A COMPARISON
OF DISSOCIATIVE
EXPERIENCES IN ADULT
FEMALE OUTPATIENTS
WITH AND WITHOUT
HISTORIES OF EARLY
INCESTUOUS ABUSE

Frances L. Strick, Ed.D. S. Allen Wilcoxon, Ed.D.

Frances L. Strick, Ed.D., is a Mental Health Counselor in the Cheaha Mental Health Center, Talladega, Alabama. S. Allen Wilcoxon, Ed.D., is Associate Professor of Counselor Education at The University of Alabama, Tuscaloosa, Alabama.

For reprints write: S. Allen Wilcoxon, Ed.D., Behavioral Studies, The University of Alabama, College of Education, Box 870231, Tuscaloosa, AL 35487-0231.

#### ABSTRACT

The critical role of early incestuous abuse in the development of high levels of dissociative symptoms has been suggested. The present study examines the reliability and validity of the Dissociative Experiences Scale for use with an outpatient population and compares the frequency of dissociative experiences in adult female outpatients with and without histories of early incestuous abuse. The Dissociative Experiences Scale (DES) and a Background Information Questionnaire (BIQ) were administered to a sample of 84 adult female outpatients from four diagnostic categories: Affective Disorder, Post-traumatic Stress Disorder (PTSD), Panic Disorder, and Schizophrenia. Cronbach's alpha within each diagnostic category (range .88 - .94) indicated good internal consistency for the DES with this sample. The Kruskal Wallis analysis,  $X^2 = 8.49$  (N = 84, df = 3, p < .05), demonstrated support for criterion-related validity of the DES by indicating a significant difference among diagnostic categories. Ryan's procedure demonstrated a distinction between Affective Disorder and PTSD and between Affective Disorder and Schizophrenia (p < .01). Forty-four % (N = 37) of the subjects reported incestuous abuse before 16 years of age. Seventy-one % (N = 60) reported sexual or physical abuse, rape, or assault, at some time during their lives. Subjects with histories of early incestuous abuse scored significantly higher,  $X^2 = 10.79$  (N = 84, df = 1, p < .001), on the DES than those who reported no history of early incestuous abuse. When matched on diagnostic category and age, DES scores remained significantly higher,  $X^2 = 5.00$  (N = 20, df = 1, p < .01), in the subjects with histories of early incestuous abuse than in those without such histories. The results of the present study support the need for exploration of dissociative symptoms in incest survivors.

# INTRODUCTION

Incestuous abuse is more prevalent and more destructive than is generally realized. Estimates are that 10% to 40% of all children experience some sort of sexual abuse, with girls being victimized two to ten times more frequently than boys (Swink & Leveille, 1986). A study by Russell (1986) (N=930) yielded the following findings: before reach-

ing eighteen years of age, 16% of females were sexually abused by a family member, 31% of females were sexually abused by a non-family member, and, when categories were combined, 38% of females were sexually abused. When childhood sexual abuse is incestuous, an estimated 80% to 90% of the victims are female (Gelinas, 1983).

Rates of childhood sexual abuse are even higher among clinical groups. For example, female psychiatric inpatients are reported to have childhood sexual abuse rates of 22% to 50% (Bryer, Nelson, Miller, & Krol, 1987; Chu & Dill, 1990; Goodwin, Attias, McCarty, Chandler, & Romanik, 1988; Jacobson, 1989). From 50% to 70% of childhood sexual abuse of female psychiatric inpatients is reportedly incestuous (Bryer et al., 1987; Goodwin et al., 1988). Outpatient rates of claiming sexual abuse during childhood range from 19% to 56%, depending on diagnosis (Coons, Cole, Pellow, & Milstein, 1990; Jacobson, 1989; Stone, 1990).

A relationship between forms of child abuse, including incest, and dissociative symptoms is strongly suggested in the literature (Braun, 1990; Putnam, 1989). In this regard, abuse by a family member would seem to represent a greater betrayal of trust than would abuse by a non-family member (Chu & Dill, 1990). Because incestuous abuse may be considered the ultimate victimization, incest may be the childhood trauma that is most likely to activate dissociation as a defense (Blackman, 1989). In fact, early incestuous abuse is commonly reported in persons diagnosed as having Multiple Personality Disorder (MPD) (Putnam, Guroff, Silberman, Barban, & Post, 1986), Post-traumatic Stress Disorder (PTSD) (Coons, Cole, Pellow, & Milstein, 1990; Spiegel, 1984), and Borderline Personality Disorder (BPD) (Stone, 1990), all diagnoses for which dissociative symptoms are criteria. Despite suggestions to support a relationship between incestuous abuse and dissociation, a review of related literature yields little empirical evidence to support such claims. Relatedly, most reports focusing on this issue rely on findings from inpatient populations. This study was conducted to investigate the prevalence of dissociative experiences in adult female outpatients with and without histories of early incestuous abuse.

## **METHODS**

#### Subjects

Subjects for the study were female outpatients (N = 84) being served in a rural, southern community mental health center. Criteria for inclusion in the study were that subjects had to be eighteen years of age or older and have a prima-

ry diagnosis of PTSD, BPD, Schizophrenia, Panic Disorder, or Affective Disorder (depressed), based on criteria from the Diagnostic and Statistical Manual of Mental Disorders - Revised Edition (DSM III-R) (American Psychiatric Association, 1987). Clients who were actively psychotic, highly agitated, or functionally illiterate were not invited to participate in the study. Prospective subjects who met the criteria for inclusion in the study were invited to participate and indicated their willingness via signed consent. The signed consent form was separated from the response sheets to maintain anonymity.

#### Instrumentation

Background Information Questionnaire. A Background Information Questionnaire (BIQ), which was partially adapted from two other questionnaires (Bryer, Nelson, Miller, & Krol, 1987; Kilpatrick, 1986), was completed by each subject as an initial means of data collection. The essential nature of these data was demographic, with specific questions about experiences of sexual abuse. In this regard, incestuous abuse was defined as any activity of being touched or abused in a sexual way before sixteen years of age (Bryer et al., 1987) by a blood relative or someone perceived as a family member (Cole, 1985).

Dissociative Experiences Scale. The Dissociative Experiences Scale (DES) is a 28-item self-report questionnaire developed at the National Institute for Mental Health (Bernstein & Putnam, 1986). A visual analogue response for each item is used with the subject making a slash across a 100-mm line at the appropriate place to indicate the percentage of the subject's time that the symptom or experience described in the item occurs. Each item score is adjusted to the nearest 5-mm, and the DES score is derived from the average of the 28-item scores. This number is a quantitative measure of dissociative symptoms and experiences, reflecting the number of different dissociative experiences and the frequency of their occurrence. The range of DES scores is 0 to 100 (Bernstein & Putnam, 1986).

Subjects for the Bernstein and Putnam (1986) study in the development of the DES were drawn from non-clinical and clinical sources representing eight groups: normal adults, adult alcoholics, adult patients with Phobic Anxiety, adult Agoraphobics, adolescents, Schizophrenics, adult patients with PTSD, and adult patients with MPD. Subjects from the clinical groups were diagnosed *independently* (Bernstein & Putnam, 1986, p. 729) within various other research and treatment programs, according to *DSM-III* (American Psychiatric Association, 1980) criteria. The size of groups ranged from 10 - 34, and the total sample was 143 subjects.

Internal reliability for the DES was measured by calculating split-half reliability coefficients for each group using the Spearman-Brown formula (Bernstein & Putnam, 1986). Split-half reliability coefficients were .71 or greater for each group. A test-retest reliability coefficient of 0.84 was calculated using Spearman rank-order correlations from the DES scores of twelve adult and fourteen adolescent normal subjects who were given the scale on two occasions separated by an interval of four to eight weeks. The median correlation coefficient for item scores was .60.

Discriminant validity for the DES was investigated using the Spearman rank-order correlation between DES scores and age, and DES scores and socioeconomic status, yielding results of -.19 (p < .01,  $\underline{N}$  = 183) and .15 (p < .08,  $\underline{N}$  = 143), respectively (Bernstein & Putnam, 1986). The literature supports the presence of higher rates of dissociation, especially depersonalization, among young people (Myers & Grant, 1972; Roberts, 1960). The negative correlation between DES scores and age, therefore, supports validity of the DES. The low level of the correlation also supports the validity of the DES as a measure of dissociation which is not merely a developmental attribute. The low, positive correlation coefficient of .15 (p < .08) supports validity of the DES in measuring a construct that may be weakly associated with intelligence (Wilbur, 1984).

A Kruskal-Wallis test comparing DES scores across the different groups in the Bernstein and Putnam (1986) study yielded an  $\underline{X}^2$  value of 93.57 ( $\underline{N}$  = 192,  $\underline{df}$  = 7,  $\underline{p}$  < .001), providing evidence for criterion-referenced concurrent validity. Pairwise comparisons of each group's scores yielded significant differences for all comparisons except normal subjects and alcoholics, alcoholics and Phobics, Phobics and Agoraphobics, and Schizophrenics and adolescents. The distribution curve was leptokurtic and positively skewed.

Further validation of the DES was established in a later study presented at the annual meeting of the American Psychological Association (Carlson & Putnam, 1988). The DES was administered to a total of 203 subjects drawn from various diagnostic groups and late adolescent college students. A principal-components analysis was performed on the 28-item scores yielding three main factors which were found to account for 63% of the total variance in the item scores. This result supports construct validity of the DES.

A replication study conducted by Ross, Norton, and Anderson (1988) included a total of 102 adult subjects drawn from non-clinical and clinical sources. The median DES score of the MPD group was significantly different from the median DES score of each of the other groups: medical students, Panic Disorder, Chemical Dependency, and Schizophrenia.

Further cross-validation of the DES was provided by Ensink and van Otterloo (1989) in their validation study in the Netherlands. The DES was administered to eighty students, seven outpatients diagnosed as having MPD, and thirteen outpatients diagnosed as having other dissociative disorders. Interitem consistency was calculated at 0.90 for students and 0.91 for outpatients using Cronbach's alpha. These high correlation coefficients suggested good internal consistency. The Mann-Whitney test yielded significant differences in the DES scores between students and patients with other dissociative disorders, and between patients with MPD and patients with other dissociative disorders, indicating good criterion validity.

In contrast to reports of the ability of the DES to discriminate between diagnostic groups (Bernstein & Putnam, 1986; Carlson & Putnam, 1988; Coons et al., 1989; Ensink & van Otterloo, 1989; Herman et al., 1989; Lowenstein & Putnam, 1988; Ross et al., 1989), Chu and Dill (1990) found no significant differences in established diagnoses between low and high DES scorers in 98 psychiatric inpatients.

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However, elevated DES scores were correlated with early abuse experiences. When physical abuse was perpetrated by a family member, DES scores were significantly elevated, but when the physical abuse was by an extrafamilial perpetrator, DES scores were not significantly elevated. Likewise, when sexual abuse was perpetrated by a family member, DES scores were significantly elevated, but when sexual abusers were not family members, DES scores were not significantly elevated.

## Data Collection and Analysis

Although the nature of data collected using the DES can lend itself to analysis using conventional parametric procedures, non-parametric procedures have been recommended for the DES (Bernstein & Putnam, 1986). This suggested procedure was recommended for data collected in this study by one of the developers of the DES (E.B. Carlson, personal communication, 1989).

Matching by diagnostic category and age was employed in this study to reduce the contribution of chance differences due to these variables and to assist in estimating the effect of a history of incest. Matching by diagnostic category was employed because of the correlation of dissociative symptoms with diagnoses. In earlier studies, persons diagnosed with MPD, PTSD, and other dissociative disorders scored higher on the DES than persons diagnosed with BPD and Schizophrenia, while those diagnosed with Affective Disorder attained the lowest scores (Bernstein & Putnam, 1986; Coons et al., 1989; Ross, Norton, & Anderson, 1988). Matching by age was employed because of the repeated finding of a negative correlation with DES scores (Bernstein & Putnam, 1986; Ensink & van Otterloo, 1989; Ross, Ryan, Anderson, Ross,

> & Hardy, 1989; Sanders et al., 1989), and as an approximate control for length of time elapsed since

early abuse.

TABLE 1 Demographic Characteristics by History of Early Incestuous Abuse

	Group			
Variables	History of Incest (n = 37)	No History of Incest (n = 47)	Total (N = 84)	
Mean Age in Years	32	41	37	
Ethnic Origin				
White	30	35	65	
Black	6	12	18	
Other	1	0	1	
Mean Years of Education	10.4	10.6	10.5	
Marital Status				
Married	15	15	30	
Separated, Divorced,				
or Widowed	19	29	48	
Single	3	3	6	
Mean Number of Children	1.9	2.4	2.2	
Employed Outside of Home	8	11	19	
Diagnostic Category				
Affective Disorder	25	34	59	
Panic Disorder	4	4	8	
Schizophrenic Disorder	3	5	8	
Post-traumatic Stress				
Disorder	5	4	9	

## RESULTS

The three questionnaires completed by subjects who were diagnosed as having Borderline Personality Disorder were eliminated from the study because the number (N = 3) in this diagnostic category was considered too small to be meaningful. Thirteen prospective subjects were eliminated because their questionnaires were incomplete. Three subjects were also excluded because they were visually impaired. Usable questionnaires were completed by 84 subjects. Specific categories were Affective Disorder (N = 59), Post-traumatic Stress Disorder (PTSD) (N = 9), Panic Disorder (N = 9) = 8), and Schizophrenia ( $\underline{N}$  = 8).

#### **BIO Findings**

Demographic characteristics of the subjects are presented in

Mean age of the subjects was 37 years, and the range was 19-64 years of age. Sixty-five (77.4 percent) of the subjects were white, 18 (21.4 percent) of the subjects were black, and one (1.2 percent) of the subjects was of other ethnic origin (i.e., Indian). Mean years of education was 10.5, and the range of years of education was 6 - 18 years. Of the total sample, 40 (48 percent) were high school graduates or had completed a General Education Degree (GED). Thirty (36 percent) of the subjects were married, 48 (57 percent) of the subjects were separated, divorced, or widowed, and 6 (7%) of the subjects had never been married. Seventy-three (88 percent) of the subjects had at least one child, and the mean number of children for participants in the study was 2.2. Nineteen (22 percent) of the subjects were employed outside the home.

jects were employed outside the home.

Early incestuous abuse (i.e., sexual abuse before 16 years of age) was reported by 37 subjects (44 percent). The frequency of early incestuous abuse by diagnostic category was as follows: Affective Disorder (25 of 59, or 42 percent), Panic Disorder (4 of 8, or 50 percent), PTSD (5 of 9, or 56 percent), and Schizophrenia (3 of 8, or 38 percent). Sixteen subjects (19 percent) reported early sexual abuse by persons other than family members, and, when categories were combined, the total for early sexual abuse was 44 subjects (52 percent). Early sexual or physical abuse was reported by 56 subjects (66 percent). Of those subjects who reported early sexual abuse, early physical abuse, or both, 43 (76 percent) reported sexual abuse, physical abuse, or both, at 16 years of age or later. Conversely, 6 (12 percent) of the 49 subjects who reported sexual abuse, physical abuse, or both, at 16 years of age or later, reported no

early sexual or physical abuse.

Sexual abuse or rape before or after 16 years of age, by a family member or non-family member, was reported by 50 (60 percent) of the total sample. Physical abuse, sexual abuse, assault, or rape, at some time during their lives was reported by 60 (71 percent) of the

total sample.

**DES Findings** 

The median score on the DES (Bernstein & Putnam, 1986) for subjects in the sample was 23.3, the mean score on the DES was 25.09, and the range of DES scores was from 3.06-74.29. The highest median DES score was in incest survivors in the diagnostic category of Schizophrenia (Table 2).

Cronbach's coefficient alphas for the diagnostic categories ranged from .88-.94, and the overall reliability coefficient was .94, indicating good internal consistency (Ensink & van Otterloo, 1989). A Kruskal-Wallis yielded an X<sup>2</sup> value of 8.45 (N = 84, df = 3, p < .05) indicating a statistically significant difference among diagnostic categories. Subsequently, Ryan's procedure was used to perform pairwise comparisons among diagnostic categories (Kirk, 1968).

This procedure also revealed statistically significant differences among two pairs of diagnostic categories, these being: Affective Disorder versus PTSD, and Affective Disorder versus Schizophrenia (Table 3).

The Mann-Whitney U was calculated to compare the median DES scores of adult female outpatient incest survivors to the median DES scores of adult female outpatients who claimed no history of incest. Diagnostic categories were collapsed within each group for this analysis. The results of the analysis indicated a statistically significant difference (Table 4).

The adult female outpatient incest survivors were then matched on diagnostic category and age with adult female outpatients who claimed no history of incest. Friedman's two-way analysis of variance by ranks was calculated to determine if the groups were drawn from the same population. The results of the analysis indicated a statistically significant difference (Table 5).

## DISCUSSION

The DES had good internal consistency, as measured by Cronbach's alpha, for the outpatient population in the study. Internal consistency was demonstrated by high coefficient

TABLE 2 Median DES Scores by Diagnostic Category and History of Incestuous Abuse

		Diagnostic Category			
History	Affective Disorder	Panic Disorder	Schizophrenic Disorder	Post- traumatic Stress Disorder	
Incest	23.9	29.0	60.7	37.1	
No Incest	12.8	24.4	25.7	26.7	
Overall	18.6	29.1	30.5	34.1	

TABLE 3
Pairwise Comparisons of Dissociative Experiences Scale (DES)
Scores by Diagnostic Category

	Diagnostic Category		
Affective History Disorder	Panic Disorder	Schizophrenic Disorder	Post- traumatic Stress Disorder
sorder	NS	*	*
ler		NS	NS
nic Disorder			NS
		<b>Disorder Disorder</b> Sorder NS	Affective Panic Disorder Schizophrenic Disorder NS * der NS NS

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alphas within diagnostic categories and within the overall sample. Criterion-related validity was demonstrated by the ability of the DES to differentiate between Affective Disorder versus PTSD and between Affective Disorder versus Schizophrenia in the study.

Dissociative experiences, as measured by scores on the DES, were significantly higher in the group composed of survivors in early incestuous abuse than in the group composed of outpatients who reported no history of early incestuous abuse. Subjects' scores on the DES were significantly higher when subjects were matched on diagnostic category and age, suggesting that the difference was not merely a function of clinical or age factors.

A history of early incestuous abuse in 44% ( $\underline{N}=37$ ) of the adult female outpatients in the present study is a higher rate than that reported in studies of inpatients. Early incestuous abuse was reported by 23% of female psychiatric inpatients in the Bryer et al. (1987) study, and 28% in Chu and Dill's (1990) study.

The high incidence of early incestuous abuse in the present study may reflect the selection of diagnostic categories. However, PTSD, the diagnostic category which has been reported to be associated with a high rate of sexual victimization (Coons, Bowman, Pellow, & Schneider, 1989), accounts for only 11% of the subjects from the total sample in the study. The contribution to the results of the study of excluding agitated or psychotic subjects as well as those who were functionally illiterate is unknown. Still, even if none of these groups had histories of early incestuous abuse, the incidence would

remain notable for the sample. The exclusion of subjects who were agitated or psychotic could more likely result in an underestimation than an overestimation of the rate of early incestuous abuse. Bryer et al. (1987) observed that severely disturbed patients were more likely to have been abused. As suppression and repression of memories may inhibit reporting of sexual and physical abuse, and subjects who refuse to complete questionnaires may be unwilling due to a history of abuse (Bryer et al., 1987), the incidence of incestuous abuse reported in the present study may be further depressed. The high incidence of early incestuous abuse in the present study may also reflect a real characteristic of distinctive population, such as the rural, southern population in the study (Finkelhor, 1978). The population in the study may be an example of a pocket of incest (Finkelhor, 1978), in which cultural groups may have developed a deviant view of family relationships (Finkelhor, 1978; Kluft, 1991).

The median (34.1) and mean (35.0) scores on the DES in the PTSD category are comparable to those of other studies and are higher than those of other diagnostic categories represented in this study. For females diagnosed as having PTSD, median scores of 31.25 (Bernstein & Putnam, 1986) and 28.76 (Lowenstein & Putnam, 1988) have been reported while a mean score of 32.7 has been noted by Coons et al. (1989).

DES scores for subjects diagnosed as Schizophrenic (md = 30.5 and  $\bar{x} = 36.4$ ) were next highest in this present study, but were still higher than those reported in other works. In this regard, Bernstein and Putnam (1986) reported 20.63

as median score on the DES for subjects diagnosed as Schizophrenic. Relatedly, Ross, Norton, and Anderson's (1988) reported a median DES score of 12.6 for a similar sample. Coons et al. (1989) reported a mean DES score of 10.5 for subjects diagnosed as Schizophrenic in their study. A clinical overlap between Multiple Personality Disorder (MPD) and Schizophrenia, due to the presence of Schneiderian symptoms, has been suggested (Fink & Golinkoff, 1990; Kluft, 1987a; Ross, Norton, & Anderson, 1988). Affirmative responses to item 27 of the DES (which addresses auditory hallucinations) by subjects diagnosed as having Schizophrenia could be expected to raise DES scores in this study.

The DES scores for Panic Disorder (md = 29.1) in this study are clearly higher than DES scores (md = 3.9) in a similar group in the study of Ross et al. (1988). The difference in DES scores in subjects diagnosed as having Panic Disorder in the two studies may

TABLE 4
Dissociative Experiences Scale (DES) Scores
by History of Early Incestuous Abuse

Group	Median Score	<u>N</u>
History of Incest	30.5	37
No History of Incest	17.8	47

# TABLE 5 Two-Way Analysis of Variance by Ranks of Dissociative Experiences Scale (DES) Scores of Matched Subjects

Group	Median Score	
History of Incest (selected)	3.5	
No History of Incest (selected)	18.2	

Note: Subjects from each group were selected fro matching on diagnostic category and age.  $X^2$  (1,  $\underline{N}$  = 20) = 5.00,  $\underline{p}$  < .05.

reflect the small sample sizes in this diagnostic category in the present study ( $\underline{n}=7$ ), and in the Ross, Norton, and Anderson (1988) study ( $\underline{n}=13$ ). DES scores ( $\overline{x}=22.2$ ) for subjects diagnosed as having Affective Disorder in the present study fell below those of all other diagnostic categories. DES scores ( $\overline{x}=6.0$ ) for subjects diagnosed as having Affective Disorder in the study by Coons et al. (1989) also fell below those of all other diagnostic categories in their study.

The ranking of diagnostic categories by DES scores in this study is compatible with what might be expected, supporting validity of the DES. Dissociative content of *DSM-III-R* criteria for diagnostic categories included in the present study is greatest for PTSD, less for Schizophrenia and Panic Disorder, and least for Affective Disorder diagnosis.

The lack of significant difference among several of the diagnostic categories in the study may reflect the small size of samples in three of the diagnostic categories. An additional factor may be the frequent misdiagnosis of MPD and other dissociative disorders (Kluft, 1987b; Rosenbaum, 1980). The absence of any diagnoses of MPD in the caseloads of the therapists assisting with data collection in the study suggests the possibility of the presence of subjects with undiagnosed MPD in the study, especially among those diagnosed as having Schizophrenia. This possibility is supported by the very high scores on the DES in the incest survivor subjects diagnosed as having Schizophrenia. Further, eight subjects in the total sample had DES scores above 45, and a very low false positive diagnosis of a Dissociative Disorder using 45 to 55 as a cutoff DES score has been reported (Frischholz, Braun, Sachs, Hopkins, Shaeffer, Lewis, Leavitt, Pasquotto, & Schwartz, 1990). As co-existing disorders are common (Crawford, 1990; Kluft, 1987), subjects with undiagnosed MPD or other dissociative disorders may be present in any of the diagnostic categories in this study. This possibility should not detract from the utility of the DES to differentiate incest survivors from those outpatients with no histories of incestuous abuse.

Higher DES scores in outpatients who were survivors of early incestuous abuse than in outpatients with no history of incestuous abuse, despite histories in both groups of a mixture of other traumatic experiences (e.g., early sexual abuse by strangers, assault, rape, and natural disasters), suggests that a history of early incestuous abuse may be a critical factor in the development of dissociative symptoms. The need for exploration of dissociative signs and symptoms in incest survivors as recommended by Bryer et al. (1987), Chu and Dill (1990), and Gelinas (1983) is supported by the results of this study. Further research efforts are recommended.

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