963; Kamphaus & Pleiss, 1991; Koppitz, 1968; Ter Laak, De Goede, Aleva, & Van Rijswijk 2005), the assessment of academic achievement (Aikman et al., 1992), and as kindergarten screening measures (Goldman & Velasco, 1980). Studies related to social/emotional aspects of functioning include those focusing on anxiety (Fox & Thomas, 1990; Puura et al., 2005; Saarni & Azara, 1977; Tharinger & Stark, 1990), emotional disturbance/distress (Joiner, Schmidt, & Barnett, 1996; Levenberg, 1975), emotional status (Rae, 1991), mood disorder (Gordon, Lefkowitz, & Tesiny, 1980; Tharinger & Stark, 1990), self-esteem (Prytula & Thompson, 1973), body image (Nathan, 1973), shyness (Lingren, 1971), adjustment (Yama, 1990), and the impact of divorce (Spigelman, Spigelman, & Engleson, 1992). Also within this category are studies focusing on conduct disorder (Feyh & Holmes, 1994), aggression (Handler & McIntosh, 1971; Lingren, 1971; Norford & Barakat, 1990), and suicide risk (Pfeffer & Richman, 1991). Research with a more interpersonal or social focus involves those

examining emotional attitude toward others (Thomas, Chaigne, & Fox, 1989; Thomas & Gray, 1992) and attachment (Madigan, Ladd & Goldberg, 2003; Pianta, Longmaid, & Ferguson, 1999). Studies have also examined the use of drawings with children who have been physically abused (Blain, Bergner, Lewis, & Goldstein, 1981; Hjorth & Harway, 1981; Manning, 1987), maltreated (Lott, 1989), ritually abused (Moore, 1994), and sexually abused (Aldridge et al., 2004; Cantlay, 1996; Chantler, Pelco, & Mertin, 1993; Hackbarth, Murphy, & McQuary, 1991; Hibbard & Hartman, 1990; Riordan & Verdel, 1991; Sadowski & Loesch, 1993; Yates, Beutler, & Crago, 1985).

#### *Frequency of Use*

Several national surveys regarding psychological test usage indicate that drawings have been commonly used in assessment. A 1985 survey of Society for Personality Assessment members found that the DAP was ranked sixth in frequency of use while the HTP was ranked eighth (Piotrowski, Sherry, & Keller, 1985). A survey of members of the American Psychological Association's (APA) Division 17 (Counseling) found that although projective drawings were not ranked among the 10 most frequently used tests when considering all practice settings, the HTP was among the top 5 for hospitals and medical schools (Watkins, Campbell, & McGregor, 1988). However, in a more recent survey, projective drawings were in the top 10 across all work settings (Watkins, Campbell, Nieberding, & Hallmark, 1995). A national survey of psychologists (Lubin, Larsen, & Matarazzo, 1984), conducted as a replication of a 1969 survey, found both the HTP and the DAP ranked among the 10 most frequently used tests. Both projective tests were also among the

10 most commonly used tests in the 1969 survey. When the results of the 1982 survey were analyzed across five psychological settings (psychiatric hospitals, community mental health centers and clinics, counseling centers, state schools for the developmentally disabled and mentally retarded, and Veterans Administration medical centers) the DAP and HTP were among the 15 most commonly used tests for all settings (Lubin, Larsen, Matarazzo, & Seever, 1985). Both of these tests were among the top 10 within psychiatric hospitals and community mental health centers and clinics, while only the DAP was among the top 10 in centers for the developmentally disabled and mentally retarded and in Veterans Administration medical centers. A survey of clinical psychologists and neuropsychologists gathered information about frequently used tests and the time required to use those tests (Camara, Nathan, & Puente, 2000). Among clinical psychologists the HTP ranked eighth while the Human Figures Drawing Test (HFD) was thirteenth. The ranking was much lower for neuropsychologists (31<sup>st</sup> for the HTP and 41<sup>st</sup> for the HFD). A survey of clinic directors of mental health facilities found the HTP and HFD again in the top 10 (Piotrowski & Keller, 1989).

Of the studies mentioned so far, none focused exclusively on the assessment of children nor did they report the percentages of respondents who worked with child populations. In a study involving members of the APA section on Clinical Child Psychology, Tuma and Pratt (1982) found that 60% of their respondents reported using drawings (HTP, DAP, KFD) in assessment. A 1991 survey focused on assessment with adolescent clients (Archer, Maruish, Imhof, & Piotrowski, 1991) and found that the HFD, HTP, and KFD were among the 10 most frequently used

instruments. Studies of test usage by school psychologists have also indicated that projective drawings are commonly used in school settings (Handler, 1996; Kennedy, Faust, Willis, & Piotrowski, 1994). A recent survey of members of APA's Division 53 (Clinical Child Psychology), Division 16 (School Psychology), and Division 54 (Pediatric Psychology) also found the DAP and HTP among the top 10 while the KFD ranked fourteenth (Cashel, 2002).

### *Benefits of Projective Drawings*

Many reasons have been provided regarding the benefits of using projective drawings. Some have suggested that they are especially useful with internalizing disorders that may not provide overt behavioral symptoms to assess, and are used frequently to gain access to material that is deliberately not revealed or is an unconscious aspect of functioning (Handler, 1996; Tharinger & Stark, 1990). Others emphasize the difficulty children have with verbalizing the types of information expected during an evaluation. This may be related to either a lack of verbal ability or a discomfort with the material (Cantlay, 1996; Falk, 1981; Malchiodi, 1998). Others have suggested that although drawings may not be useful in assessment, they may be useful in the development of rapport with children (Joiner et al., 1996).

Knoff (1993) supports the use of drawings to generate clinical hypotheses and expects that other assessment processes will then be used to test those hypotheses. He does not see them as an essential component of every personality assessment but only when the circumstances indicate their usefulness (i.e., when the problem is complex and other more objective assessments have not provided a clear understanding) in diagnosis and treatment planning (Knoff, 1990). This emphasis on

hypothesis generation is shared by other writers. For instance Malchiodi (1998) recommends that drawing characteristics be examined as suggestions for further evaluation if there is a concern about possible abuse or emotional aspects such as depression. Not all researchers would agree that the role of drawings is only to generate hypotheses. Pianta et al. (1999) view drawings as useful in the process of classification.

Handler (1996) lists thirteen advantages of the DAP. Some from that list which are relevant to children but not listed above, are that it is an easy task for both the examiner and examinee and is likely to be one that will elicit the child's cooperation. It can be used with very young children and those of lower intelligence. This fits with the view expressed by Braden (2003) that in school settings drawings are easy to use because they can be group administered and children are asked to do something that is a common experience for them. Another advantage Handler states is that drawings allow the assessment of cognitive and emotional aspects with the same instrument.

Others view the value of HFD's as being their ease of use compared to other types of assessment. Riordan and Verdel (1991) state "Most [art-therapy projective techniques] require clinical training to be properly used as assessment tools. The human figure drawing, however, can easily be used in an informal way for general assessment of blatant indications of sexual abuse in a child's artwork" (p. 117). They emphasize the importance of using several drawings obtained across time. They also mention the importance of knowledge regarding artistic development in children if emotional and cognitive problems are being diagnosed. Discussing the drawing is

also described as being important to discover “the meaning the child gives to different characteristics of the drawing” (p. 120).

Many others have indicated the usefulness of drawings for the assessment of sexual abuse due to the difficulty children have with discussing that topic and due to the lack of other suitable instruments (Sadowski, & Loesch, 1993; Stember, 1980). Although the validity is questionable, a great deal can be found in the literature regarding possible indicators of abuse in figure drawings (Hibbard & Hartman, 1990; Kaufman, & Wohl, 1985; Moore, 1994; Riordan & Verdel, 1991; Sidun & Rosenthal, 1987). In a survey of Massachusetts professionals who conduct child sexual abuse evaluations, 54.8% of those surveyed viewed projective techniques as being useful for that purpose (Oberlander, 1995).

#### *Research Regarding Reliability and Validity*

Studies assessing the validity of drawings for the variety of uses already mentioned have achieved mixed results. One study examined children’s drawings in regard to markers of incest while also investigating the types of judgments made by naive versus sophisticated raters (Cohen & Phelps, 1985). Three sets of drawings for each child (HTP, drawing of family engaged in an activity, and a free drawing) were rated “for the presence or absence of several clinically-derived features hypothesized to be more frequent in the drawings of sexually abused children” (p. 269). Although the differences between the incest and clinic groups were statistically significant, they were not regarded as clinically significant. Reliabilities among raters were low and training in art therapy did not have an impact on reliability. Joiner et al. (1996) selected three previously identified indicators of emotional distress: size, detail, and

line heaviness. There was adequate interrater reliability for their selected indicators, however, they did not correspond with the standardized instruments chosen so no evidence of validity was found.

According to the results of a study comparing the human figure drawings of aggressive and nonaggressive preschool children (Norford & Barakat, 1990), the ability of clinical judges to correctly classify the drawings was no better than chance. The drawings did not allow for a differentiation between groups, even when scored with the Koppitz Emotional Indicator Checklist-Revised. Other studies have also failed to find differences between contrasted groups. For example, Feyh and Holmes (1994) found no significant differences between the drawings of conduct disordered and non-conduct disordered children. In a study using Koppitz's emotional indicators, judges were unable to successfully distinguish between the drawings of disturbed and normal children (Fuller, Preuss, & Hawkins, 1970).

When comparing the human figure drawings of abused and non-abused children, the use of the Koppitz Emotional Indicators alone misclassified a high proportion of children in both categories (Chantler et al., 1993). Even when flag items were combined with a behavior checklist, 34.2% of the sexually abused children and 8.1% of the clinic children were misidentified. This would indicate that caution should be exercised when attempts are made to classify individual children even though significant group differences exist. Another study used the HTP to discriminate between physically abused, nonabused but disturbed, and well-adjusted children (Blain et al., 1981). Of the 15 items used, better discrimination power was found for a 6-item test. When 3 or more of these 6 items are present, "it is almost

twice as likely that the child who has achieved this score has been abused physically as that he or she is emotionally disturbed but not abused, and 18 times more likely than that he or she is well-adjusted” (p. 672). However, the authors do not indicate how many children in their study would have been misclassified using this procedure. Although they state that these items may serve as indicators of abuse, they also mention the importance of considering this a hypothesis and urge the use of additional information. A study by Lott (1989) found that emotional indicators were present in the drawings of maltreated children significantly more often than the drawings of non-maltreated children. Another study using the Favorite Kind of Day Drawing found significant differences in regard to indicators of aggression between drawings of physically abused children and control groups (Manning, 1987).

One study examined the usefulness of the KFD as an evaluation tool to identify sexually abused children (Hackbarth et al., 1991). The Like to Live in Family (LILIF) rating procedure was used to score the KFDs on a scale from 0 to 4 with higher scores reflecting more positive family relationships and environments. Among the results noted was a significant difference between the LILIF scores for sexually abused children and the scores for the unidentified group (the comparison group of children who seemed to have normal adjustment). The authors state “... that the KFD could significantly discriminate between sexually abused children and unidentified children” and give as an implication of their findings that “the KFD shows enough promise as an evaluation tool in the area of sexual abuse that elementary counselors may want to consider this instrument for inclusion in their repertoire of assessment skills” (p. 259-260). It is difficult to see, however, from the



range of scores presented in the results how useful LILIF scores on the KFD would be in actual practice. The range of scores for the sexually abused children was 0 to 3.20 while the range for the unidentified children was .20 to 3.40. Although the LILIF score for an individual child might provide information about family relationships and environment, it does not appear to clearly indicate whether the child has been sexually abused or not.

Pianta et al. (1999) conducted a study with 200 kindergarten children in which family drawings were scored and classified according to attachment status. They found a correspondence between drawing classification and measures of social-emotional and behavior functioning. In their discussion, they suggest that practitioners may find the scoring system they used (Kaplain & Main, 1986 as cited in Pianta et al., 1999) to be more useful than the hypothesis-generating approach that is commonly used with drawings.

#### *Problems with projective drawings*

In light of the lack of research support for the validity of projective drawings, a number of problems have been identified with their use. Lingren (1971) noted that even in studies where statistical significance is found between contrasted groups, practical significance may be lacking that would prevent the indicators from being useful for clinical practice. Klopfer and Taulbee (1976), in their review of projective techniques, raise concerns about the use of projective drawings in the assessment of stable personality characteristics. Some studies have found differences in results related to the experimental manipulation of variables such as stress (Sturner,

Rothbaum, Visintainer, & Wolfer, 1980). Others have found differences in drawings based on physical characteristics of the examiner (Yagoda & Wolfson, 1964).

Knoff (1990) provides an analysis of 104 studies using projective drawing techniques. Based on that analysis it appears that conclusive statements about the validity of hypotheses related to specific indicators cannot yet be made. Due to numerous problems with the research studies he evaluated, he states

...that much of the projective drawing research cannot be used for differential diagnosis, or even for validation of specific clinical characteristics within a referred individual or an identified group. This reinforces the use of projective drawings as hypothesis-generating tools, rather than as hypothesis-validating tools. (p. 100)

Two additional concerns mentioned by Knoff are that support for incremental validity is also lacking and that many times the issues studied are too trivial (Knoff, 1993).

In spite of these types of conclusions, numerous articles have been written that provide lists of indicators in projective drawings along with their interpretation. For example, Miller, Veltkamp, and Janson (1987) provide a list of possible interpretations that can be made from the drawings of children, but fail to provide any research evidence for the accuracy of those interpretations. A few of the indicators mentioned in the literature, along with their interpretive hypotheses, are summarized in Table 1.

Developmental aspects of children's drawings are frequently overlooked in research regarding interpretation (Hagood, 1992). One problem cited by Hagood

(1992) is that most studies focus on only one drawing for each child when drawings can vary a great deal across time. It is also possible that cultural changes may make projective instruments developed many years ago inappropriate for use now. For example, is the material represented currently in drawings made by normal children different from the material represented in drawings made by normal children in the 1960s? One study examining that question (Groves & Fried, 1991) found that there was a great deal of correspondence on human figure drawings (HFDs) between a more recent sample and that used by Koppitz. However, this study examined the developmental items from Koppitz and did not incorporate emotional indicators. Hagood (1992) describes other problems in the assessment of children's drawings: the effects of immediate prior events are often ignored; changes in artwork across time are assumed to be due to the effects of therapeutic treatment when a reasonable alternative explanation may be that the changes are due to developmental maturation; the projection into the drawing that becomes the focal point may actually be the clinician's rather than the child's; and psychoanalytic interpretations that may be appropriate for adults are also applied to the drawings of children.

The influence of artistic ability has been an ongoing concern regarding the accurate interpretation of drawings (Cressen, 1975; Klopfer & Taulbee, 1976; Whytmyre, 1953). Some believe that research frequently blurs the distinction between problems in drawings that are due to pathology and those that are due to artistic quality (Handler & Clemence, 2003). One recommendation has been to use a control figure. Handler suggests using a drawing of an automobile (Handler 1996; Handler & Clemence, 2003) and comparing the quality of that with the drawing of

the person. If the drawing of the person is of poorer quality than the drawing of the automobile, then those qualities are more likely to be associated with characteristics that can be interpreted rather than being associated with artistic skill.

*The Resulting Controversy or “Why are projective drawings still used?”*

In responding to the problems mentioned and the research findings, researchers have reached very different conclusions. Handler and Habenicht (1994) in a review of the literature involving the Kinetic Family Drawing Technique are critical of the typical research methodology that involves the focus on one drawing characteristic with one fixed interpretation. According to these reviewers, “What is needed is a group of studies in which many variables are analyzed simultaneously, in concert with each other, in an approach that matches the approach taken by a talented clinical interpreter” (p. 457). Handler (1996) makes a similar statement in regard to research involving the three major drawing techniques but also adds:

Although DAP, HTP, and KFD research has not been as encouraging as the research-oriented psychologist would like, there are enough positive studies to encourage a researcher to seek more innovative ways of demonstrating the utility of drawings in the process of understanding people in their complexity. (p. 287)

Knoff (1990) expresses concern that research on reliability may overemphasize consistency in structural details at the expense of consistency of hypotheses. For example, in a test-retest situation, a specific structural detail that indicates anxiety may be present in the first drawing but not the second. In this case, the reliability of that indicator across time would not be supported. However, if a

different detail that indicates anxiety is present in the second drawing, then consistency of hypotheses (in this case anxiety) would be supported. Other criticisms of the research include the perspective that the standards for projective testing are overly harsh and that if the same standard were applied to other methods of testing, they too would be considered substandard (Hilsenroth, 2004). He also feels that the research reviews have not constituted an unbiased examination. In addition, reducing a drawing to a few signs loses what can be conveyed when examining a drawing in its entirety, even though it does allow for better reliability since it is more concrete (Waehler, 1997). However, this eliminates the context that might influence how the details are interpreted in actual clinical practice.

Users of projective drawings maintain that experienced clinicians are able to make better use of drawings than are inexperienced users (Motta, Little, & Tobin, 1993a) but empirical evidence to support this is lacking. The view that with a trained clinician, insights can be obtained that would be difficult to obtain otherwise is expressed by Leichtman (2004) when he states that he supports their use due to the “richness and uniqueness of the material they produce, ... and the fact that in skilled hands the tests can provide remarkable insights into personality and psychopathology...all investigatory methods involve tradeoffs” (p. 310). For example, he adds that checklists may correspond well with diagnoses made by clinicians but checklists are usually asking the same questions—projective tests provide something different.

In a response to Motta et al. (1993a), Gresham (1993) provides these explanations for the continued use of HFDs despite their poor research support: “(a)

illusory correlation, (b) false belief in incremental validity, and (c) impossibility of disconfirmation” (p. 182). He also states that the use of HFDs may persist due to the process of partial reinforcement--a match between drawing interpretations and behavior will sometimes be found merely by chance. Kamphaus and Pleiss (1993), in their response to the review by Motta et al. (1993a), add that since evidence of reliability has been found for some scoring systems, many users may assume that this means that the validity of the measure has also been demonstrated. In their response to reviewers, Motta, Little, and Tobin (1993b) add the possibility of confirmatory bias as a reason for the continued use of HFDs.

Some researchers make a distinction between a sign and a global approach. A sign approach isolates single characteristics for interpretation. A global approach integrates multiple characteristics through a scoring system (Garb, 2003). For example, in a study by Tharinger and Stark (1990), they compared the use of individual signs vs “a qualitative, integrative, and holistic approach” (p. 366). They achieved better results with the qualitative approach as it distinguished between some of the groups, whereas the individual sign approach did not distinguish any of the groups. Global approaches in scoring may be useful for the screening of emotional problems in children (Garb, Lilienfeld, & Wood, 2004) but sign approaches appear to have little validity. Garb (2003) believes that clinicians continue to use a sign approach to interpretation in spite of the fact that research support is lacking due to illusory correlations, even though there is better research support for a global approach. In his words, “clinicians can have a difficult time learning from experience” (p. 34).

Chapman and Chapman (1967) designed six studies to investigate what they call illusory correlations. They consider illusory correlation to be a systematic error that occurs when an observer reports a correlation when in fact the two events “(a) are not correlated, or (b) are correlated to a lesser extent than reported, or (c) are correlated in the opposite direction than that which is reported” (p. 194). They consider this type of error to be a possible explanation for the agreement among clinicians regarding the clinical correlates of projective drawing performance (for example, that people who are paranoid draw figures with elaborate eyes) in spite of the research that has failed to substantiate those clinical observations. From their six experiments, they found that even naive subjects tend to find the same correlations between drawing characteristics and symptom statements that are typically reported by practicing clinicians. In addition, these illusory correlations match what the subjects expected to find prior to ever examining any drawings.

#### *Recommended Practice*

Even those who are not completely supportive of the use of projective techniques have described some guidelines that would make their use more appropriate in clinical practice. Klopfer and Taulbee (1976) suggest that drawings become useful only when they are discussed with the examinee and when they are combined with other information. Falk (1981), in an analysis of the literature, emphasizes that human figure drawings such as the DAP are most useful when used as only one part of the diagnostic process. This recommendation is commonly found in the literature, along with an emphasis on using additional information from other sources as part of any decision-making process (Blain et al., 1981; Falk, 1981;

Hagood, 1992; Moore, 1994; Rae, 1991; Sadowski & Loesch, 1993; Sidun & Rosenthal, 1987). Handler (1996) also emphasizes that information from projective drawings should be incorporated with other assessment information. He addresses the issue of multiple interpretations of a single sign by stressing that clinicians consider the numerous possible meanings instead of thinking about a specific sign as always having one specific meaning.

In their review of the literature regarding the KFD technique, Handler and Habenicht (1994) report that reliabilities can vary widely on different components of the drawing such as omission of body parts and size of figures. As a consequence, some variables should be interpreted with caution when only one of a child's drawings is examined. According to Mangold (1982), antecedent testing conditions can have an impact on the scoring system used for the KFD. Handler and Habenicht (1994) also caution against focusing on single drawing characteristics alone. "The use of these so-called KFD signs of pathology or disturbance in a piecemeal manner, either in research or clinical application, flies in the face of good scientific inquiry and good clinical practice" (p. 455). They recommend a more holistic, integrative approach in both research and clinical practice. Cantlay (1996) wrote a handbook designed for nonprofessionals to assist in the identification of children who should be referred to a mental health professional. Although Cantlay provides a list of indicators in drawings that have consistent interpretations, she recommends looking for patterns that exist in multiple drawings collected across time.

It is important to keep in mind that some drawing characteristics will differ due to age and gender; therefore, it is important to not interpret something as



pathological when it is merely reflective of the child's age (Handler & Habenicht, 1994). Use of children's drawings in assessment necessitates an understanding of normal stages in development (Knoff, 1993; Malchiodi, 1991), otherwise, factors that are the result of the developmental differences that exist among children of different ages, may be mistaken for signs of psychological problems (Norford & Barakat, 1990). In their review of the literature regarding the KFD, Handler and Habenicht (1994) also found evidence of cultural differences. Concerns about cultural influences in the interpretation of drawings has existed for many years (Koppitz, 1968) and is specifically mentioned as an area of concern by some current researchers as well. Handler (1996) states that "cultural factors affect drawing style and quality in some dramatic ways" (p. 222). Unfortunately, research regarding specific cultural influences on drawings is uncommon. In one of the few studies to examine cultural differences (Matto & Naglieri, 2005), total scores on the Draw A Person: Screening Procedure for Emotional Disturbance (DAP:SPED) were found to be similar across groups of children (ages 6 to 17) of different racial backgrounds: Black, White, and Hispanic.

Other reviewers indicate that enough studies have been conducted and that the evidence does not support the use of drawings in assessment. Kamphaus and Pleiss (1991) examined the validity coefficients from numerous studies that have compared the scores from different drawing techniques with scores from intelligence measures such as the Stanford-Binet and the Wechsler Scales. They conclude that the validity evidence is too weak to support their use, even as screening measures of intelligence. Another review (Motta et al., 1993a) concluded that figure drawings

should not be used for either personality or intellectual assessment. Their response to the frequently made recommendation that figure drawings should not be used alone but only in conjunction with other information is, “If figure drawings are weak psychometrically, they can add little or nothing to findings derived from stronger measures. One does not use a less valid measure to support a more valid one” (p. 163). Martin (1983) takes the issue a bit further and states that the use of figure drawings in the social-emotional assessment of children is unethical. Part of his explanation for that stance is that multiple interpretations can be possible for any one drawing characteristic and then the use of that information “can reinforce a stereotype or bias held by the clinician, or be the basis for the formation of a strongly held hypothesis; then, without the clinician’s awareness this data will cause a search for supportive data” (p. 6). This concern has also been expressed by Malchiodi (1998).

But others disagree. Holtzman (1993) cites correlations between the Harris-Goodenough Developmental Score and several WISC subtests which range from .22 to .35. Holtzman then states “While clearly not sufficiently high to justify use of the HFD by itself as a measure of intellectual performance, there is no reason why it could not be used in conjunction with other measures of intellectual development, as is strongly recommended by most investigators who have conducted research on the HFD” (p. 190).

#### *Statement of the problem*

When considering the controversy that exists surrounding the use of figure drawings in assessment, along with the knowledge that they are used quite

frequently, the question arises as to how figure drawings are actually used by clinicians in the assessment process. What type of impact, if any, does the inclusion of a figure drawing in an assessment battery have on the interpretations made by clinicians? If a projective drawing is not part of the assessment information, will clinicians request one? This study examines that issue by presenting clinicians with fictitious information from an assessment battery for a child, but which varies with regard to the figure drawing. A drawing that might bring out concerns about sexual abuse was chosen for this study. It was chosen because one of the problems with the assessment of sexual abuse is the difficulty many children have in verbalizing information about the abuse (and it would not be unusual for a child to not mention the abuse during an initial intake session), and drawing techniques have been specifically recommended by some as a way to overcome this problem in the assessment process (Hackbarth et al., 1991; Riordan & Verdel, 1991; Sadowski & Loesch, 1993; Sidun & Rosenthal, 1987). Also, although the validity is questionable, a great deal can be found in the literature regarding possible indicators of abuse in figure drawings (Hibbard & Hartman, 1990; Kaufman & Wohl, 1985; Moore, 1994; Riordan & Verdel, 1991; Sidun & Rosenthal, 1987).

### *Research Questions*

Three groups of participants in this study received background information and assessment data about a fictitious 8-year-old client. The only difference in the information received was in regard to a drawing. One group received a drawing which could be identified as having indicators of abuse and emotional problems,

another group received a drawing without those types of indicators, and the final group did not receive a drawing.

1. Do the participants in the groups make different decisions about the client's symptoms/circumstances?
2. Do the participants in the groups make different decisions about potential referrals for the client?
3. Do the participants in the groups make different decisions about the usefulness of the provided information?
4. Do the participants who do not receive a picture, request one?

## Methods

### *Participants*

Surveys were sent to 510 randomly selected members of Section 1 (Clinical Child Psychology) and Section 5 (Society of Pediatric Psychology) within Division 12 (Clinical Psychology) of the American Psychological Association. The mailing yielded 132 (25.8%) returned surveys with usable responses. The participants ranged in age from 22 to 85 ( $M = 39.6$ ). Years of work experience ranged from less than one year to 38 years ( $M = 8.7$ ). The percentage of clinical practice involving children ranged from 0 to 100 % ( $M = 78\%$ ). In regard to the participants' work settings, 47% worked in hospitals, 36% worked in private practice, 39% worked at universities, while 20% worked in other types of settings. Additional demographic characteristics of the participants are summarized in Table 2.

### *Materials*

A packet of information about a fictitious 8-year-old female client (Susan) was sent to each participant (Appendices C–F). The packet included background information, a reason for referral (oppositional behavior and moodiness), and assessment information. Scores were provided for the following instruments: Wechsler Intelligence Scale for Children–Third Edition (WISC-III), Revised Children's Manifest Anxiety Scale (RCMAS), Children's Depression Inventory (CDI), and the Child Behavior Checklist (CBCL) parent version. Some packets also include a drawing of a person. The background information and test scores were fictitious. Also in the packet was a 2-page questionnaire (Appendices G and H). In addition to asking for demographic information about the participants the survey

form had three other parts. Part one asked about symptoms or circumstances that Susan is likely to be experiencing, part two asked about the types of referrals that would be most likely, and part three asked for a rating of the usefulness of each of the assessment instruments.

### *Procedure*

The participants were randomly assigned to one of three groups and the packet of information was slightly different for each group. Although the background information and the scores on assessment instruments were the same, two groups received a drawing and one did not. The drawings were selected from a group of drawings that had been obtained during a research study conducted by the Center on Child Abuse and Neglect at the University of Oklahoma Health Sciences Center. One drawing was selected that had some characteristics identified in the literature as being associated with sexual abuse. The drawing (by a 9-year-old female) also has some indicators for associated symptoms (such as anxiety). The indicators are: overemphasis or elongation of the neck, omission of hand/fingers, teeth, concealment of genitalia, and hearts. One scoring system (Peterson & Hardin, 1997) would give this drawing a 6.5-7.5. Scores at 6 and above are in the category suspicious/refer. The second drawing (by an 8-year-old female) was selected because it did not have any obvious sexual abuse indicators. Group 1 received information about Susan that included a drawing with sexual abuse indicators, Group 2 received information about Susan that included a drawing without sexual abuse indicators, and Group 3 received information about Susan without a drawing.

## Results

The first research question for this study involved whether or not the participants in the groups made different decisions about the client's symptoms/circumstances. Table 3 provides the means and standard deviations for all participants for each of these 19 items. It is interesting to note that the number of participants who declined to give a rating varied a great deal for the different items. Nine of the items had fewer than ten participants who declined to give a response while three items (bedwetting, physical abuse, and sexual abuse) had over 70 participants who declined to give a response.

To avoid having 19 separate analyses, the symptoms/circumstances were grouped into clusters. A logical approach was used to determine these clusters by focusing on commonalities among the individual items. Each cluster score was determined by computing the mean of the individual symptom/circumstance scores within that cluster. These clusters are presented in Table 4 along with the means and standard deviations for each group.

This process reduced the 19 symptoms to six clusters. One symptom, psychotic thinking, was dropped from the analysis for two reasons. It did not clearly fit logically into a symptom cluster and it was the symptom that participants were least likely to identify as a possible problem for this client ( $M = 1.35$ ). A one-way analysis of variance (ANOVA) was conducted for each cluster to evaluate the relationship between the assessment information provided and the decisions made about the client. The results of these analyses are reported in Table 5. There was not a significant group difference for any of the cluster scores, indicating that the

decisions made by the participants were not influenced by the differences in the assessment information provided.

The second research question involved whether or not the participants in the groups made different decisions about possible referrals for the client. Table 6 provides the means and standard deviations for all participants regarding the likelihood of making a referral using a 1-6 scale. On 7 of the items, out of the list of 10 possible referrals, fewer than 10 participants declined to give a response. Three of the referral items had a much larger number of participants who did not give a response: marital counseling (35), child protective services (CPS) investigation for physical abuse (35), and CPS investigation for sexual abuse (38).

A one-way ANOVA was conducted for each referral. Alpha was set at .005 for each of these 10 analyses to control for Type I error. As indicated in Table 7, only the referral for a neurological evaluation was significant,  $F(2, 122) = 5.99, p = .003$ . Due to the unequal Ns, the Games-Howell procedure was selected for post-hoc comparisons. Since Type I error was already controlled by using .005 for alpha in the initial analysis, .05 was used for the post-hoc analysis. The results of this post-hoc analysis are in Table 8. There were significant differences between the means for the group receiving a drawing with indicators and both of the other groups. This indicates that the group receiving a drawing with indicators was significantly less likely to make a referral for a neurological evaluation than either of the other groups.

The third research question addressed whether or not the participants in the groups would make different decisions about the usefulness of the assessment instruments utilized to evaluate the client. Table 9 provides the means and standard



deviations for the four assessment instruments that were included in the information sent to all participants. A one-way ANOVA was conducted for each of the four assessment instruments. As indicated in Table 10, there was not a significant difference for any of the instruments. To see if there was a difference in ratings of usefulness of the drawing for the two groups receiving that as part of the assessment battery, an independent samples *t*-test was conducted. There was not a significant difference between the groups,  $t(85) = .714, p = .48$ .

The final research question was whether or not the participants who did not receive a projective drawing would request one. Of the 45 participants in this group, 13.3% requested a drawing. Another 15.6% requested a projective, without specifying the type.

## Discussion

Drawings have been used since the 1920's to answer many different assessment questions. Studies of test usage with different groups of mental health professionals across many years have consistently found drawings to be among the top ten most frequently used assessment tools (Archer et al., 1991; Camara et al., 2000; Cashel, 2002; Handler, 1996; Kennedy et al., 1994; Lubin et al., 1984; Lubin et al., 1985; Piotrowski et al., 1985; Watkins et al., 1988; Watkins et al., 1995). These findings are especially interesting since the research regarding the validity of projective drawings in assessment has been mixed and concerns about their value as an assessment tool exist. A number of researchers have reached the conclusion that there is inadequate research support for their validity and state that their use in assessment is not supported (Kamphaus & Pleiss, 1991; Knoff, 1990; Motta et al., 1993). Other writers have also attempted to explain this puzzling finding—the popularity of an assessment tool that has so little research support (Garb, 2003; Gresham, 1993). The present study has focused more on how drawings are used. More specifically—do they influence the decisions that are made about a client? The three groups of participants received background and assessment information that was identical with one exception—a drawing. Group 1 received a drawing with abuse indicators, Group 2 received a drawing without indicators, and Group 3 did not receive a drawing.

The first research question involved the decisions participants made about 19 symptoms/circumstances that the client might be experiencing. Would the differences in the assessment information influence those decisions? The items were

grouped into six clusters for analysis. In this case the drawings did not influence the decisions made about the client in regard to any of the cluster scores. It was also noted that participants were especially reluctant to rate the likelihood that the client was experiencing the following three items: bedwetting, physical abuse, and sexual abuse.

The second research question involved whether or not the participants would make different decisions about possible referrals for the client. Again, participants were especially reluctant to make ratings on particular items. In this case, they were less likely to give a rating regarding the likelihood of a referral for three items: marital counseling, CPS investigation for physical abuse, and CPS investigation for physical abuse. With only one exception, the presence of a drawing in the assessment battery did not influence any of the decisions made in regard to the client. Participants receiving a drawing with indicators were significantly less likely than either of the other two groups to make a referral for a neurological evaluation. Perhaps there were qualities in the picture that those participants received that suggested neurological functioning was normal and helped them rule out possible problems in that area. Being less likely to make this type of referral may not be a meaningful difference, however, since the other two groups were also unlikely to make a referral for a neurological evaluation.

The third research question involved the participants' views of the usefulness of the four assessment instruments utilized in the evaluation of the client. The groups did not differ in their evaluations of these instruments. The two groups who received a drawing were also asked about the usefulness of the drawing, but they did not differ

in their ratings. Related to views about the usefulness of the assessment instruments, the fourth research question asked if those not receiving a drawing would request one. All participants were asked if any additional assessment instruments should be used and 13.3% of those in Group 3 requested a drawing while another 15.6% requested a projective test without specifying the type. This question was an open-response question without a list of tests from which to choose. Since it was mentioned by a number of participants, it indicates that they noticed the absence of that particular type of assessment tool and desired to have access to that information.

Several limitations of this study exist. First, the percentage of surveys returned was low (25.8%). Approximately 3 out of 4 of those receiving the survey chose not to participate. This presents a problem in that there may be differences between those who were willing to participate and those who were not. Second, not all participants had the same level of training. In fact, some were students and had not yet completed their graduate training. It is unknown whether those participants had yet had adequate coverage of assessment practices and interpretation in their graduate courses. With additional training and experience, these participants might have responded differently to the assessment information provided. Third, even for those with the same level of training, it is unknown whether they had previous experience with this type of evaluation or not. Although participants were asked about their years of experience in working with children, it was a general question that did not focus on the specific types of assessment experiences with children. Fourth, many participants were reluctant to make ratings regarding some of the variables of interest. Perhaps a future study could change the information provided in

the scenario in a way that would encourage a response on those items. In order to limit the amount of time investment for participants, the background information was kept relatively brief and the number of assessment instruments to interpret was very limited. Although more detailed information might have prompted participants to provide a rating, it might also discourage participation altogether if the task appears too time consuming.

The overall conclusion from this study is that a drawing (or lack of one) in the assessment battery had very little impact on the decisions made about the client. Much of the previous research has focused on the validity of conclusions reached when using a drawing and the frequency of their use. The implications of the frequent use of drawings, in spite of the inadequate research support for their validity, will vary depending on how much or how little they influence the conclusions in an assessment report. Perhaps some clinicians see projective drawings as a type of tool that should be included in an assessment battery so that it has the appropriate breadth and covers multiple domains, yet do not really depend on it for their interpretations. If this study does represent a common approach to the use of drawings, that they should be included even though little attention is paid to their interpretation, then perhaps much of the controversy regarding the use of drawings in assessment is unnecessary. Concerns expressed in the literature about the use of drawings may be overstated if it turns out that they do not heavily influence the decisions that clinicians make. Perhaps the inclusion of a drawing is somehow seen as something one is supposed to do, that its absence would be questioned if another professional were to view the assessment report. A related possibility is that the

drawing is frequently included in the evaluation just in case something dramatic emerges that isn't evident in other assessment tools. If the typical outcome is that nothing dramatic does emerge, then the drawing has no other relevance and does not impact the outcome of the evaluation. Is it appropriate to add a component to an assessment battery that really won't influence a clinician's judgment? The use of a drawing for this purpose would not be totally without consequence when one considers that there is a time and possibly monetary investment involved for the client. Since drawings typically take a brief amount of time to complete (especially compared to the amount of time involved for other types of assessment tools) perhaps this is not a tremendous concern.

An additional possibility is that although drawings are used frequently, perhaps some clinicians do not intend to use them for diagnostic purposes. As mentioned previously, some have suggested that drawings can be useful in the development of rapport with children (Joiner et al., 1996), and that may be the reason for their use in the assessment batteries of some clinicians. A related possibility is that some use drawings as a part of the clinical interview process. In this case, the presence or absence of specific features within the drawing are not analyzed, but the purpose of using the drawing is to allow an opportunity to engage children in a discussion about themselves and their families. Since many of the concerns regarding the psychometric properties of drawings have focused on their use diagnostically, then the implications of their frequent use is much different if clinicians do not use them for that purpose.

Given the possibilities expressed about why a drawing is included in an assessment battery but does not influence the decisions made, this does provide some direction for future research. Additional studies could be conducted that focus on evaluations conducted for different purposes. It is possible that although in the situation presented in this study, the drawings had no influence, that in evaluations conducted for other specific purposes, the outcome might be different. The referral question could be included as a variable in future research. Also, research conducted for the purpose of assessing the frequency of use for different assessment instruments might include questions that address more specifically how those clinicians are using those instruments and what made them decide to include a particular instrument in an assessment battery. This type of question would provide useful information about the intent of clinicians when a drawing is included in order to learn whether they are most frequently being used to develop rapport, to assist in the clinical interview, to generate hypotheses, or to make diagnoses. Related to this issue regarding how clinicians actually use different assessment instruments would be a possible follow-up to this study. The participants in this study who were in the two groups that received a drawing could be asked how they used the data provided. For example, when they made decisions about symptoms/circumstances and possible referrals, what information did they use? They could also be asked specific questions about each instrument that address not merely how useful the instrument was (as the current study did), but how they used the information provided by that assessment instrument.

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## Appendix A

### Tables

Table 1

Indicators and Possible Interpretations

Signs	Meaning	Citation
“excessive shading, small figures, rigidity in the drawing process, over-worked or heavily drawn lines”	anxiety (also “chronic heightened anxiety is common in children and adults with traumatic histories (Eth & Pynoos, 1985; Udwin, 1993;as cited in Moore, 1994)	Hammer, 1980; Burgess & Hartman, 1993; as cited in Moore, 1994
“graphic representation of genitals on a figure”	history of sexual abuse	Hibbard & Hartman, 1990 as cited in Moore, 1994
“long and unshaded hair”	“may indicate sexual ambivalence, which is common to many children but often a major theme in a child who has been sexually abused”	Buck 1977, cited in Riordan & Verdel, 1991
“overemphasis or elongation of the neck”	“may indicate that the child is having difficulty in maintaining control over bodily drives”	Kaufman & Wohl, 1985, cited in Riordan & Verdel, 1991

Table 1 (continued)

Indicators and Possible Interpretations

Signs	Meaning	Citation
“appearance of a heavily shaded belt around the trunk”	a. “may represent a conflict between the expression and the control of sexuality” b. which is “accentuated in children who have been sexually abused”	a. Buck, 1977; b. Sgroi, 1982 cited in Riordan & Verdel, 1991
“huge circular mouths”	“often drawn when oral sex is involved”	Briggs & Lehmann, 1989, p. 133 cited in Sadowski & Loesch, 1993
hair emphasis	sexual preoccupation	Ogdon 1981 cited in Sadowski & Loesch, 1993
“shading of the genitalia or oral areas of the drawing”	sexual abuse	Sadowski & Loesch, 1993
“‘unnecessary’ markings, such as cuts or scars on trees”	“psychic trauma”	Hammer, 1988 cited in Sadowski & Loesch, 1993

Table 2

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Participant Demographic Information (*n*)

---

Gender

Male	Female
38	94

Division 12

Clinical Child	Pediatric Psychology
69	60

Degree

PhD	PsyD	Doctoral Student	Masters
104	3	20	5



Table 3

## Means and Standard Deviations for Symptoms/Circumstances

	<i>N</i>	<i>M</i>	<i>SD</i>
Self-Esteem Problems	118	4.48	0.77
Academic Difficulties	124	5.06	0.98
Anxiety	131	5.33	0.72
Depression	130	5.06	0.76
Hyperactivity/Impulsivity	125	3.35	1.28
Inappropriate Sexual Behavior	86	1.83	0.88
Withdrawal	126	4.60	1.07
Aggression	120	3.61	1.18
Somatic Complaints	132	5.33	0.76
Psychotic Thinking	122	1.35	0.59
Sleep Difficulties	89	3.88	1.12
Family Difficulties	130	5.52	0.64
Peer Problems	93	3.99	0.83
Concentration Difficulties	129	4.88	0.80
Noncompliant Behavior	130	5.38	0.71
Bedwetting	57	2.23	0.98
Physical Abuse	56	2.38	0.91
Sexual Abuse	58	2.90	1.17
Delinquent Behavior	113	2.50	1.07

Table 4

## Means and Standard Deviations for Cluster Scores

	<i>N</i>	<i>M</i>	<i>SD</i>
Internalizing (Self-esteem Problems, Anxiety, Depression, Withdrawal)			
Drawing–Indicators	44	4.92	.56
Drawing–No Indicators	43	4.92	.52
No Drawing	45	4.82	.53
Total	132	4.88	.52
Cognitive (Academic Difficulties, Concentration Difficulties)			
Drawing–Indicators	43	4.98	.74
Drawing–No Indicators	42	4.95	.62
No Drawing	45	4.98	.71
Total	130	4.97	.69
Physical (Somatic Complaints, Sleep Difficulties, Bedwetting)			
Drawing–Indicators	44	4.57	.95
Drawing–No Indicators	43	4.52	1.13
No Drawing	45	4.47	1.01
Total	132	4.52	1.02

Table 4 (continued)

## Means and Standard Deviations for Cluster Scores

	<i>n</i>	<i>M</i>	<i>SD</i>
Externalizing (Hyperactivity/Impulsivity, Inappropriate Sexual Behavior, Aggression, Noncompliant Behavior, Delinquent Behavior)			
Drawing–Indicators	44	3.53	.69
Drawing–No Indicators	43	3.51	.95
No Drawing	45	3.59	.69
Total	132	3.54	.78
Relationship (Family Difficulties, Peer Problems)			
Drawing–Indicators	42	5.04	.58
Drawing–No Indicators	43	5.06	.66
No Drawing	45	4.86	.73
Total	130	4.98	.66
Abuse (Physical Abuse, Sexual Abuse)			
Drawing–Indicators	25	2.64	.95
Drawing–No Indicators	17	3.12	1.18
No Drawing	19	2.42	.69
Total	61	2.70	.98

Table 5

## Analysis of Variance for Cluster Scores

	<i>df</i>	<i>F</i>	<i>p</i>
Internalizing	2,129	0.47	.629
Cognitive	2,127	0.02	.982
Physical	2,129	0.11	.897
Externalizing	2,129	0.11	.898
Relationship	2,127	1.26	.288
Abuse	2,58	2.50	.091

Table 6

## Means and Standard Deviations for Referrals

	<i>N</i>	<i>M</i>	<i>SD</i>
Counseling–Child			
Drawing–Indicators	43	5.42	0.96
Drawing–No Indicators	43	5.40	0.70
No Drawing	44	5.36	0.72
Total	130	5.39	0.79
Counseling–Family			
Drawing–Indicators	44	5.75	0.58
Drawing–No Indicators	43	5.77	0.48
No Drawing	44	5.61	0.54
Total	131	5.71	0.53
Marital Counseling			
Drawing–Indicators	35	3.03	1.22
Drawing–No Indicators	33	3.42	1.06
No Drawing	29	3.41	1.30
Total	97	3.28	1.20
Child Inpatient Treatment			
Drawing–Indicators	44	1.45	0.70
Drawing–No Indicators	43	1.40	0.54
No Drawing	43	1.40	0.62
Total	130	1.42	0.62

Table 6 (continued)

## Means and Standard Deviations for Referrals

	<i>N</i>	<i>M</i>	<i>SD</i>
CPS Investigation–Physical Abuse			
Drawing–Indicators	29	1.62	0.86
Drawing–No Indicators	35	1.77	1.00
No Drawing	33	1.58	0.66
Total	97	1.66	0.85
CPS Investigation–Sexual Abuse			
Drawing–Indicators	28	1.96	1.14
Drawing–No Indicators	35	2.11	1.26
No Drawing	31	1.68	1.05
Total	94	1.93	1.16
Neurological Evaluation			
Drawing–Indicators	39	1.67	0.81
Drawing–No Indicators	42	2.48	1.19
No Drawing	44	2.32	1.25
Total	125	2.17	1.16
Medical Evaluation			
Drawing–Indicators	41	3.05	1.52
Drawing–No Indicators	40	3.40	1.75
No Drawing	44	3.02	1.36
Total	125	3.15	1.54

Table 6 (continued)

## Means and Standard Deviations for Referrals

	<i>N</i>	<i>M</i>	<i>SD</i>
Educational Evaluation			
Drawing–Indicators	42	3.81	1.47
Drawing–No Indicators	42	4.55	1.33
No Drawing	45	4.42	1.34
Total	129	4.26	1.41
Additional Psychological Testing			
Drawing–Indicators	42	3.79	1.73
Drawing–No Indicators	41	4.29	1.45
No Drawing	44	4.23	1.58
Total	127	4.10	1.60

Table 7

## Analysis of Variance for Referrals

	<i>df</i>	<i>F</i>	<i>p</i>
Counseling–Child	2,127	0.05	0.949
Counseling–Family	2,128	1.09	0.338
Marital Counseling	2,94	1.20	0.306
Child Inpatient Treatment	2,127	0.13	0.877
CPS Investigation–Physical Abuse	2,94	0.49	0.617
CPS Investigation–Sexual Abuse	2,91	1.20	0.306
Neurological Evaluation	2,122	5.99	0.003*
Medical Evaluation	2,122	0.76	0.469
Educational Evaluation	2,126	3.46	0.034
Additional Psychological Testing	2,124	1.26	0.289

\* significant  $p < .005$



Table 8

## Neurological Evaluation–Post Hoc Comparisons (Games-Howell)

Group	<i>M</i>		Mean Difference	<i>p</i>
Drawing–Indicators	1.67	Drawing–No Indicators	-0.81	0.002*
		No Drawing	-0.65	0.016*
Drawing–No Indicators	2.48	Drawing–Indicators	0.81	0.002*
		No Drawing	0.16	0.821
No Drawing	2.32	Drawing–Indicators	0.65	0.016*
		Drawing–No Indicators	-0.16	0.821

\* significant  $p < .05$

Table 9

## Means and Standard Deviations for Usefulness of Assessment Instruments

	<i>N</i>	<i>M</i>	<i>SD</i>
WISC-III			
Drawing–Indicators	44	4.77	1.10
Drawing–No Indicators	43	4.65	1.09
No Drawing	45	4.69	1.26
Total	132	4.70	1.14
RCMAS			
Drawing–Indicators	44	5.18	0.76
Drawing–No Indicators	43	4.81	1.18
No Drawing	45	4.87	1.06
Total	132	4.95	1.02
CDI			
Drawing–Indicators	44	4.80	1.21
Drawing–No Indicators	43	4.74	1.33
No Drawing	45	4.91	1.02
Total	132	4.82	1.18
CBCL			
Drawing–Indicators	44	5.00	1.24
Drawing–No Indicators	43	5.07	0.77
No Drawing	45	5.00	0.93
Total	132	5.02	0.99

Table 10

Analysis of Variance for Usefulness of Assessment Instruments

	<i>df</i>	<i>F</i>	<i>p</i>
WISC-III	2,129	0.13	0.880
RCMAS	2,129	1.69	0.188
CDI	2,129	0.23	0.796
CBCL	2,129	0.07	0.932

Appendix B  
Participant Information



*The University of Oklahoma*

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

June 11, 1999

Dear Colleague:

I am collecting data for my dissertation regarding the decisions made by psychologists in the interpretation of assessment information and would appreciate very much your participation in this project. Enclosed is a survey which is being sent to psychologists throughout the United States. It should take about 10-15 minutes of your time to complete. The results from your survey will be identified by demographic group only, not by individual.

Please return the completed survey, along with the signed informed consent form, in the enclosed postage-paid envelope by June 30, 1999. As soon as each envelope is received, the signed consent form will be separated from the survey, and filed in a separate location. I would be happy to supply the results of this study at your request. To receive a copy of the results, simply write your address underneath your signature on the informed consent form that you return.

Sincerely,

Karen Longest, M.A.  
Doctoral Student

Cal D. Stoffenberg, Ph.D.  
Faculty Advisor

**University of Oklahoma--Norman Campus**

**INFORMED CONSENT FORM**

Title of Project: Psychologists' Use of Assessment Information in the Evaluation of Children

Investigator: Karen Longest, M.A., Doctoral Student

This is to certify that I, \_\_\_\_\_  
hereby agree to participate as a volunteer in a scientific study as part of an authorized research program of the University of Oklahoma under the supervision of Cal Stoltenberg, Ph.D., Faculty Advisor (405) 325-5974.

The purpose of the research is to gain a better understanding of the decisions made by psychologists as they analyze assessment information. The procedures to be followed involve reading some background information about a hypothetical client, reviewing some assessment information, and then responding to some questions about that information.

I understand that I am free to refuse to participate or to refuse to answer any questions at any time. I understand that I am free to withdraw my consent and to withdraw from the research at any time without prejudice to me. I understand that no risks are foreseen from participation in this research. I also understand that the benefits of participation include the opportunity to add to current knowledge about interpretations made by psychologists based on assessment information.

I understand that by agreeing to participate in the research and signing this form I do not waive any of my legal rights.

I understand that when this signed informed consent form and survey are received by the researcher, they will immediately be separated and stored in separate files. I also understand that the research investigator named above will answer any of my questions related to the research procedures at any time. Additional questions regarding my rights as a research participant can be directed to the Office of Research Administration (405) 325-4757.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Signature

PLEASE KEEP THIS COPY FOR YOUR RECORDS.

**University of Oklahoma--Norman Campus**

**INFORMED CONSENT FORM**

Title of Project: Psychologists' Use of Assessment Information in the Evaluation of Children

Investigator: Karen Longest, M.A., Doctoral Student

This is to certify that I, \_\_\_\_\_  
hereby agree to participate as a volunteer in a scientific study as part of an authorized research program of the University of Oklahoma under the supervision of Cal Stoltenberg, Ph.D., Faculty Advisor (405) 325-5974.

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KEEP THIS COPY FOR YOUR RECORDS. SIGN AND RETURN THE OTHER FORM.

\_\_\_\_\_

Date

\_\_\_\_\_

Participant Signature

## Appendix C

### Client Information—Groups 1 and 2



Please read the background and assessment information provided. Then, answer the Survey Questions.

### **CLIENT INFORMATION**

Susan Williams is an 8 year-old Caucasian female referred for services by her mother due to parental concerns about her oppositional behavior and moodiness. Mrs. Williams reported that Susan has always been a child that was somewhat challenging to discipline, but that as long as she was firm, Susan would comply. However, in the past year it has gotten to the point where it seems that nothing works well to get her to obey. According to Mrs. Williams, she and her husband have tried a variety of discipline strategies but none have seemed to result in an improvement in Susan's behavior. Even simple requests seem to result in arguments and tantrums. She also reports that Susan seems ready to be angry over anything and often bursts into tears and stomps out of the room over seemingly minor things (such as being out of the kind of snack food she was wanting). Other problem behaviors reported are that Susan seems constantly bored and restless as if she can't sit down and enjoy an activity for very long. Suggestions from her parents about things she could do for fun only seem to make her more irritated. Mrs. Williams also reports being very frustrated by Susan's frequent complaints of feeling bad (that her head, throat, or stomach hurts) and believes at this point that Susan is just wanting attention or trying to get out of doing something she should be doing. After several trips to the doctor with apparently nothing being wrong, her parents have told her that unless she has an observable symptom (fever, vomiting, etc.) that she is not to even mention feeling bad. An additional concern for Mrs. Williams is that Susan is also having some problems academically. Her school performance in the past, although not outstanding, has always been satisfactory. Now her grades are barely passing and getting her to focus on doing her homework is very difficult.

Susan lives in the home with her 25 year-old mother, 34 year-old step-father, and 14-year-old step-brother, John. Mr. and Mrs. Williams have been married for 6 years. John came to live with them about 18 months ago after his mother remarried. He and his step-father did not get along and it was decided that it would be better for him to live with his father. According to Mrs. Williams, although they have had no problems with his behavior, John seems to have had a difficult time adjusting and reports missing his mother and his friends at his former school. Changes that have occurred for the family include an increase in work hours for Mr. Williams. He works at a restaurant as an assistant manager and has begun to work more due to the increase in living expenses now that John lives with them. In addition, Mrs. Williams reports that her mother's health has been deteriorating and that she spends a lot of her time after work at her mother's home doing cooking, house cleaning, and running errands for her. She reports that this has been a stressful time for them as they do not want her mother to live with them, yet the demands of two households has been overwhelming. She reports feeling exhausted and feels that she has less patience with Susan than she used to.

Susan was neatly dressed and came willingly but quietly into the examiner's office. She initially made little eye contact and her verbal responses were minimal. She was aware of

the reason for the appointment but suggested that a solution would be for her parents to leave her alone and not tell her what to do. Although initially reluctant, she was eventually able to describe a few of her favorite activities and school subjects. When asked if any recent incidents had occurred that were bothering her, she replied "I don't like it that we argue all the time." Although Susan did not display a great deal of enthusiasm for the activities during the evaluation, she did seem to put forth effort. Her responses were thoughtful and she appeared to make a legitimate attempt, even on items that were difficult for her. She readily complied with all requests, but did ask several times how much longer it would take before she would be finished.

The following assessment information was obtained:

1. Wechsler Intelligence Scale for Children--Third Edition

IQ Scores:		Index Scores:	
Full Scale	107	Verbal Comprehension	111
Verbal	108	Perceptual Organization	107
Performance	104	Freedom from Distractibility	93
		Processing Speed	96

Subtest Scaled Scores:

Information	12	Picture Completion	11
Similarities	12	Coding	9
Arithmetic	9	Picture Arrangement	10
Vocabulary	13	Block Design	11
Comprehension	11	Object Assembly	12
Digit Span	8	Symbol Search	9

2. Revised Children's Manifest Anxiety Scale (RCMAS)

Total Anxiety T-score	69
Percentile	97th

3. Children's Depression Inventory (CDI)

Total	17
-------	----

4. Child Behavior Checklist (CBCL) (parent version)

Total	67*	Social Problems	52
Internal	71*	Thought Problems	58
External	67*	Attention Problems	67
Withdrawn	73*	Delinquent Behavior	57
Somatic Complaints	68	Aggressive Behavior	68
Anxious/Depressed	70	Sex Problems	50

Competence Scales

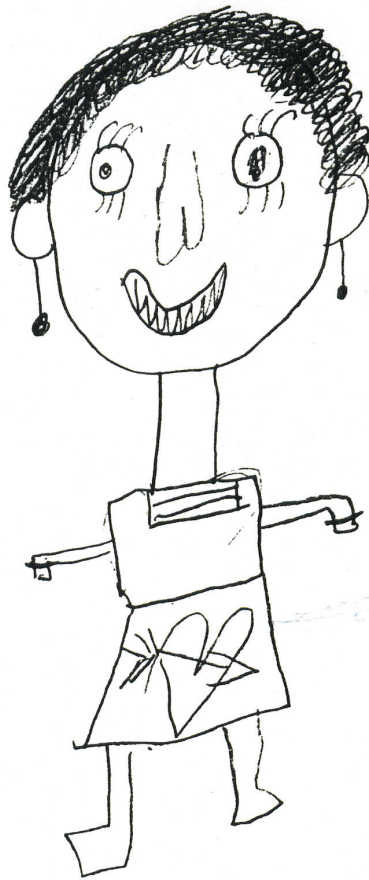
Activities	42	Social	37
School	30		

\*=Clinical Range

5. Draw-A-Person (DAP) (see attached picture)

Appendix D

Drawing-Group 1



Appendix E  
Drawing-Group 2



Appendix F  
Client Information–Group 3

Please read the background and assessment information provided. Then, answer the Survey Questions.

### **CLIENT INFORMATION**

Susan Williams is an 8 year-old Caucasian female referred for services by her mother due to parental concerns about her oppositional behavior and moodiness. Mrs. Williams reported that Susan has always been a child that was somewhat challenging to discipline, but that as long as she was firm, Susan would comply. However, in the past year it has gotten to the point where it seems that nothing works well to get her to obey. According to Mrs. Williams, she and her husband have tried a variety of discipline strategies but none have seemed to result in an improvement in Susan's behavior. Even simple requests seem to result in arguments and tantrums. She also reports that Susan seems ready to be angry over anything and often bursts into tears and stomps out of the room over seemingly minor things (such as being out of the kind of snack food she was wanting). Other problem behaviors reported are that Susan seems constantly bored and restless as if she can't sit down and enjoy an activity for very long. Suggestions from her parents about things she could do for fun only seem to make her more irritated. Mrs. Williams also reports being very frustrated by Susan's frequent complaints of feeling bad (that her head, throat, or stomach hurts) and believes at this point that Susan is just wanting attention or trying to get out of doing something she should be doing. After several trips to the doctor with apparently nothing being wrong, her parents have told her that unless she has an observable symptom (fever, vomiting, etc.) that she is not to even mention feeling bad. An additional concern for Mrs. Williams is that Susan is also having some problems academically. Her school performance in the past, although not outstanding, has always been satisfactory. Now her grades are barely passing and getting her to focus on doing her homework is very difficult.

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Verbal	108	Perceptual Organization	107
Performance	104	Freedom from Distractibility	93
		Processing Speed	96

Subtest Scaled Scores:

Information	12	Picture Completion	11
Similarities	12	Coding	9
Arithmetic	9	Picture Arrangement	10
Vocabulary	13	Block Design	11
Comprehension	11	Object Assembly	12
Digit Span	8	Symbol Search	9

2. Revised Children's Manifest Anxiety Scale (RCMAS)

Total Anxiety T-score	69
Percentile	97th

3. Children's Depression Inventory (CDI)

Total	17
-------	----

4. Child Behavior Checklist (CBCL) (parent version)

Total	67*	Social Problems	52
Internal	71*	Thought Problems	58
External	67*	Attention Problems	67
Withdrawn	73*	Delinquent Behavior	57
Somatic Complaints	68	Aggressive Behavior	68
Anxious/Depressed	70	Sex Problems	50
Competence Scales			
Activities	42	Social	37
School	30		

\*=Clinical Range

## Appendix G

Survey Form—Groups 1 and 2

## SURVEY QUESTIONS

**Part 1** Based on the client information provided, indicate the likelihood that Susan is experiencing the following symptoms and/or circumstances.

	Highly Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Highly Likely	Can't determine with available information
1. Self-esteem problems	1	2	3	4	5	6	_____
2. Academic difficulties	1	2	3	4	5	6	_____
3. Anxiety	1	2	3	4	5	6	_____
4. Depression	1	2	3	4	5	6	_____
5. Hyperactivity/impulsivity	1	2	3	4	5	6	_____
6. Inappropriate sexual behavior	1	2	3	4	5	6	_____
7. Withdrawal	1	2	3	4	5	6	_____
8. Aggression	1	2	3	4	5	6	_____
9. Somatic complaints	1	2	3	4	5	6	_____
10. Psychotic thinking	1	2	3	4	5	6	_____
11. Sleep difficulties	1	2	3	4	5	6	_____
12. Family difficulties	1	2	3	4	5	6	_____
13. Peer problems	1	2	3	4	5	6	_____
14. Concentration difficulties	1	2	3	4	5	6	_____
15. Noncompliant behavior	1	2	3	4	5	6	_____
16. Bedwetting	1	2	3	4	5	6	_____
17. Physical abuse	1	2	3	4	5	6	_____
18. Sexual abuse	1	2	3	4	5	6	_____
19. Delinquent behavior	1	2	3	4	5	6	_____

**Part 2** Based on the client information provided, rate the likelihood of each of the following referrals.

	Highly Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Highly Likely	Can't determine with available information
1. Counseling services for child	1	2	3	4	5	6	_____
2. Counseling services for family	1	2	3	4	5	6	_____
3. Marital counseling	1	2	3	4	5	6	_____
4. Inpatient treatment for child	1	2	3	4	5	6	_____
5. Child Protective Services investigation for physical abuse	1	2	3	4	5	6	_____
6. Child Protective Services investigation for sexual abuse	1	2	3	4	5	6	_____
7. Neurological evaluation	1	2	3	4	5	6	_____
8. Medical evaluation	1	2	3	4	5	6	_____
9. Educational evaluation	1	2	3	4	5	6	_____
10. Additional psychological testing	1	2	3	4	5	6	_____

If further psychological testing is indicated, please specify the additional assessment instruments needed. \_\_\_\_\_

**Part 3** Rate each of the assessment instruments in regard to their usefulness in this situation.

	Not Useful	1	2	3	4	5	Extremely Useful
Wechsler Intelligence Scale for Children, 3rd Ed.	1	2	3	4	5	6	
Revised Children's Manifest Anxiety Scale	1	2	3	4	5	6	
Children's Depression Inventory	1	2	3	4	5	6	
Child Behavior Checklist	1	2	3	4	5	6	
Draw-A-Person	1	2	3	4	5	6	

**Part 4** Please provide the following information about yourself:

Age \_\_\_\_\_ Gender \_\_\_\_\_ Racial/Ethnic Group \_\_\_\_\_

Type of degree (PhD, PsyD, etc.) \_\_\_\_\_ Years of experience post degree \_\_\_\_\_

What percentage of your practice involves work with children? \_\_\_\_\_%

In what types of settings do you work?

a. hospital b. private practice c. clinic d. university e. other \_\_\_\_\_

**Thank you for participating in this survey. Please return this form and the signed informed consent form in the enclosed stamped, self-addressed envelope by June 30<sup>th</sup>.**

Appendix H  
Survey Form–Group 3

## SURVEY QUESTIONS

**Part 1** Based on the client information provided, indicate the likelihood that Susan is experiencing the following symptoms and/or circumstances.

	Highly Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Highly Likely	Can't determine with available information
1. Self-esteem problems	1	2	3	4	5	6	_____
2. Academic difficulties	1	2	3	4	5	6	_____
3. Anxiety	1	2	3	4	5	6	_____
4. Depression	1	2	3	4	5	6	_____
5. Hyperactivity/impulsivity	1	2	3	4	5	6	_____
6. Inappropriate sexual behavior	1	2	3	4	5	6	_____
7. Withdrawal	1	2	3	4	5	6	_____
8. Aggression	1	2	3	4	5	6	_____
9. Somatic complaints	1	2	3	4	5	6	_____
10. Psychotic thinking	1	2	3	4	5	6	_____
11. Sleep difficulties	1	2	3	4	5	6	_____
12. Family difficulties	1	2	3	4	5	6	_____
13. Peer problems	1	2	3	4	5	6	_____
14. Concentration difficulties	1	2	3	4	5	6	_____
15. Noncompliant behavior	1	2	3	4	5	6	_____
16. Bedwetting	1	2	3	4	5	6	_____
17. Physical abuse	1	2	3	4	5	6	_____
18. Sexual abuse	1	2	3	4	5	6	_____
19. Delinquent behavior	1	2	3	4	5	6	_____

**Part 2** Based on the client information provided, rate the likelihood of each of the following referrals.

	Highly Unlikely	Unlikely	Somewhat Unlikely	Somewhat Likely	Likely	Highly Likely	Can't determine with available information
1. Counseling services for child	1	2	3	4	5	6	_____
2. Counseling services for family	1	2	3	4	5	6	_____
3. Marital counseling	1	2	3	4	5	6	_____
4. Inpatient treatment for child	1	2	3	4	5	6	_____
5. Child Protective Services investigation for physical abuse	1	2	3	4	5	6	_____
6. Child Protective Services investigation for sexual abuse	1	2	3	4	5	6	_____
7. Neurological evaluation	1	2	3	4	5	6	_____
8. Medical evaluation	1	2	3	4	5	6	_____
9. Educational evaluation	1	2	3	4	5	6	_____
10. Additional psychological testing	1	2	3	4	5	6	_____

If further psychological testing is indicated, please specify the additional assessment instruments needed. \_\_\_\_\_

**Part 3** Rate each of the assessment instruments in regard to their usefulness in this situation.

	Not Useful					Extremely Useful
Wechsler Intelligence Scale for Children, 3rd Ed.	1	2	3	4	5	6
Revised Children's Manifest Anxiety Scale	1	2	3	4	5	6
Children's Depression Inventory	1	2	3	4	5	6
Child Behavior Checklist	1	2	3	4	5	6

**Part 4** Please provide the following information about yourself:

Age \_\_\_\_\_ Gender \_\_\_\_\_ Racial/Ethnic Group \_\_\_\_\_

Type of degree (PhD, PsyD, etc.) \_\_\_\_\_ Years of experience post degree \_\_\_\_\_

What percentage of your practice involves work with children? \_\_\_\_\_%

In what types of settings do you work?

a. hospital b. private practice c. clinic d. university e. other \_\_\_\_\_

**Thank you for participating in this survey. Please return this form and the signed informed consent form in the enclosed stamped, self-addressed envelope by June 30<sup>th</sup>.**

Appendix I

Prospectus



Psychologists' Use of Drawings

in the Assessment of Children

A Dissertation Prospectus

Karen Longest

Department of Educational Psychology

University of Oklahoma

## Psychologists' Use of Drawings in the Assessment of Children

Several national surveys regarding psychological test usage indicate that drawings are commonly used in assessment. A survey of Society for Personality Assessment members (Piotrowski, Sherry, & Keller, 1985) found that the Draw-A-Person (DAP) was ranked sixth in frequency of use while the House-Tree-Person (HTP) was ranked eighth. A survey of members of the American Psychological Association's (APA) Division 17 (Counseling) found that although projective drawings were not ranked among the 10 most frequently used tests when considering all practice settings, the HTP was among the top 5 for hospitals and medical schools (Watkins, Campbell, & McGregor, 1988). A national survey of psychologists (Lubin, Larsen, & Matarazzo, 1984), conducted as a replication of a 1969 survey, found both the HTP and the DAP ranked among the 10 most frequently used tests. Both projective tests were among the 10 most commonly used tests in the 1969 survey also. When the results of the 1982 survey were analyzed across five psychological settings (psychiatric hospitals, community mental health centers and clinics, counseling centers, state schools for the developmentally disabled and mentally retarded, and Veterans Administration medical centers) the DAP and HTP were among the 15 most commonly used tests for all settings (Lubin, Larsen, Matarazzo, & Seever, 1985). Both of these tests were among the top 10 within psychiatric hospitals and community mental health centers and clinics, while only the DAP was among the top 10 in centers for the developmentally disabled and mentally retarded and in Veterans Administration medical centers.

Of the studies mentioned so far, none focused exclusively on the assessment of children nor did they report the percentages of respondents that worked with child populations. One recent survey, however, did focus on assessment with adolescent clients (Archer, Maruish, Imhof, & Piotrowski, 1991) and found that Human Figure Drawings (HFD), HTP, and Kinetic Family Drawing (KFD) were among the 10 most frequently used instruments. Studies of test usage by school psychologists have also indicated that projective drawings are commonly used in school settings (Handler, 1996).

Many studies have examined the use of drawing tests with different child populations. The majority of these studies can be placed into one of three categories: (a) cognitive/educational assessment, (b) personality assessment, and (c) abuse evaluation. Cognitive/educational studies of drawings include the investigation of their use in the assessment of intelligence (Abell, Von Briesen, & Watz, 1996; Aikman, Belter, & Finch, 1992; Harris, 1963; Kamphaus & Pleiss, 1991; Koppitz, 1968), the assessment of academic achievement (Aikman et al., 1992), and as kindergarten screening measures (Goldman & Velasco, 1980). Studies related to personality assessment include those focusing on anxiety (Fox & Thomas, 1990; Tharinger & Stark, 1990), conduct disorder (Feyh & Holmes, 1994), emotional disturbance (Levenberg, 1975) aggression (Norford & Barakat, 1990), suicide risk (Pfeffer & Richman, 1991), emotional status (Rae, 1991), mood disorder (Tharinger & Stark, 1990), emotional attitude toward others (Thomas, Chaigne, & Fox, 1989; Thomas & Gray, 1992) and adjustment (Yama, 1990). Studies have also examined the use of drawings with children who have been physically abused (Blain, Bergner,

Lewis, & Goldstein, 1981; Hjorth & Harway, 1981; Manning, 1987), maltreated (Lott, 1989) ritually abused (Moore, 1994), and sexually abused (Chantler, Pelco, & Mertin, 1993; Hackbarth, Murphy, & McQuary, 1991; Hibbard & Hartman, 1990; Riordan & Verdel, 1991; Sadowski & Loesch, 1993; Yates, Beutler, & Crago, 1985).

Studies assessing the validity of drawings for the variety of uses already mentioned have achieved mixed results. In responding to these findings, researchers have reached very different conclusions. Handler and Habenicht (1994) in a review of the literature involving the Kinetic Family Drawing Technique, are critical of the typical research methodology which involves the focus on one drawing characteristic with one fixed interpretation. According to these reviewers, “What is needed is a group of studies in which many variables are analyzed simultaneously, in concert with each other, in an approach that matches the approach taken by a talented clinical interpreter” (p. 457). Handler (1996) makes a similar statement in regard to research involving the three major drawing techniques but also adds

Although DAP, H-T-P, and K-F-D research has not been as encouraging as the research-oriented psychologist would like, there are enough positive studies to encourage a researcher to seek more innovative ways of demonstrating the utility of drawings in the process of understanding people in their complexity.  
(p. 287)

Knoff (1990) states “Projective drawings cannot be evaluated on the basis of the present research; only after a great number of experimentally sound studies have been completed can these assessment tools and techniques be fairly critiqued” (p. 100) but then goes on to provide guidelines for the use of drawings in the assessment process.

He states that “projective drawings probably are best used to *generate hypotheses* about the referral situation rather than *to validate those hypotheses*” (p. 101).

This recommendation is commonly found in the literature, along with an emphasis on using additional information from other sources as part of any decision-making process (Blain, Bergner, Lewis, & Goldstein, 1981; Falk, 1981; Hagood, 1992; Sadowski & Loesch, 1993; Moore, 1994; Rae, 1991; Sidun & Rosenthal, 1987).

Other reviewers indicate that enough studies have been conducted and that the evidence does not support the use of drawings in assessment. Kamphaus & Pleiss (1991) examined the validity coefficients from numerous studies which have compared the scores from different drawing techniques with scores from intelligence measures such as the Stanford-Binet and the Wechsler Scales. They conclude that the validity evidence is too weak to support their use, even as screening measures of intelligence. Another review (Motta, Little, & Tobin, 1993) concluded that figure drawings should not be used for either personality or intellectual assessment. Their response to the frequently made recommendation that figure drawings should not be used alone but only in conjunction with other information is “If figure drawings are weak psychometrically, they can add little or nothing to findings derived from stronger measures. One does not use a less valid measure to support a more valid one” (p. 163). Martin (1983) takes the issue a bit further and states that the use of figure drawings in the social-emotional assessment of children is unethical. Part of his explanation for that stance is that multiple interpretations can be possible for any one drawing characteristic and then the use of that information “can reinforce a stereotype or bias held by the clinician, or be the basis for the formation of a strongly held

hypothesis; then, without the clinician's awareness this data will cause a search for supportive data" (p. 6).

When considering the controversy that exists surrounding the use of figure drawings in assessment, along with the knowledge that they are used quite frequently, the question arises as to how figure drawings are actually used by clinicians in the assessment process. What type of impact, if any, does the inclusion of a figure drawing in an assessment battery have on the interpretations made by clinicians? The proposed study would examine that issue by presenting clinicians with information from an assessment battery that had been conducted on a child but varied with regard to the figure drawing. To provide a situation more comparable to the actual assessment process, an appropriate referral question must be provided to those examining the assessment information. As indicated previously, figure drawings have been used to provide information about many different aspects of psychological functioning. The specific area chosen for the referral question in this study involves concerns about the sexual abuse of a child. This area was selected because one of the problems with the assessment of sexual abuse is the difficulty many children have in verbalizing information about the abuse, and drawing techniques have been specifically recommended by some as a way to overcome this problem in the assessment process (Hackbarth, Murphy, & McQuary, 1991; Riordan & Verdel, 1991; Sadowski & Loesch, 1993; Sidun & Rosenthal, 1987). Also, although the validity is questionable, a great deal can be found in the literature regarding possible indicators of abuse in figure drawings (Hibbard & Hartman, 1990 ; Kaufman, B., & Wohl, 1985; Moore, 1994; Riordan & Verdel, 1991; Sidun & Rosenthal, 1987).

## Method

### Participants

Participants will be psychologists randomly selected from the membership list of a professional organization which focuses on clinical work with children.

### Materials

Participants will be mailed a survey which contains two sections. The first section will be used to obtain demographic information. Information will be requested regarding age, type of degree, years of experience, percentage of clinical work involved in the assessment of children, and work setting. The second section will provide information from an assessment conducted on a child, followed by questions about the interpretations made based on the information provided. (Note to committee members. A copy of the survey is attached but specific details about the age of the child, scores on the assessment instruments, and the picture have not been included. I am still going through assessment files and examining drawings to find one that is appropriate for use in this study.)

### Procedure

Participants will be randomly assigned to three groups. The first group will receive the assessment information which includes a drawing that displays some indicators of sexual abuse as described in the research literature. The second group will receive the assessment information which includes a drawing that does not display indicators of sexual abuse typically described in the literature. The third group will receive assessment information that does not include a picture.

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