IDENTIFICATION OF DISSOCIATIVE EXPERIENCES IN CHILDREN AND ADOLESCENTS

DISSERTATION

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

For the Degree of

DOCTOR OF PHILOSOPHY

By

Heather L. Queener, M.A.
Denton, Texas
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It is well known that adults who experience life threatening or catastrophic events can develop post traumatic stress disorders (PTSD). It has more recently been noted that children who have experienced trauma may also develop PTSD or may exhibit some symptoms consistent with that diagnosis. The symptom clusters identified in PTSD include reexperiencing phenomena, avoidant/dissociative behaviors, and autonomic hyperarousal. The cluster identified as avoidant/dissociative behaviors has particularly been correlated with a history of trauma. However, children who show such symptoms are often identified by other diagnostic labels. Because children use dissociation as a defense more commonly than adults, dissociation as an indicator of psychopathology may be confounded by its developmental normality. This study attempts to quantify the dissociative experiences reported by children and adolescents, and to determine whether the variance in degree of dissociation in children has useful diagnostic and treatment implications.

Students referred for psychological evaluation in a suburban school district were administered a modified version of the Dissociative Experiences Scale (DES), a self-report measure of dissociative experiences. Scores on this scale were compared with observed classroom behaviors, psychological diagnoses, and a variety of available demographic information. Data analysis utilized correlations and analyses of variance to identify factors which covaried with degree of dissociation. Results showed that age and gender correlated most with amount of dissociation, and diagnosis showed trends in the expected direction. Teacher observations of behavior did not correlate with DES scores to any significant degree. The utility of the modified DES with this population is equivocal, based on the results of this study. Modest sample size, selection bias in subject recruiting, and diagnostic biases may all have played a part in limiting the significance of the results. However, trends were in the expected directions, suggesting that the theoretical bases for using the DES may apply. Further research with larger samples and a control group may help clarify these findings.

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CHAPTER I

INTRODUCTION

Children referred for psychological evaluation in the school setting are often described by their teachers as exhibiting traits which the teacher may assume represents an attention deficit disorder: they are "spacey", don't pay attention, seem withdrawn, have limited concentration, are distractible, are difficult to get to know, demonstrate poor responses to limit setting, and so on. It is not uncommon for a subsequent psychological evaluation to find no particular evidence of an attention deficit disorder, but rather to identify factors suggestive of depression and/or anxiety which are impacting the child's performance at school. Oftentimes the similarity of the presenting symptoms of these disparate diagnostic categories is perplexing. When investigating the history of these children, it is also not uncommon to find that the child has a history of familial instability, with multiple moves, multiple father figures, or a documented or suspected history of physical, sexual, or emotional abuse. These children may also have been neglected, or have faced self-care challenges outside the normal ranges expected for their

age. In the current view of psychological development, these experiences are now seen as representing some form of trauma.

Trauma

Trauma has been defined as "an emotional shock that creates substantial, lasting damage to an individual's psychological development" and as "overwhelming, uncontrollable experiences that psychologically impact victims by creating in them feelings of helplessness, vulnerability, loss of safety, and loss of control" (James, 1989, p. 1). James noted that a trauma may be a single event or a series of interactions which are traumatic, and may be physical or psychological. She emphasized that the impact of traumatic events must be evaluated, not in isolation, but within the context of the individual's constitution and external supports. Zatzick et al. (1994), among others, have noted that there is marked individual variability in dissociative responses to trauma; some individuals are more reactive to less stress due to innate characteristics. It has become increasingly common to identify a number of long term or repeated stressors such as physical or sexual abuse as traumatic experiences for children. Long term deprivation, survival of an environmental catastrophe, or witnessing a disasterous occurance also may be traumatic. Even painful medical procedures may qualify as traumas. It has also become more

accepted to acknowledge the negative impact of strictly emotional events on children, whether or not actual physical danger was experienced (Widiger, 1994, DSM-IV workshop). Of primary importance is the intrusive nature of the event. In her studies of traumatized children, Terr (1981) quoted Freud's 1920 definition of psychic trauma as, "an extensive breach being made in the protective shield against stimuli."

Recently, it has been recognized that the traumas experienced by children sometimes lead to the development of post traumatic stress disorder. Whether it is the result of one horrifying event or a series, the trauma experienced by a child can have varying impact on adjustment and functioning. As with adults, "the child victim may exhibit severe psychiatric symptoms or may superficially appear symptom free" (James, 1989, p. 1). Recent investigations have identified post traumatic stress disorder in children who have been exposed to natural disasters, human-made catastrophes, and intrafamilial abuse of all kinds (e.g., Fredrick, 1985; James, 1989; Terr, 1981).

Post Traumatic Stress Disorder

Classified under DSM nomenclature as an anxiety disorder, Post Traumatic Stress Disorder (PTSD) is arguably the most severe of these disorders. The nature of the trauma considered necessary to precipitate PTSD is described as:

> an extreme traumatic stressor involving direct personal experience of an event that involves actual or

> threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate. (DSM-IV, p. 424)

It has been suggested that the disorder is relatively more severe when the stressor is "of human design" such as torture or rape. The specific criteria for a diagnosis of post traumatic stress disorder require that the individual meet six criteria: 1) The individual must be exposed to a traumatic event (as described above) and the person's response to that event or stressor involved "intense fear, helplessness, or horror; in children this may be expressed by disorganized or agitated behavior" (APA, p. 428). 2) The event must be persistently reexperienced in one or more ways, including intrusive distressing recollections or dreams of the event (children may demonstrate repetitive play with themes related to the trauma or have nonspecific frightening dreams), acting or feeling as if the trauma were recurring, and/or intense distress or physiological reactivity on exposure to cues related to the event. 3) There must be avoidance of stimuli asssociated with the trauma and numbing of general responsiveness as shown by efforts to avoid: thoughts, feelings, conversations,

activities, places, or people associated with the trauma; inability to recall an important aspect of the trauma; less interest or participation in activities; feelings of detachment from others; restricted range of affect; sense of a foreshortened future. 4) There must be persistent symptoms of increased arousal including difficulty falling/staying asleep, irritibility/angry outbursts, difficulty concentrating; hypervigilance, exaggerated startle response. 5) Symptoms (in 2, 3, and 4) last more than one month. 6) The disturbance causes significant distress or impairment in social, occupational or other areas of functioning.

Associated symptoms such as depression and anxiety are commonly seen with PTSD, as are impulsive behaviors, difficulty concentrating, emotional lability, and memory problems. Some authors, in fact, have suggested that additional diagnoses might often be warranted in PTSD cases. For example, Sierles et al. (1983) examined adult male combat veterans hospitalized for treatment of PTSD and found a large majority (84%) could be diagnosed with other syndromes as well. These findings are important to consider, particularly from a treatment standpoint.

Helzer et al. (1987) reported on the epidemiology of PTSD in the general population. They found the disorder to be uncommon: in their sample, only 5 men and 13 women per 1000 had met the DSM-III criteria for PTSD at any time in

their lives. The types of events which accounted for the disorder varied across sex: in men, it was only triggered by combat and seeing someone die, in women it was mostly triggered by physical attack (including rape). Several other findings were of note. Although few subjects met the full diagnostic criteria, 15 percent of men and 16 percent of women sampled experienced some symptoms after trauma. The symptoms most commonly reported were "nightmares, a feeling of jumpiness, and trouble sleeping" (p. 1631). Persons with PTSD were twice as likely to have an additional diagnosis, with the most common being obsessive-compulsive disorder, dysthymia, and manic-depressive disorder. It was also noted that the occurance of PTSD was predicted by a history of childhood behavioral problems, including fighting, supporting the idea that individual personality and behavioral characteristics prior to a traumatic event may influence the individual's response to that event (Helzer et al., 1987). The authors cautioned that their study sample was relatively small, 2493 participants, and the generalizability of the results might be limited.

The diagnosis of PTSD in children is in the early stages of use, and some authors suggest that it is underdiagnosed or rarely considered simply because clinicians do not tend to view children's symptoms within this framework. Few empirical studies have examined post traumatic stress reactions in children in a manner

comparable to those done with adults. Those that have done so have found symptom similarities and differences. Terr (1985), for example, noted several differences between adult and child reactions to trauma. She noted that the children she studied had a) no period of amnesia about the experience, b) no psychic numbing, c) no true visual flashbacks, d) no long term decline in school functioning, e) more frequent post-traumatic play and reenactment, f) more time skew (distorted perception of time), and g) a foreshortened view of the future. She noted that her subjects were of all developmental stages, oedipal, latency, and adolescence, and all showed consistent findings despite the differences in age and developmental level.

Pynoos et al. (1987) investigated symptom patterns in school age children who had been exposed, at varying levels of proximity, to a life-threatening event. They found significant differences between groups of children, classified by levels of proximity to the event on their rates of PTSD, from no PTSD to severe PTSD. They noted that factor distributions were also significant between groups identified by level of PTSD, with the factors identified as "intrusiveness, numbing, avoidance", and "disturbances in sleep and concentration" always present in the severe PTSD category and most often absent in the none or mild PTSD category. The symptoms specified within these factor categories were: interpersonal distance, reduced interest

in activities, difficulty paying attention, sleep disturbance, intrusive imagery and thoughts, and emotional avoidance. These symptoms have also been recognized as central to the presentation of PTSD in adults. Interestingly, anxiety symptoms alone provided little differential capability; they were reported more globally by children of each severity level. This study and those of Terr (cf, 1985) noted that individual factors such as background, family makeup, and developmental phase specific to each child seemed to provide either some measure of protection or vulnerability to the stressor. For example, in the Pynoos et al (1987) study, some children were highly exposed by location but never realized that their lives were in danger; another child was at home yet felt very traumatized because a special tactical team set up emergency headquarters there. This study also provided supportive evidence for the ability of school age children to directly report their experiences and emotional responses to traumatic events.

In a retrospective study designed to evaluate rates of PTSD in a sample of psychiatrically hospitalized children, Deblinger et al. (1989) found that 20.7% of sexually abused children, 6.9% of physically abused children, and 10.3% of nonabused children met criteria for PTSD. They noted that their findings must be viewed as preliminary and that the clinicians documenting symptoms in their study might not

have noted some PTSD symptoms. Indeed, the majority of the 155 subjects received one of the following diagnoses: adjustment disorder, conduct disorder, oppositional disorder, depression, or attention deficit disorder with hyperactivity (ADHD). Although many subjects across all patient groups were identified as suffering PTSD symptoms, when subcategories of PTSD symptoms were examined, some differences emerged. Both sexually abused and physically abused children showed more avoidance/dissociative behaviors than nonabused subjects, while physically abused children showed fewer hyperarousal symptoms than either sexually abused or nonabused children. The authors noted that this last finding seemed surprising; they offered only that hyperarousal symptoms may overlap with many other disorders. However, it also seems possible that physical abuse may occur on a highly regular and more predictable basis than sexual abuse, and may lead to more of a defensive dulling of awareness rather than hypervigilance. These authors did caution that this was a preliminary, retrospective study, and that the results might not be generalizable to non-hospitalized children.

It has also been found that witnessing acts of violence can have significant psychological consequences for children. Pynoos and Eth (1985) noted that "children who witness extreme acts of violence represent a population at significant risk of developing anxiety, depressive, phobic,

conduct, and post-traumatic stress disorders" (p. 19). The acts specifically investigated as having the potential for great personal impact on the child were: the murder of a parent, the rape of a mother, and the suicidal act of a parent. Pynoos and Eth (1985) found that the child witnesses they studied did not display traumatic amnesia, but were subject to "intrusive imagery and associated affect" (p. 24) which markedly interfered with the child's capacity to learn. They also showed a high frequency of sleep disturbances, and exhibited startle reactions to specific reminders of the trauma.

Famularo, Kinscherff, and Fenton (1990) investigated the symptom differences between children with chronic PTSD (defined as longer than 8 months duration of symptoms) and those with acute PTSD (defined as less than 6 months duration of symptoms). Although specific symptoms occured in individual subjects within both groups, some significant patterns emerged when group data was examined. The symptoms of the acute PTSD group were found to be most consistent with greater and more generalized anxiety/agitation; these children presented more frequently with difficulty falling asleep, nightmares, hypervigilance, exaggerated startle response, and generalized anxiety or agitation, and acted as though the trauma was re-occuring on real or symbolic exposure. In contrast, the symptoms presented by the chronic subtype had more similarities to depression and/or

detachment. These children showed more detachment, restricted range of affect, thoughts that life will be too difficult, dissociative episodes, and sadness. Inspection of the data table provided by these authors showed a number of additional item categories which, while possibly not reaching statistically significant levels, showed up with greater frequency in the chronic PTSD group. These categories were: avoid thoughts/feelings related to trauma; inability to recall certain aspects of the trauma; diminished interest in activities/games; loss of developmental skills, regression; difficulty concentrating; odd behavior or statements; imaginary companions; excessive daydreaming; dissociative episodes; and illusions, vivid images.

PTSD has also been etiologically linked with Multiple Personality Disorder (MPD) Spiegal (1984). Spiegal suggests that MPD is a form of PTSD in which the individual has extensively and pathologically utilized the avoidance/dissociation process such that it impacts most aspects of his or her life.

Children who have experienced trauma but do not exhibit the full range of symptoms to qualify for a diagnosis of PTSD, often do exhibit some dissociative and/or hyperarousal symptoms, as noted in various studies above. Dissociative symptoms are of particular interest for several reasons. First, several of the previously reviewed studies have

suggested that it is this category of behaviors which is more suggestive of a pathological response to trauma. Second, these behaviors have a long history in psychiatric nosology and encompass a range of behaviors stretching from the mundane and everyday to the clearly pathological and diagnostically controversial.

Dissociation

Dissociation has been defined as "a multidimensional construct that is characterized by blocking of connections between affects, cognitions, and voluntary control of behaviors" (Sanders 1986). Dissociative phenomena are generally presumed to occur along a contiuum from the normal fantasy, absorption, and daydreaming, to the pathological involuntary episodes which often involve negative consequences for the individual.

In a brief history of dissociation, Sanders (1986) traced its roots to Joseph Pierre Durand, a French physician of the late nineteenth century, who postulated the division of the mind into sections, each with its own ego and all under the control of a generalized ego. Only slightly later, Freud used the dissociative technique of hypnosis, as did others of his time, although his theoretical focus was more on repression than dissociation. Pierre Janet was known for early studies of hypnosis as well, and suggested that dissociation was the underlying mechanism and signifier of pathology to a number of abnormal behaviors. McElroy

(1992) noted that Janet had identified severe dissociation as a response to trauma over 100 years ago and he suggested that individuals who had such experiences were less able to deal with reality (van der Kolk & van der Hart, 1989). In the 1940's, Sullivan described the phenomenon of sudden intense anxiety causing overwhelming stress and a disintegration of the self. Sullivan felt that this "not-me" aspect of the personality, cut off from everyday awareness, often originated in childhood, precipitated by a traumatic event (Sullivan, 1953). Hilgard (1977) viewed dissociation as existing on a continuum, and demonstrated that amnesia might or might not be present in relation to a dissociative event. As noted by Sanders (1986), "viewing dissociation as a personality trait which can trigger normal, creative, and adaptive behavior, as well as pathological behavior" (p. 85) is of importance both theoretically and therapeutically. However, the broad range of dissociative behaviors, some seemingly uncontrollable and others cognitively mediated, presents a diagnostic dilemma.

Addressing the dilemma of dissociative behaviors, Gruenewald (1986) emphasized the generally accepted premise that consciousness may co-exist on several levels simultaneously, and this variance in degrees of mental attention underlies many everyday behaviors as well as those which are clearly pathological. She noted the distinction between dissociative phenomena, which may range from the

normal to the pathological, and dissociation proper, which is generally considered pathological and indicative of specific disturbances. As a diagnostic category, dissociative disorders encompass such conditions as psychogenic amnesia, fugue, and multiple personality disorder. Within the range of normal phenomena, dissociation is a phase-appropriate defense which occurs early in normal development. It becomes formally described as "splitting" when it continues across developmental stages and is more extensively and pathologically used. Gruenewald described splitting and dissociation as closely related, while noting that each carries a slightly different connotation. She noted that dissociation need not involve regression, and does not imply a developmental arrest. She likened the "alterations in consciousness seen in dissociative states as products of self-suggestion at pre-conscious or unconscious levels" (p. 119), and summarized the difference between the normal and pathological dissociation as "the retention of awareness of self...and of knowing which of these roles is, or should be, uppermost at any given moment" (p. 119).

Normal Dissociation

Dissociative tendencies are a normal part of a person's defensive repertoire; indeed, a number of studies have commented on the preservative utility of the dissociative process and its ubiquity in times of stress. Dissociation

has been described as an "involuntary, natural mechanism" (James, 1989) which occurs normally in all ages, but with variations given developmental level. James noted in particular that not all dissociative episodes are disordered, but that "most are benign and pass unremarkably" (p. 102). Bernstein and Putnam (1986) described dissociation as "a lack of the normal integration of thoughts, feelings, and experiences into the stream of consciousness and memory," (p. 727) and noted that it occurs to some degree in normals and is more prevalent in individuals with mental illness. As a defense mechanism, "dissociation is typically utilized to protect the indiviudal from experiencing overwhellming anxiety" (McElroy, 1992, p. 838).

McKellar (1977) provided a more in-depth discussion of the normal kinds of dissociation only alluded to by others. He described as "very common indeed" those "periods of absent-mindedness, in which a normal personality is so preoccupied with his own imagery that he loses touch with the world around him" (p.103), and noted that daydreaming represents "a withdrawal into imagery" in which the subject may become unaware of time and place. Sleepwalking is another phenomenon of the same nature, but which may be considered somewhat more extreme. Simple fatigue or sleep deprivation may give rise to hypnagogic imagery that represents yet another form of dissociative experience. He

noted that the distinction between normal and abnormal can be quite artificial. In exploration of an anthropological perspective on this distinction, McKellar cited Van de Castle (1974) who noted that our society "does much to discourage altered states of consciousness: we are frightened of hypnosis, we discourage alcoholic excess, and law enforcement agents 'ensure that drugs are not used to seek out forms of dissociation'" (p. 104). In contrast, a 1972 cross-cultural study of non-Western societies showed some "institutionalized form of dissociation present in 89% of these societies" (p. 104). In other words, some general reluctance to acknowledge dissociative phenomena or lend it credibility by studying it, may be in part a reflection of greater societal values.

Ludwig also (1983) suggested that the wide variety of manifestations of the dissociative process are molded by the "influence of individual psychological needs and conflicts, social forces and cultural factors" (p. 95). He described dissociation as representing "a process whereby certain mental functions which are ordinarily integrated with other functions presumably operate in a more compartmentalized or automatic way, usually outside the sphere of conscious awareness or memory recall" (p. 95). He noted that dissociation is a "fundamental psychobiological mechanism" which underlies a variety of altered forms of consciousness, and stressed that it includes phenomena such as daydreaming,

twilight states, dreams, hallucinations, repressions, deja vu, and paramnesias. He noted the survival value of the dissociative process, and enumerated seven major functions of dissociative reactions: 1) Dissociation allows for the automatization of behaviors. Simultaneous processing of information makes the organism more efficient. 2) Dissociation allows for greater economy and efficiency in functioning. Compartmentalization of certain functions allows more single-minded dedication to a given task. 3) Dissociation allows for the resolution of irreconcilable conflicts since opposing drives can be expressed in a way that does not interfere with conscious beliefs. 4) Dissociation allows for some escape from the constraints of reality since dissociative states either permit escape or allow a sense of control in a way not bounded by the realities of the situation. 5) Dissociation allows for the isolation of catastrophic experiences as a defense mechanism. When a shattering emotional experience is defensively separated into a different area of consciousness, the ego is permitted more optimal functioning. 6) Dissociation allows for a cathartic discharge of feelings by allowing the expression of pent-up emotions. This provides some relief without fear of social censure. 7) Dissociation allows for the enhancement of "herd sense", that suggestibility which allows a person to follow

a leader-figure and promotes social cohesiveness under that figure.

Heber et al. (1989), in a study comparing the dissociative experiences reported by alternative healers versus traditional therapists, noted a qualitative difference between how dissociative experiences were viewed. Alternative healers valued and sought after such experiences, whereas more traditional therapists tended to view dissociative experiences as more pathological. This study suggested that dissociative experiences do not necessarily negatively impact life functioning and are not necessarily indicative of psychiatric disturbance in nonclinical groups.

The psychoanalytic literature has long recognized the adaptive function of fantasy, and has viewed dissociation as a defense mechanism. Spiegal (1986) noted however that the "use of dissociation is different from the traditional understanding of defense mechanisms in that it provides protection from immediate experiences rather than unconscious memories or wishes" (p. 123). He suggests that this protection results in a fragmentation of consciousness that is ultimately less adaptive than other methods of coping, as it allows for reexperiencing of the trauma.

Ross et al. (1990) investigated the frequency of dissociative experiences in the general population. In a random sample of adults age 18 and older, they found that

dissociative experiences were common. They found the degree of dissociation in the general population to be independent of all major socioeconomic factors except for age; mean scores declined with age in both sexes. They also noted that five percent of the general population scored above a range which indicated a high likelihood of post-traumatic stress disorder or multiple personality disorder. From the distribution of their data, they suggested that a component of dissociation may be due to endogenous factors, rather than psychosocial experiences.

Identification of the pathological use of dissociation can be complicated because normal developmental behaviors and temporary responses to extreme stress can appear similar to some symptoms of dissociative disorders (James, 1989).

Pathological Dissociation

Although the dissociative process is a natural one, there may be a number of factors which contribute to its becoming pathological. For example, when dissociation is habitually used as a defense, the process can become pathological; the individual who habitually dissociates develops few other coping mechanisms, and does not integrate numerous experiences into the self. According to the DSM IV, "the esential feature of the dissociative disorder is a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment. The dissociation may be sudden or gradual,

transient or chronic" (APA, 1994). Nemiah (1980) noted that pathological dissociation is characterized by disruptions in the individual's sense of identity and disturbances in memory. This can contribute to a wide "range of clinical and behavioral phenomena" (Putnam, 1993, p. 40). Disturbances of self seen in the dissociative disorders may result from a failure to integrate self-referential information across dissociative barriers (Albini & Pease, 1989; Fink, 1988; Putnam, 1990). In general, dissociative defenses can be used as escape valves; as noted by Chu & Dill (1990), "painful events can be made less intense through dissociative alterations in perceptions (depersonalization and derealization), can be 'forgotten' (psychogenic amnesia), or can even be completely disowned as 'someone else's' experience (multiple personality)" (p.887).

Pathological dissociation has been defined by Putnam (1993) as "a discrete state of consciousness, recurrently activated by stress, trauma, or by stimuli reminiscent of trauma" which "acts to encode information in a way that interferes with its retrieval and integration into the normal stream of consciousness" (p. 41). Summarizing a number of studies, he noted additionally that the syndromal profile found in adults may include symptoms of: "depression, anxiety, somatoform symptoms, auditory hallucinations, identity diffusion, self-destructive behavior, and posttraumatic symptoms such as hyperarousal,

nightmares, and exaggerated startle responses" (p. 41). Because the origin of pathological dissociation is frequently thought to be in childhood, "early recognition of pathological dissociation and predictors of MPD is critical" (McElroy, 1992, p.833). Unfortunately, due to the controversial nature of the diagnostic category at the extreme end of the spectrum (MPD), the very description of dissociative behaviors or disorders may seem controversial as well.

Depersonalization is one symptom of the dissociative process which has been studied in both normals and psychiatric patients. Depersonalization has been defined as: "a change in one's perception or experience that results in a feeling of being alien, unreal, mechanical, or otherwise not one's self" (James, 1989, p. 102). James (1989) noted that a mild form of this can be part of the typical adolescent experience. Noyes et al. (1977) reported that the depersonalization syndrome they identified appears similar in normal persons exposed to danger and in psychiatric patients during the symptomatic phase of their illness, suggesting that the phenomenon is the same regardless of what causes it to happen.

Myers and Grant (1972) described depersonalization as "a pattern of disordered function" and note that it can occur in conditions of very different etiology. They studied depersonalization phenomena in college students to

determine commonalities with the depersonalization found within a psychiatric population. They found that the descriptions given by the students differed "in no obvious way" from those given by a clinical population. They also noted an association between depersonalization and agoraphobia in women and between depersonalization and deja vu in men. They further noted that depersonalization and agoraphobia may be functionally related, in that the role of depersonalization may be to curb crippling anxiety (cf. Harper & Roth, 1962).

In a study of hospitalized adult mental patients, Fleiss et al. (1975) failed to find strong correlations with either anxiety or depression in patients who reported having experienced depersonalization or derealization. They felt that these phenomena are "likely transitory for most patients and...occur independently of diagnosis" (p. 111). They did note that it seemed uncertain whether these experiences are actually independent of anxiety or depression. Chu and Dill (1990) found that dissociative symptoms were prominent in adult patients who reported a history of childhood abuse. They also found the severity of abuse correlated with level of dissociative symptoms identified on a self-report measure.

Greenes et al. (1993), in a study of female bulimics with and without depression, found an association between depression and dissociation. They found that bulimics with

depression were more dissociative than bulimics without depression, suggesting that the depression, rather than bulimia may be correlated with dissociative experiences. And Zatzick et al. (1994) found no differences in dissociative experiences among Vietnam veterans of different ethnic backgrounds.

Childhood Dissociation

It has been noted by a number of authors (Braun, 1984; James, 1989; McElroy, 1992; Putnam, 1991) that the genesis of dissociative disorders lies in childhood and that children have a varying tendency, based on genetic predisposition, to dissociate under stress. However, the study of childhood dissociation has been a relatively recent trend. Putnam (1991) noted that although childhood dissociative disorders were described in 19th century medicine, they disappeared from the literature for much of the 20th century. However, the current focus on children's issues, especially in conjunction with greater societal problems, seems to have spurred interest in childhood dissociation.

Putnam (1991) noted that developmental factors contribute to difficulties in determining whether dissociative behaviors in a child represent a normal or pathological range of functioning. Children normally show more dissociative behaviors than adults, and, as in many other psychiatric disorders, the clinical picture can vary

markedly between children and adults. He noted that children's capacity for dissociative behaviors peaks at about age 9-10 years and declines during adolescence to low levels in early adulthood. This capacity roughly mirrors children's capacity for hypnotic behaviors, which fall in an inverted-U shape with the peak at age 9-10. He noted that there is more difference between individual children than between different ages of the same child. He has also noted that gender does not seem to have an effect on dissociative capacity, although he suggested, without giving specific examples, that culture probably does (Putnam 1993). Zatzick et al. (1994) in contrast, found that among Vietnam veterans, severity of trauma rather than ethnicity determined the degree of dissociative responses.

Putnam (1991) noted also that the "high rates of placebo response noted in clinical medication trials with children, may well be related to their dissociative/hypnotic capacities" (p. 522). He noted also some differences between children and adults on their abilities to perform specific hypnosis scale tasks. It has been suggested that the changes in these capacities reflect difficulties with psychometric measurements in children as opposed to true changes in capacity (Gardner & Oleness, 1981). This idea has been addressed in relation to children's abilities to provide accurate self-report measures.

Normative dissociation seems to be related to the natural capacity of children for fantasy play, imaginary companionship, and other imaginative activities, although "normal" rates for these behaviors are disputed. It is well accepted that children demonstrate a remarkable variability in the reality constraints they apply in play; certain rules may be rigidly applied while the fantasy itself is well outside the realm of reality. Children regularly imbue objects with an array of qualities which often serve them in a positive way: the toddler's transitional object is a prime example.

It has been suggested by a number of authors (James, 1989; Putnam 1991) that imaginary companionship may in some cases be a precourser to the development of more split-off aspects of the self, although distinguishing this incipient process from that which is "normal" presents an enormous challenge. For example, "pretend friends", common in childhood to some degree, may become split-off parts that harbor feelings or images but do not become separate from the child's consciousness (James, 1989). In other words, the degree of dissociation exhibited by a child often does not become the extreme splitting seen in the patient with a formal dissociative disorder. However, many symptoms are common to dissociatively disordered children, traumatized children, and in children with other problems (James, 1989) and may represent more or less efficient mechanisms for

coping with stress. It has been suggested that traumatic experiences are associated with disturbances in the normal age-related decrease in dissociative capacity (Chu & Dill, 1990; Fink & Golinkoff, 1991).

Children, Dissociation, and Trauma

Just as traumatic experiences have a vast impact on adults, so too do they on children, often to an even greater degree because children lack many of the coping mechanisms available to adults. They typically have not yet developed more sophisticated or mature defenses, and must use more primitive means of coping with stress. Putnam (1993) noted that many "professionals are unaware of the nature of dissociation or the role that traumatically-induced dissociative processes can play in the behavioral disturbances manifest by maltreated children" (p.39). He and others have noted that dissociative disturbances in children are often mistaken for more "conventional" disorders. Diagnoses such as Attention Deficit Disorder (ADD), ADHD, conduct disorder, oppostional defiant disorder, learning disabilities, and possible psychosis are frequently identified in these children. This may partly be due to the child's own developmental limitations; although adults can report more of the symptoms or experiences suggestive of a dissociative disorder, children "have a much poorer sense of the continuity of their behavior and the flow of time"

(Putman, 1993, p. 41) and thus may be less reliable in spontaneously reporting dissociative experiences.

Although some authors have questioned children's abilities to accurately report such experiences, Sanders and Giolas (1991) have reported evidence to support their ability to do so. In an investigation of the correlation between self-reported degree of dissociation and childhood stress, they administered the Dissociative Experiences Scale to hospitalized adolescents, ranging in age from 13-17 years, and compared these scores with another self-report measure of childhood trauma. They found that the adolescents' ratings of the degree of childhood stress they experienced correlated with their DES scores, but that background information available in their medical records did not. The authors noted that their findings suggested that negative home experiences may not be reported by the families of stressed or traumatized children. They also found that degree of dissociation was not related to diagnostic category in any consistent way, although mood disorders and conduct disorders were slightly more likely to correlate with a high DES score than were other diagnoses. Ross et al. (1989) also found that children, ages 12-14, were able to complete the Dissociative Experiences Scale in a manner which provided data consistent with theoretical expectations.

Mann and Sanders (1994) investigated family context in relation to dissociation. Utilizing male subjects ages eight to 11 and their families, they found a correspondence between fathers' and sons' dissociation scores, as well as correlations between parental dissociation, parental inconsistency, and rejection, with child dissociation. This data was also noted to be consistent with the interpretation that dissociative symptoms may appear to be signs of ADHD in some children.

Dissociative symptoms have been observed in response to a number of different traumatic situations. Sanders (1986) noted that high levels of affect often trigger dissociative behaviors, and postulated a threshold type mechanism. On the other hand, Gelinas (1983) noted that some former victims of incest have described conscious efforts to induce dissociation or "self-hypnotic anesthesia experiences" (p. 316) as a way not to feel the abuse. Gelinas further noted that using dissociation as a defense created a more general tendency to dissociate when under more minor stresses, even after the original traumas had ended. Gelinas noted also that, in contrast to the anxiety symptoms most commonly seen with war veterans, the incest victims in her study, traumatized as children, presented with more depressive symptomotology.

Putnam (1993) described the single best predictor of a dissociative disorder as frequent trance-like behavior, and

noted that this behavior can cause a child to miss information and exhibit confusion in the school setting. This in turn may cause these children to exhibit "fluctuating abilities, shifting preferences, inconsistent knowledge, and other evidence of erratic access to information and skills" (p. 42) hypothesized to be secondary to difficulties in retrieval of memories. On the more extreme end of the continuum, children with dissociative disorders may report vivid imaginary companions and both visual and auditory hallucinations, which can be mistaken for evidence of psychosis or schizophrenia.

The wide variety of behavioral symptoms seen in dissociating children are described by James (1989, p.102), and include: going into trance-like states in response to certain stimuli, perceiving their surroundings as being unreal, using another name, claiming not to be him or herself, claiming dual identity, referring to him or herself as "we," shifting abilities to perform tasks, denying behaviors that have been observed by others, changing visual acuity, changing handwriting, changing style of dress, drastic changes in behavior, unexpected outbursts, disorientation, losing time, drawing him or herself as multiple persons, and getting lost coming home from a familiar place. More formally defined symptoms include depersonalization, repression, splitting, psychogenic amnesia, and multiple personalities.

Mann and Sanders (1994) pointed out that dissociative symptoms such as short attention span and emotional lability may be mistaken for symptoms of ADHD. They also note that dissociation appears correlated with state anxiety but is more than a simple indicator of general distress.

As suggested by the above symptom lists, the delineation between healthy and unhealthy dissociation presents a clinical challenge. A variety of factors can complicate a diagnosis of a dissociative disorder or the identification of overuse of dissociation as a defense. In allergic children, for example, allergic reactions may cause children to appear suddenly changed in a variety of ways, for no apparent reason. Organic disorders can also cause drastic behavioral shifts with no obvious triggers. Drug use, both prescription and recreational, can have similar effects, with widely varying impacts on different individuals. Other mental disorders, such as ADD, conduct disorder, and eating disorders may show symptom patterns which are similar as well (James, 1989). Clearly, some specific method to measure dissociative symptoms or experiences would be diagnostically useful.

Mann and Sanders (1994) integrate and summarize the etiological theories of childhood dissociation to suggest that reaction to trauma during childhood is impacted by both family environment and by biological and psychodynamic tendencies to dissociate. They postulate that dissociation

is a normal defense mechanism available in varying degrees to individuals during overwhelmingly stressful situations; dissociative ability is in part biologically/genetically based; capacity for dissociation is greatest in childhood; and relationship patterns within the family can foster dissociative tendencies.

Measurement of Dissociation

Several interview-based scales have been developed for use in identifying the multiple personality patient. These scales typically assess dissociative symptomotology in depth. However, they are typically lengthy and many questions relate specifically to the more extreme symptoms likely to be experienced or identified by the patient with MPD. Several such scales have also been developed specifically for children and adolescents (Dean, 1986; Kluft & Putnam, 1984; Putnam, 1990) and are designed to be completed by a person familiar with the child's behavior over an extended period of time. These scales have a number of drawbacks. In addition to the requirement for long-term familiarity with the subject, interviews are subject to rater biases, and objective scoring for research and comparison purposes can be problematic. For example, as noted above, Sanders and Giolas (1990) found that others' ratings of a child's experiences were poor predictors of the child's self-rated experience of childhood. Reliability and validity data are often not available for this type of

rating system as well. For these reasons, a simple self-report questionnaire, which provides a more objective form of measurement, will be used in this study.

The Dissociative Experiences Scale (DES; Putnam & Bernstein, 1986) was developed to identify and quantify dissociative experiences which represent a range from the everyday to the pathological. This scale contains items which many people might have experienced in the course of their lives, as well as items which might be experienced less frequently by the average person. Items are presented in a statement format, with the response to be made in the form of a mark on a line which represents frequency of experience (anchored with 0% on the left and 100% on the right). The distance marked along the line provides a measure of the degree to which the individual has had that dissociative experience. The number of lines marked at greater than zero provides a measure of the different types of dissociative experiences the individual reports. Normal individuals (those without psychiatric pathology) would be anticipated to identify fewer dissociative experiences, and to have had these experiences less frequently than those individuals who have received a clinical diagnosis (Bernstein & Putnam, 1986).

Bernstein and Putnam (1986) reported that the questions for this scale were developed in consult with clinical experts in dissociative disorders and by interviews with

individuals who had been identified as having such disorders. The visual analogue scale was used to avoid the artificiality of discrete categories, and allows for relatively objective scoring. It was noted specifically that "items identifying dissociation of moods and impulses were excluded ... so that experiences of dissociation would not be confused with alterations in mood and impulse associated with affective disorders" (p. 729). The test-retest reliability coefficient was reported as .84 ($p < .0001$, $n = 26$). The median Spearman rank-order correlation for the 28 items and the overall item score was reported as .64, with a range of .50 to .79. A Kendall coefficient of concordance yielded a coefficient of .70 ($p < .0001$, df = 7,189), showing a high degree of agreement among items. Criterian-referenced concurrent validity was reported as a test value of 93.57 ($N = 192$, df = 7, $p < .0001$; Bernstein & Putnam, 1986).

Using the DES with adult subjects, Bernstein & Putnam (1986) showed that the scale was able to reliably differentiate between subjects with and without a clinical diagnosis of a dissociative disorder. It provided a ranking of various diagnostic groups along the dissociation continuum, with MPD subjects providing the highest median score, followed, in descending order, by PTSD subjects, schizophrenics, late-adolescents (college students), and normal adults. The college students' scores likely

represent the relative normalcy of dissociative experiences which have been noted in adolescence (Myers & Grant, 1970).

Greenes et al. (1993) found depression to correlate with higher DES scores; Zatzick et al. (1994) found that ethnicity did not correlate with DES scores. However, they did document a slight negative relation between age and education attainment such that dissociative experiences decrease with increased age and IQ. They noted that the DES measures a trait construct of dissociation and noted that their results were consistent with the findings of others.

Norton et al. (1990) identified a number of factors which correlated with high scores on the DES. In their sample of university students, they found that those who generated high scores on the DES were more likely to experience intense anxiety and avoidant behaviors, a high level of anger, and many somatic complaints, and become involved in imagination and think irrationally, than those who generated low scores.

Several studies have also utilized the DES with adolescents. As noted previously, Sanders and Giolas (1991) utilized the DES with hospitalized adolescents, aged 13-17 years. They modified the format of the scale by eliminating question #1, which refers to the individual's experiences while driving, as most of their subjects were too young to drive. Ross et al.(1989) used a sample of students ages 12-14, and made no modifications to the scale. They found a

decline in DES scores with age, as might be predicted theoretically, and noted that high scores in adolescents must be interpreted cautiously as such scores might not be indicative of pathology. The degree to which dissociation in children younger than age 12 can be quantified by this questionnaire remains to be investigated.

Purpose

This study seeks to quantify the extent to which children and adolescents referred for psychological testing experience dissociative episodes, and to examine how effectively dissociation can be measured in children via self-report. By measuring the dissociative experiences of these school-age children using a self-report format with a non-pathological emphasis, it is hoped that the occurance of these experiences might help clarify the nature of some of these students' symptoms. Despite often similar complaints from the classroom teachers initiating referrals, these students' test data suggest different diagnoses. Some greater understanding of the nature of their symptomotology would likely have both diagnostic and treatment implications, in the school setting and elsewhere.

Hypotheses

Hypothesis 1. In keeping with the notion that dissociation exists as degrees along a continuum, it is hypothesized that children who have received a primary diagnosis of a mood disorder (typically a depressive

disorder) will generate higher DES scores than those subjects who have received a primary diagnosis of an anxiety disorder, and both of these will generate higher DES scores than subjects who have received a primary diagnosis of a disorder which is characterized by a behavioral disturbance (including Oppositional Defiant Disorder, Conduct Disorder, Attention Deficit Hyperactivity Disorder). Subjects who have received no diagnosis are predicted to generate the lowest DES scores.

Hypothesis 2. It is hypothesized that students who demonstrate more withdrawn behaviors in the classroom will show higher DES scores than those students who simply appear less attentive.

Hypothesis 3. The following relations are also hypothesized: gender, overall intellectual level, and time since psychological testing will not correlate with DES scores; history of abuse will be positively correlated with DES scores, while degree of abstract thinking will be negatively correlated; age of subject will likely show a non-linear correlation with DES scores, with the highest scores coming from the late elementary and early junior high (middle range of the sample population) students. No predictions are made regarding residence with biological parents or with ethnicity.

CHAPTER II

METHOD

Participants

Participants were 53 children referred for psychological evaluation in a suburban school district during the school year 1993-1994. Students referred for evaluation have been observed to have difficulties of some kind in the classroom setting; the evaluation process is designed to identify those children whose problems appear to stem from an emotional disturbance. The subjects ranged in age from nine years-ten months to eighteen years-six months. Students may have been new referrals or reevaluations (reevaluations are completed every three years); subjects referred for a psychological evaluation may have been previously identified as speech handicapped, learning disabled, emotionally disturbed, or as having some other health impairment. Children referred for evaluation who had been identified as Mentally Retarded, Autistic, or as having a Pervasive Developmental Disorder were excluded from this study, as subjects with these diagnoses might have presented some unusual confounds.

Procedures

Written consent was obtained from each participant's parent or legal guardian. Although all parents/guardians

had already signed a consent for the administration of psychological testing as part of a comprehensive individual assessment, separate consent was obtained for the administration of the research questionnaire and inspection of records for the purpose of this study. The consent form (see Appendix B) was mailed to the home address of students who were tested during the school year. Students who completed the psychological evaluation during the summer were typically accompanied by a parent/guardian to the test location; consent forms were presented in person to those parents/guardians.

After consent forms were completed, each participant was taken from his or her classroom to complete the DES. Each participant was informed of the parent consent, and then given the opportunity to read and sign the children's assent form (see Appendix C). After signing this form, the DES was administered. Only one student declined to participate.

Due to scheduling, some children were administered the questionnaire shortly after having completed the psychological evaluation, while others completed it much later. Students tested during the summer completed the questionnaire the same day they completed the psychological evaluation, after all other measures had been completed. The length of time between the psychological test battery

and completion of the DES was recorded and investigated in relation to DES scores.

Participants were administered the Dissociative Experiences Scale (Putnam & Bernstein, 1986), modified slightly to accomodate the range of ages to be assessed (see Appendix A). This modification consisted of several wording changes in the questions themselves (as specified by asterisks in Appendix A); the adjustment of wording was reviewed by a special education teacher who works with students of many ages who have a variety of academic difficulties and needs. The wording changes were made to simplify the language and sentence structure so the questions would be more easily readable and more concrete. One sentence changed wording in such a way to specifically target the age groups of these subjects. Additionally, three cue words were placed at intervals under the sample measurement line to help provide a concrete visual frame of reference; on test items, only the endpoints were labeled. Five sample questions were added to ensure that participants understood how to mark the line. The scale was completed in the same manner as it was designed to be administered to adults; this highly visual format is well suited to a range of age groups. As estimated, each participant completed the questionnaire in about ten minutes. Children who had difficulty reading the statements were assisted by the examiner, who read them out loud as was done with a

geriatric sample included in the study by Ross et al. (1989).

To protect confidentiality, participants were assigned an identification number, which incorporated a code to specify which of four examiners completed the psychological assessment which provided the diagnosis. The following additional data were obtained from each subject's school records: age, gender, ethnicity, WISC-III full scale, verbal, and performance IQ scores and similarities subscale score, teacher ratings of behaviors utilizing the Burks Behavior Rating Scales and/or the Achenbach Teacher Report Form, any documentation of abuse or neglect, residence with both biological parents or not, and psychological diagnosis. (A personality diagnosis was coded both when formally diagnosed and when used informally as part of the diagnostic description, such as "Depressive Disorder, NOS, with Borderline Personality Features.") Length of time from completion of psychological testing to administration of the DES was noted in days.

Due to the modest sample size, several of the socioeconomic status (SES) and background variables had limited representation in some groups (i.e., subjects were 83% Caucasian, 7.5% Black, 3.8% Hispanic, and 5.7% Other), so binary data coding was used for these variables. Variables thus coded included race, documented abuse, and parents (lives with both biological parents or not). Living

arrangements were varied, with 24.5% living with both biological parents and 75.5% with some other arrangement. It was additionally noted, when measuring DES scales, that there seemed to be a difference in response styles: a subject completing the DES in "normal" style generated varying distances when marking each line, while an "abnormal" style showed response marks only at either the extreme ends of the scale or the ends and the midpoints of each line. Eleven subjects (21%) showed an abnormal style. These response styles were categorically coded as well.

CHAPTER III

RESULTS

The DES was completed by 53 participants, of which 41 (77%) were male and 12 (23%) were female. Ages ranged from nine years ten months to 18 years six months. The mean DES score for all subjects was 27.8, with a standard deviation of 17.2. Sixty-two percent of all participants were diagnosed or described as having prominent features of depression; 36% were diagnosed or described as anxious. Participants often carried more than one diagnosis or description, including depression, anxiety, ADD, and personality disorders. Two participants were described as having no diagnosis; this was found to be an artifact, to some degree, of the setting.

Hypothesis 1 predicted that participants who received a primary diagnosis of mood disorder (depression) would generate higher DES scores than participants with a primary diagnosis of anxiety; both would be higher than children who were identified as having a behavioral disorder. Participants who received no diagnosis would generate the lowest DES scores. Among the 53 participants in this study, 24 (45.3%) had a primary diagnosis of depression, 16 (30.2%) had a primary diagnosis of anxiety, and only 2 (3.7%)

received no diagnosis. The remainder had a diagnosis related to behavioral problems (including 3 [7.5%] described as having a primary diagnosis of Attention Deficit Disorder) or a diagnosis (or "features of") a personality disorder. Since the number of "no diagnosis" participants was so low, it was not possible to reliably compare this group with the depression and anxiety groups; these participants were grouped in an "other" category which included all other diagnoses (ADD and personality disorders). Inspection of this "other" category by individual case revealed some interesting data, which will be noted later. DES scores were also compared between participants with single versus multiple diagnoses.

Table 1 compares DES average by gender for participants based on their primary diagnosis and for those participants whose diagnostic descriptors included a diagnosis (or features of) a personality disorder.

As can be seen in Table 1, participants with a primary diagnosis of depression showed an average DES score of 31.3, and participants with a primary diagnosis of anxiety had an average DES score of 21.8. It should also be noted that of the 40 participants who received a primary diagnosis of either depression or anxiety, nine (22.5%) carried the other diagnosis (or "prominent features of") as well. These nine generated an average DES score of 20.6; only 2 had a documented history of abuse.

Table 1

Average DES by Gender and Diagnosis

		Males	Females	Total
	N	18 (34%)	6 (11%)	24 (45%)
Depression	M	26.4	45.9	31.3
	SD	16.0	12.5	17.4
	N	14 (26%)	2 (4%)	16 (30%)
Anxiety	M	19.0	41.4	21.8
	SD	10.1	9.8	12.4
	N	9 (17%)	4 (7%)	13 (24%)
Other	M	23.8	39.2	28.5
	SD	8.9	29.2	19.1
	N	10 (19%)	4 (8%)	14 (13%)
Personality	M	29.8	44.8	34.1
Disorder	SD	11.7	28.7	19.5

Note. Of the 14 participants in the Personality Disorder group, 7 were in the "depressed" group also, 4 were in the "anxiety" group also, 3 were in the "other" group also, and 4 had only the personality disorder diagnosis.

A one-way analysis of variance with DES score as the dependent variable and diagnosis as the independent variable showed no significant differences in average DES scores between the "depressed", "anxious", and "other" groups. A visual inspection of the cell means showed the greatest difference between those groups described as primary depression and primary anxiety. The other/none group, which included diagnoses or features of personality disorders, as well as behavioral diagnoses, was the second highest group. Due to this surprising result, further inspection of these subjects was undertaken on a case by case basis. Although no hypotheses had been generated regarding the personality disorder diagnosis, this result was given further consideration below.

Because the greatest difference was between the depressed and anxious groups, a oneway analysis of variance examining only these two groups was performed. The resulting group effect ($F = 3.319$, $df = 1,38$) was not significant ($p = .076$) but showed a trend in the expected direction.

Further inspection of the data suggested that gender was a possible confounding variable in the elevation of DES scores. To test this, gender was covaried in an analysis of variance with DES scores as the dependent variable and diagnosis as the independent variable. When effects due to gender were removed, the effect was weaker ($F = 2.289$, df =

1, 37 and p = .139), suggesting that the trend toward higher DES scores was due more to gender differences (i.e., females endorsed more dissociation) than to depression alone.

Table 1 also shows that participants whose diagnostic description included a personality disorder generated an average DES of 34.1. The relation of this value to the others in the table merited further investigation. An analysis of variance with DES scores as the dependent variable and presence of a personality disorder as the independent variable showed a trend in the expected direction but did not reach significance (F = 2.68, df = 1, 51, p = .108). A subsequent analysis of covariance, equalizing the effects of depression, showed an even stronger trend, with personality disorder diagnosis showing greater dissociation when the effects of depression were equalized (F = 3.369, df = 2, 50, p = .072). Again, the trend was in the expected direction, but did not reach significance. Covarying anxiety weakened the effect (F = 2.174, df = 2, 50, p = .147).

The number of non-ADD diagnoses (or "features of" diagnoses) of each participant was also coded. Table 2 shows the group means of DES scores between participants with varying numbers of diagnoses.

Part (a) of Table 2 shows higher mean DES scores for participants with more diagnoses or features of more diagnostic categories. Although the mean differences were

Table 2

Average DES by Number of Diagnoses

0			1			2			3		
N	M	SD	N	M	SD	N	M	SD	N	M	SD
(a) All Participants											
5	23.1	4.7	24	24.9	14.3	21	31.7	21.5	3	31.1	1.4
(b) Removing 0 diagnosis; "0"= ADD only											
3	21.2	5.1	24	24.9	14.3	21	31.7	21.5	3	31.1	1.4

in the expected direction, an analysis of variance with DES scores as the dependent variable and number of diagnoses as the independent variable, fell far short of significance (F = .747, df = 3, 49, p = .529). In an attempt to maximize the differences between group means, a subsequent camparison examined DES scores of participants with one diagnosis and participants with more than one diagnosis. (Groups 2 and 3 were combined and compared with group 1.) The resulting analysis of variance again did not reach significance (F = 1.744, df = 1, 46, p = .193).

Further inspection of the two participants who did not receive a diagnosis (not even ADD) revealed the following. Both were approximately 12 year old males who showed no behavioral problems in the classroom; one was a routine

reevaluation and the other was referred for testing by the legal guardian. Although both participants' psychological evaluations documented some signs of emotional turmoil, their school performance showed no educational need for services, thus they did not receive a diagnosis. One participant had previously qualified for services with an anxiety disorder diagnosis, but his home life had stabilized. The other was in the care of a legal guardian due to a history of neglect and possible abuse by his biological parents, and also had a low IQ (FS = 73, Sim = 3). Psychological evaluations for both suggested that features of anxiety and depression were evident on test data. This helps explain why the average DES of these subjects was 26.0.

Part (b) of Table 2 shows the mean DES when the two "no diagnosis" participants were removed, leaving three participants who only had a diagnosis of ADD. This drops the DES average to 21.2. Removing the one female participant from the ADD group drops it still further, leaving a mean DES of 17.6. Although only a few particpants' data are available, this suggests that the distractibility shown by the ADD child may be a different phenomenon than the inattentive appearance of the depressed or anxious child.

Hypothesis 2 predicted that teacher observations of behavior would correlate with diagnosis and DES scores.

Results of these analyses showed no significant correlations between Achenbach totals and DES scores ($r = -.37$, $p < .05$) or Burks totals and DES scores ($r = -.32$, $p < .05$). The total Burks did show a negative correlation ($r = -.36$, $p < .05$) with factor 1 (absorption/imaginative involvement) of the DES. This suggests that a more internally focused child is likely to demonstrate less observed problems (although not all Burks scales involve acting out behaviors) in the classroom.

Hypothesis 3 proposed various correlations among background or SES variables and DES scores. For an exhaustive listing of all correlations found at the .01 level (see Appendix D). Several of the more salient and interesting correlations will be examined here.

Although the predicted pattern was not found, age did correlate with DES scores. A scatterplot showed a general tendency for DES scores to increase with age in this sample. A multiple regression equation using age as the first step found a significant relation with the DES ($F = 8.649$, $R2 = .14$, $p < .005$); no other variable in the analysis (diagnoses of depression or anxiety) accounted for any significant variance. Further inspection of age effects is provided by Table 3, which shows the breakdown of DES scores by several age groups.

Table 3

Age as Correlated with DES Scores

	Average DES Scores								
	Primary Depression			Primary Anxiety			Total		
	N	M	SD	N	M	SD	N	M	SD
>17 yrs	2	56.9	13.1	1	23.6	0	4	74.1	24.9
12-14 yrs	15	27.5	16.2	8	26.2	13.6	33	25.9	13.8
<12 yrs	7	32.1	14.4	7	16.7	9.6	16	24.2	13.6

The effect of amount of time from the psychological evaluation to taking the DES was also examined (see Table 4), with the participant having completed the DES on the same day as the psychological evaluation, or on a different day.

Table 4

Average DES Scores

	N		M	SD
Same day (psych & DES)	20	(38%)	25.6	18.7
Diff day (psych & DES)	33	(62%)	29.1	16.6

Twenty participants (38%) took the DES on the same day they completed the psychological evaluation. The average DES for this group was 25.6. Of the 33 participants who took the DES on a different day, the average DES was 29.1. An analysis of covariance examining average DES scores by primary diagnosis equalizing time (i.e., covarying day between assessment and DES) produced a significant diagnostic effect ($F = 7.03$, df =1, 37, $p < .01$). This suggests that the trend showing higher dissociation among depressed participants described earlier is strengthened when the artifactual effect of administration time is removed.

Although gender was not predicted to have any effect on DES scores, this study did find such an effect. As depicted in Table 1, gender differences seem prominent. The effect of gender on DES was significant ($r = .48$, $p < .01$) and showed that female participants were more likely to generate higher DES scores than male participants. Also, an analysis of variance examining the effect of primary diagnosis on average DES scores when gender effects were removed showed a significant effect due to gender ($F = 15.37$, df = 2, 37, $p < .001$) while the main effect of primary diagnosis approached significance as well ($F = 2.29$, $p = .139$).

As predicted, IQ did not correlate with DES scores. However, it was interesting to note that intellectually, the subjects fell mostly within the average range. Mean full

scale IQ, as measured by the WISC-III, was 95.6, with a standard deviation of 13.5. Mean verbal IQ was 96.4, with a standard deviation of 12.9, and mean performance IQ was 95.9, with a standard deviation of 14.9. The similiarities subscale score mean was 10.1, with a standard deviation of 2.7. No correlations between IQ variables and DES scores were noted. Documentation of abuse did not correlate with DES scores (r = .14, p > .05), possibly because so few participants (12) had abusive/neglectful backgrounds documented in their school records.

CHAPTER IV

DISCUSSION

Present Study

The present study investigated the usefulness of the DES as a means of better understanding various behavioral manifestations of emotional disturbance in the classroom. As noted by Mann and Sanders (1994), symptoms such as short attention span and emotional lability are often interpreted in the classroom as signs of ADHD while they may be indicative of dissociation. Mann and Sanders (1994) utilized the Childrens Perceptual Alteration Scale as a measure of dissociation but noted that the drawbacks to this instrument included a lack of cutoff scores to distinguish clinical from nonclinical samples. The DES has been found to reliably identify adults who have had dissociative experiences resulting from traumatic or stressful life events; this study investigated whether a modified DES could be completed by children and adolescents in order to quantify dissociative experiences as a means of differentiating types and degrees of emotional disturbance.

Results showed general trends in the directions expected, but often did not reach significance. This lack of significance may have been partly due to the modest

sample size and large variation among subjects on a variety of characteristics, including age, diagnosis, and time from psychological testing to completion of the DES. Although average DES scores obtained in this study were larger than those reported elsewhere, these scores are not directly comparable with those reported in previous studies because the DES was modified slightly for use with a younger population in this study. The mean DES score generated by the children and adolescents in this study was 27.7. By comparison, Ross et al. (1989) found a median DES score of 17.7 for a group of junior high school students ranging in age from twelve to fourteen years old. Baldwin & Sewell (1994) found a mean DES of 18.48 for a group of adult women traumatized by rape and diagnosed with PTSD. The modification of the DES for this study, which included altered wording on one item to make it applicable to the population being sampled, may have increased the degree of endorsement. However, the participants in this study, in contrast to those in the Ross study, had been referred for evaluation because of observed abnormalities in their functioning in school, so elevated scores may have reflected greater pathology; higher scores would be consistent with the construct of dissociation as a component of some behavioral or emotional disturbance. It should also be noted that although average DES scores were higher in this study than in several others, the large standard deviations

were typical compared with other studies (e.g., Heber et al., 1989; Zatzick et al., 1994).

Hypothesis 1 in this study predicted higher DES scores for participants identified as depressed than those identified as anxious. The scores showed a trend in that direction, but this difference did not reach significance. Participants who received a primary diagnosis of ADD generated a lower DES average than those identified as depressed or anxious. Although these differences did not reach statistical significance, they were in the predicted direction. The two participants who received no diagnosis, besides being too small a group for reliable statistical comparisons, also presented a confound because their lack of diagnosis reflected the "educational need" requirement of the school psychological setting. In other words, a student whose school performance does not appear to be compromised by emotional turmoil, is unlikely to receive a diagnosis, even if test data suggests the presence of some emotional issues.

Post-hoc analyses investigated a number of other observed trends. Some participants completed the DES on the same day they completed the psychological testing and others completed the DES at a later date. When time between assessment and DES was covaried, the trend towards higher DES scores for depressed participants was strengthened. Some participants were described as having more than one

diagnosis; it seemed possible that more diagnoses might signal greater disturbance. Participants who had received more than one diagnosis tended to generate a higher DES score than those with only one, suggesting that greater variety of symptoms might correlate with a tendency to dissociate. For example, a participant who was diagnosed with depression, anxiety, and a personality disorder might be more likely to show a higher DES score than a participant with a simple diagnosis of dysthymia. A multifaceted diagnostic picture might suggest (cf. Mann & Sanders, 1994) a more traumatic history or greater vulnerability to stressors, or both.

It was also noted that personality disorder characteristics were included in diagnostic descriptors more frequently than expected. Because personality disorders are relatively infrequently diagnosed in this setting, this observation prompted further investigation. Correlations with DES scores showed a trend in the expected direction, although the results did not reach significance. Although only limited histories were available, the fact that these participants were described diagnostically as exhibiting characteristics of a personality disorder may suggest that they have experienced chronically stressful family circumstances; the higher DES scores generated by this group may be representative of not just the maladaptive behaviors specified by such a diagnosis, but may suggest some etiology

for these higher scores. This would fit with the findings of other authors (e.g., Famularo et al., 1990), relating chronicity of stress to degree of dissociation. These children may appear disturbed in many ways.

The effect of time differences (from psychological testing to completion of the DES) on DES scores appeared to be artifactual; when time was equalized in an analysis of covariance examining DES scores by primary diagnosis, the trend showing higher dissociation among depressed participants was strengthened. Several interpretations of this are possible. Participants who completed the DES the longest time after psychological testing may have had experiences, including perhaps interventions at school, which impacted their DES scores. Or, students who were evaluated in the fall might have presented with anxiety related to school attendance which masked underlying depression; when these participants completed the DES towards the end of the school year, the underlying problems were reflected in their DES scores. Also, all students who were tested during the summer also completed the DES on the same day they completed the psychological evaluation; school was not in session at the time, so lower overall stress levels might have reduced anxious symptoms and allowed for more accurate diagnoses of depression (i.e., school anxiety would be reduced, allowing for clearer expression of depressive symptoms).

Correlations were also noted between gender and DES scores; this was not predicted based on previous studies. This finding may also be partly an artifact of the setting. Because acting-out children are typically more of a problem than withdrawn children in the school setting, and more boys act out, more boys tend to be referred. Overall referral data bear this out. Girls, more likely to present as withdrawn, are referred less often; those who are referred might be more disturbed. In other words, withdrawn behaviors may need to be relatively more severe than acting out behaviors in the classroom to prompt a referral. Perhaps the higher DES scores generated by girls in this study are reflective of this phenomenon. It is also possible that there is a gender effect on the DES in children.

Diagnostic biases also may have affected the results related to age. Historically in the school district sampled, a diagnosis of depression or anxiety was used to meet eligibility criteria to label a student as emotionally disturbed. Younger children are more likely to be diagnosed as anxious in this setting rather than depressed; this trend reverses as children get older. Additional features are more likely to add to the diagnostic complexity in late adolescence; the extreme DES scores generated by several older subjects may reflect a more chronic disturbance, such as an emerging personality disorder rather than simply depression or anxiety, although these are still frequently

not formally diagnosed. Although these more disturbed students likely demonstrate levels of functioning vastly different from the younger students sampled, due to the biases inherent in this setting, circumscribed diagnoses make these individual scores more difficult to explain. It is also important to note that much information which might help understand both the DES scores and the etiology of a student's disturbance is typically not available in a school file. Accurate family histories are difficult to obtain; parents who have not sought treatment or evaluation for their children can be defensive when questioned by school personnel. It seems feasible that many participants might have more pathogenic histories than their school records show. This does not mean that the DES is not useful in this setting, but rather that accurate correlational data may be more difficult to obtain.

The lack of correspondence between teachers' observations of behaviors and DES scores is not surprising given that theoretical models would predict that behavioral inventories more accurately rate externalized behaviors than internally oriented ones; the more dissociative child's behavioral patterns may be more difficult to describe objectively. Mann and Sanders (1994) had greater concordance between behavioral descriptors and DES scores, utilizing the Achenbach Child Behavior Checklist (CBCL), a parent report form, to document their subjects' behaviors.

Another important difference between that study and this one may be that those families volunteered to participate in the evaluation process, and may have been more disclosing of family information.

DES with Children/Adolescents

The DES has been shown to be sensitive to dissociative symptoms in adult populations. The results of this study are less clear with regard to the utility of the DES with younger subjects. Although the statistical significance of the results generally did not reach the alpha level dictated by convention for this type of research, the differences observed seemed consistent and large enough to be clinically useful. Certainly the results indicate that the DES can provide some information not found using other more established assessment instruments; it might effectively be used as an adjunct to other testing.

Dissociation has been conceptualized as part of a normal defense system, with individual differences partly biologically or genetically based; the predisposition to use dissociation as a style of coping is either fostered by the environment or is less developed because of less need for its protective function. Understanding dissociation as a coping style may be more useful than trying to identify a link with specific diagnoses. The clinical significance of the DES with this population therefore may be to assist in

understanding a child's coping and/or to suggest a need for more rigorous inquiry into that child's life circumstances.

Various studies have investigated dissociative phenomena as a component of several psychiatric disorders; these links seem to be related to the severity of the stressors antecedent to the disorder studied (whether the diagnosis is depression, anxiety, or something else). If the DES measures dissociative tendency as a trait (as noted by Mann & Sanders, 1994), which is somewhat stable within an individual, then degree of dissociation is likely to be related to the severity of whatever disorder it accompanies. Although the trends in this data suggest that higher DES scores are more likely to accompany a diagnosis of depression than a diagnosis of anxiety, this data may be interpreted as related to the severity of the disturbance. Simply comparing the DES scores of depressed versus anxious subjects may be like comparing apples and oranges; it may be that the elevation of the DES scores are not so much related to the diagnosis per se, but rather to the underlying degree/chronicity of the disturbance. Due to the nature of the setting in the present study, children diagnosed with depression likely had a more chronic course of emotional disturbance than those diagnosed with anxiety. The child who is observed to be depressed/withdrawn in the school setting is likely to have been like this for a longer period of time prior to referral than the student who is

anxious/acting out; the disruptive student is more quickly referred. In keeping with this interpretation, a person with a diagnosis of a personality disorder, which represents a chronic and pervasive pattern of pathological behavior, is even more likely to exhibit dissociative symptoms. This interpretation fits the results in this study. It is also likely that the severity of disturbance within a given diagnostic category may correlate with elevations in DES scores. For example, a person with PTSD might be expected to generate higher DES scores than a person with a simple phobia; this was not explicity evaluated in this study, as diagnoses were analyzed in general groups. This might be an area for further investigation.

Limitations to the Present Study

A number of limitations to this study may restrict the generalizability of the results. The nature of the participant selection process must be considered a restricting factor. First of all, the bulk of students referred for special education testing are male, presenting a greater abundance of externalizing rather than internalizing disturbances, and overrepresenting males in the subject pool.

Second, the self selection bias inherent in the consent process may have excluded children from families which are more disturbed or have experienced more disruptive events;

families with more traumatic or troubled backgrounds may not have provided consent for their child to participate.

Third, the diagnostic bias inherent in school psychological services is towards diagnosing at a basic level to qualify an eligible child for services, rather than being more exhaustive or specific (i.e., children are often diagnosed with a Depressive Disorder NOS, rather than specifying Dysthymia.) This bias may have impacted the range of diagnostic categories identified, and the specific diagnoses assigned.

Fourth, this study utilized teacher report forms to quantify behaviors; research published since data was collected for this study suggested that it might be more valuable to obtain parent reports of behavior to correlate with DES scores. In addition, in this study, behavior ratings were obtained using two different instruments so that the total number of participants evaluated with each was lower than if all had been rated on the same one. Had the same rating system been applied to all participants, trends in this portion of the data might have been more easily noted.

Fifth, some participants completed the DES the same day they completed the psychological testing which supplied their diagnosis, while others completed the DES days or even months later. As in the behavioral observations data, a split in the total subjects on this variable may serve to

have obscured trends. Also, because diagnoses in children are notoriously unstable, those participants who completed the psychological testing long before the DES may have presented a somewhat different diagnostic picture at the time of DES administration.

Finally, the modifications made to the DES for administration to this population may have altered in some manner the construct it was measuring. The age groups sampled may also have interpretated the items differently than adults do. Because children are typically less defensive than adults, they may also tend to acknowledge unusual experiences more, so the scale may not be as useful as a measure of pathological dissociation as it is for adults. Children may also vary more in their ability to estimate time and percentages, and may in fact view time much differently than do adults. This characteristic would predominantly affect degrees of endorsement, rather than items endorsed.

Clinical Implications

Given the results of the present study based on conventional statistical analyses, it is useful to cautiously examine dissociation in light of its clinical utility with children. In clinical terms, the measurement of dissociation levels provided meaningful data, both in differentiating diagnostic groups and when participants were examined on a case by case basis. First of all,

dissociation as a prominant component of childhood depression merits continued attention. As an adjunct to more conventional psychological testing, DES scores may provide some insight into an individual child or adolescent's non-observable experiences and coping mechanisms. The DES provides a measure for the child's perception of his or her life experiences in a way which might suggest directions for intervention in schools and elsewhere. As cautioned by Bernstein and Putnam, however, the DES is not designed to be a diagnostic instrument. It does not even seem appropriate as a stand-alone screening device for children. Given that dissociation has its place within the normal developmental spectrum, the potential for misuse of DES scores could lead to inappropriate labeling or stigma. It seems most appropriately utilized as a component of a battery of tests.

Summary and Directions for Future Research

The findings of this study suggest several avenues for further research. The modified DES might be administered to non-referred students to obtain a control group for comparison of these findings. Such a group, matched for age, SES, and family background, might provide further insight into the nature of dissociative tendencies in these students, and suggest how the referred students might differ from nonreferred peers. Further investigation into the differences due to age and gender might start with these

nonreferred students. Additional research might utilize the Achenbach CBCL (the parent measure) to determine if behaviors observed by parents correlate any more accurately with DES scores and diagnoses of referred students than teacher observations of behavior.

It might also be interesting to compare scores on the DES with scores on the Childrens Perceptual Alteration Scale. This scale was used with elementary age children and found to correlate with parents behavioral observations and dissociative tendencies in parents (Mann & Sanders, 1994) Correlations between this scale and the DES might provide further validation of the construct of dissociation in children.

In summary, this study suggests that the modified DES shows some promise for application with younger subjects. The general trends observed in this study fit with a theoretical construct of dissociation as a coping style developed and used to varying degrees in response to stressful life events. DES scores may be more reflective of degree of disturbance, related to chronicity and severity of distress, rather than type of pathology per se. This concept lends itself to application in a variety of settings.

APPENDIX A

DISSOCIATIVE EXPERIENCES SCALE

Dissociative Experiences Scale

Identification #_____(M/F) Age _____ Date _____

Directions:

This questionnaire consists of 28 questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of drugs or alcohol. To answer the questions, make a mark on the dotted line with a vertical (up and down) line at the place that seems to show how often you have had each experience.

(For the child/adolescent version, the directions were simplified slightly, and the line scale was modified from a percentage scale to a number/word modified line to assist in making judgements. Additionally, some minor wording changes were made in the questions themselves to better fit the language or role of the identified age groups. The original wording appears in parentheses after an * which follows each change.)

Several sample questions were also added, to ensure that all participants understood the correct procedure for marking the lines. The following were the samples used:

A. How often should people brush their teeth before bedtime?

Mark on the line how often you do this.

B. Some people walk home from school with their friends.

Mark on the line how often this happens with you.

C. People sometimes fall asleep in class.

Mark on the line how often this happens to you.

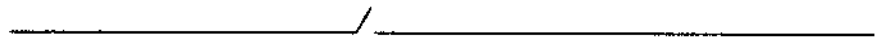
D. People sometimes have their favorite food served in the school cafeteria.

Mark on the line how often this happens to you.

E. People sometimes feel really disappointed when someone gives them a gift they really don't like.

Mark on the line how often this happens to you.

Example:



never sometimes all the time

1) Some people have the experience of riding in*(driving) a car and suddenly realizing that they don't remember what has happened during all or part of the trip. Mark the line to show how often *(what percentage of the time) this happens to you.

never all the time

2) Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Mark the line to show how often this happens to you.

never all the time

3) Some people have the experience of finding themselves in a place and having no idea how they got there. Mark the line to show how often this happens to you.

---

never all the time

4) Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Mark the line to show how often this happens to you.

---

never all the time

5) Some people have the experience of finding new things among their belongings that they do not remember getting *(buying). Mark the line to show how often this happens to you.

---

never all the time

6) Some people sometimes find that people come up to them *(they are approached by people) that they do not know who call them by another name or say *(insist) that they have met them before. Mark the line to show how often this happens to you.

---

never all the time

7) Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves doing something, and they actually see themselves as if they were looking at another person. Mark the line to show how often this happens to you.

---

never all the time

8) Some people are told that they sometimes do not recognize friends or family members. Mark the line to show how often this happens to you.

---

never all the time

9) Some people find that they have no memory for some important events in their lives (for example, a birthday or Christmas *(a wedding or graduation)). Mark the line to show how often this happens to you.

---

never all the time

10) Some people have the experience of being accused of lying when they do not think that they have lied. Mark the line to show how often this happens to you.

---

never all the time

11) Some people have the experience of looking in a mirror and not recognizing themselves. Mark the line to show how often this happens to you.

---

never all the time

12) Some people have the experience of feeling that other people, things *(objects) and the world around them are not real. Mark the line to show how often this happens to you.

---

never all the time

13) Some people have the experience of feeling that their body does not seem to belong to them. Mark the line to show how often this happens to you.

---

never all the time

14) Some people have the experience of sometimes remembering a past event so clearly *(vividly) that they feel as if they were reliving that event. Mark the line to show how often this happens to you.

---

never all the time

15) Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Mark the line to show how often this happens to you.

---

never all the time

16) Some people have the experience of being in a familiar place but finding it strange and seeming different *(unfamiliar). Mark the line to show how often this happens to you.

---

never all the time

17) Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Mark the line to show how often this happens to you.

---

never all the time

18) Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Mark the line to show how often this happens to you.

---

never all the time

19) Some people find that they sometimes are able to ignore pain. Mark the line to show how often this happens to you.

---

never all the time

20) Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Mark the line to show how often this happens to you.

---

never all the time

21) Some people sometimes find that when they are alone they talk out loud to themselves. Mark the line to show how often this happens to you.

---

never all the time

22) Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Mark the line to show how often this happens to you.

---

never all the time

23) Some people sometimes find that in certain situations they are able to do things very easily *(with amazing ease and spontaneity) that would usually be difficult for them (for example, in sports, school, or with friends *(work,

social situations)). Mark the line to show how often this happens to you.

---

never all the time

24) Some people sometimes find that they cannot remember whether they have done something or have just thought about doing it (for example, not knowing whether they have just mailed a letter or have only thought about mailing it). Mark the line to show how often this happens to you.

---

never all the time

25) Some people find evidence that they have done things that they do not remember doing. Mark the line to show how often this happens to you.

---

never all the time

26) Some people sometimes find writings, drawings or notes among their things *(belongings) that they must have done but cannot remember doing. Mark the line to show how often this happens to you.

---

never all the time

27) Some people sometimes find that they hear voices inside their head that tell them to do things or say things about what *(comment on things that) they are doing. Mark the line to show how often this happens to you.

never all the time

28) Some people sometimes feel as if they are looking at the world through a fog so that people and things *(objects) appear far away or unclear. Mark the line to show how often this happens to you.

never all the time

APPENDIX B

CONSENT FORM

Dear Parent:

I will be conducting a research project designed to investigate some possible correlates of anxiety and depression in school age children. I am requesting your permission for your child to participate. Your child's participation will consist of conmpleting a 28 item self-report questionnaire. On this questionnaire, your child will estimate the frequency he or she has had various experiences; it is important for you to know that none of the content asks about religion, sexuality, or abuse. The questionnaire takes about 10 minutes to complete.

Each child who participates will leave class for only the period of time it takes to complete the questionnaire. I expect that most children will enjoy the questionnaire and be interested in completing it. However, any child who does not wish to participate will not need to do so. Each child's questionnaire will be coded by number, so as to preserve confidentiality. Additional information will be obtained from the child's school records, and may include such information as age, gender, ethnicity, IQ, and teacher ratings of classroom behaviors. No contact with the child's teacher or additional information from the parent will be required.

There will be no personal risk or benefit to your child for his or her participation. However, the results obtained in this study may help other children at some future date. Your decision whether or not to allow your child to participate will in no way affect your child at school. The individual information obtained from each questionnaire will not be released to the school or be contained in your child's school records. At the end of the study, a summary of the results will be made available to the school district and to all interested parents. Results obtained from the completed project may be published in a scientific journal.

Should you have any questions or desire further information, please call me at 323-5774. Thank you in advance for your cooperation and support.

Sincerely,

Heather Queener, M.A.
Psychological Associate
Carrollton-Farmers Branch SD

THIS PROJECT HAS BEEN REVIEWED BY THE UNIVERSITY OF NORTH TEXAS COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS.

IT HAS ALSO BEEN APPROVED BY THE CARROLLTON-FARMERS BRANCH SCHOOL DISTRICT

Please indicate whether or not you wish to allow your child to participate in this project by completing the appropriate statement below. Please return this form in the enclosed envelope to the special education center as soon as possible. A copy of this form will be sent home with your child after completion of the questionnaire.

* I do grant permission for my child, _____ to participate in this project.

* I do not grant permission for my child, _____ to participate.

_____ _____

Parent/guardian signature Date

APPENDIX C

CHILDREN'S ASSENT FORM

Children's Assent Form

This is a short questionnaire that I'd like you to fill out if you want to. Your (mother, father, etc.) signed a form giving me permission to see if you would like to do this, but it is not something you have to do. Let me explain what it is.

You will read some descriptions of things people may experience and you will mark on a line how often those things may have happened to you. If you have trouble reading the questions, I will read them to you, but you will make the mark on the line each time.

There's no right or wrong answer to any of these, and you don't get a grade for doing it. You can stop doing this at any time, without getting in trouble or having anyone get mad at you. The paper won't even have your name on it, just a number. The information we get from kids who fill these out will be used in a research project. It doesn't have anything to do with your grades or your school work. Many people find that questionnaires like this can be fun to do. Would you like to do this one?

If any of the questions bother you, you can feel free to talk with me about them.

Yes, I would like to complete this questionnaire.

_____ _____

(Student's signature) (Date)

_____ _____

(Examiner's signature) (Date)

APPENDIX D

ADDITIONAL ANALYSES

Correlations, significant at the .01 level.

Gender with DES ..... r = .48
Gender with factor 1 ..... r = .45
Gender with factor 3 ..... r = .35
Age with total Burks ..... r = -.51
Age with average DES .....r = .38
Age with factor 1 .....r = .36
Race with response style .....r = .64
Full scale IQ with Verbal IQ .....r = .89
Full scale IQ with Performance IQ ..... r = .90
Full scale IQ with Similarities .....r = .71
Full scale IQ with response style .....r = -.36
Verbal IQ with Full scale IQ .....r = .89
Verbal IQ with Performance IQ ..... r = .62
Verbal IQ with Similarities ..... r = .81
Verbal IQ with factor 2 ..... r = -.38
Performance IQ with Full scale IQ ..... r = .90
Performance IQ with Verbal IQ ..... r = .62
Performance IQ with Similarities .....r = .49
Similarities with Full scale IQ .....r = .71
Similarities with Verbal IQ .....r = .81
Similarities with Performance IQ ..... r = .49
Number of diagnoses with depression ....r = .44
Number of diagnoses with anxiety ..... r = .38
Number of diagnoses with personality disorder.... r = .42
Depression with number of diagnoses ..... r = .44
Anxiety with number of diagnoses .....r = .38
Anxiety with primary diagnosis ..... r = .69
Personality disorder with number of diagnoses ... r = .42
Achenbach internal with Achenbach total ..... r = .77
Achenbach external with Achenbach total ..... r = .54
Achenbach total with Achenbach internal ..... r = .77
Achenbach total with Achenbach external ..... r = .54
Burks total with age ..... r = -.52
Average DES with gender ..... r = .48
Average DES with age ..... r = .38
Average DES with factor 1 ..... r = .95
Average DES with factor 2 ..... r = .73
Average DES with factor 3 ..... r = .90
Response style with race ..... r = .64
Response style with Full scale IQ ..... r = -.36
DES Factor 1 with gender ..... r = .45
DES Factor 1 with age .....r = .36
DES Factor 1 with average DES ..... r = .95
DES Factor 1 with factor 2 ..... r = .55
DES Factor 1 with factor 3 ..... r = .83
DES Factor 2 with Verbal IQ ..... r = -.38
DES Factor 2 with average DES..... r = .73
DES Factor 2 with factor 1 ..... r = .55
DES Factor 2 with factor 3 ..... r = .63

DES Factor 3 with gender ..... r = .35
DES Factor 3 with average DES ..... r = .90
DES Factor 3 with factor 1 ..... r = .83
DES Factor 3 with factor 2 ..... r = .63

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