

Dissociative Experiences Scale

The Dissociative Experiences Scale (DES) was developed by Eve Bernstein Carlson, Ph.D. and Frank W. Putnam, M.D. The overall DES score is obtained by adding up the 28 item scores and dividing by 28: this yields an overall score ranging from 0 to 100. Copies of the DES can be obtained through the [Sidran Institute](#).

The following pages from Dr. Ross's book ***Dissociative Identity Disorder*** provide background information on the DES. The papers by Dr. Ross referenced in the text are listed elsewhere on this website.

The Dissociative Experiences Scale (DES) is a 28-item self-report instrument that can be completed in 10 minutes, and scored in less than 5 minutes. It is easy to understand, and the questions are framed in a normative way that does not stigmatize the respondent for positive responses. A typical DES question is, "Some people have the experience of finding new things among their belongings that they do not remember buying. Mark the line to show what percentage of the time this happens to you." The respondent then slashes the line, which is anchored at 0% on the left and 100% on the right, to show how often he or she has this experience. The DES contains a variety of dissociative experiences, many of which are normal experiences.

A newer form of the DES has a format in which the responses are made by circling a percentage ranging from 0% to 100% at 10% intervals. The advantage of the new form of the DES is that it is easier to score. It appears to have excellent convergent validity with the original form of the DES, and to be interchangeable with it (Ellason, Ross, Mayran, & Sainton, 1994).

The DES has very good validity and reliability, and good overall psychometric properties, as reviewed by its original developers (Carlson, 1994; Carlson & Armstrong, 1994; Carlson & Putnam, 1993; Carlson et al., 1993). It has excellent construct validity, which means it is internally consistent and hangs together well, as reflected in highly significant Spearman correlations of all items with the overall DES score. The scale is derived from extensive clinical experience with an understanding of DID. In the initial studies during its development and in all subsequent studies, the DES has discriminated DID from other diagnostic groups and controls at high levels of significance, based on either group mean or group median scores. In most samples, the mean and median DES scores for DID subjects are within 5 points of each other.

As reviewed in Chapter Six, the higher the DES score, the more likely it is that the person has DID. In a sample of 1,051 clinical subjects, however, only 17% of those scoring above 30 on the DES actually had DID (Carlson et al., 1993). The DES is not a diagnostic instrument. It is a screening instrument. High scores on the DES do not prove that a person has a dissociative disorder, they only suggest that clinical assessment for dissociation is warranted. This is how we report DES scores in our consults, as within or not within the range for DID, and as consistent or not consistent with the clinical and DDIS diagnosis of DID. DID subjects sometimes have low scores, so a low score does not rule out DID. In fact, given that in most studies the average DES score for a DID patient is in the 40s, and the standard deviation about 20, roughly about 15% of clinically diagnosed DID patients score below 20 on the DES.

The DES is the only dissociative instrument that has been subjected to a number of replication studies by independent investigators. We found in our original replication (Ross, Norton, & Anderson, 1988) that it discriminated DID from other groups very well, with scores similar to those found by Bernstein and Putnam (1986), and this pattern has persisted in all subsequent research.

In another study (Ryan, 1988; Ryan & Ross, 1988), we administered the adult form of the DES to 345 college students with a median age of 24 years, and 168 adolescents ages 12-14. We found that DES scores decline with age on, a curve similar to the decline in hypnotizability scores with age (Berg & Melin, 1975; Gordon, 1972; Morgan & Hilgard, 1973; Spiegel & Spiegel, 1978). The 12-year-olds had a median scores of 20.2, the 14-year-olds a median score of 14.8, and the college students a median of 7.9. The difference between 12- and 14-year-olds was significant at $p < .00001$.

Hypnotizability and dissociation are linked to each other, so it is not surprising that the DES yields scores that vary with age the way hypnotizability does. In both the adolescents and the college students, every item on the DES correlated with the overall scores for that group at $p < .001$ by Spearman correlation. This suggests that the adult form of the DES is a good screening instrument in subjects as young as 12; an adolescent form of the DES is in development.

In the same study, we wanted to find out if the DES is a useful screening instrument in a nonclinical population. We therefore administered the DDIS, the SCL-90 (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1973), and the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1977) to 20 high scorers and 22 low scorers on the DES, among the college students.

The high- and low-DES scorers differed on each subitem and the overall score of the SCL-90. They differed on 15 of 20 scales on the

MCMI, and they differed drastically on the DDIS. There were 25 different dissociative disorder diagnoses made in the high group, for example, and none in the low. This means that the DES can predict who will not, and who may have a dissociative disorder with high accuracy. As well, the DES taps into the dissociative component of general psychopathology, as evidenced by the SCL-90 and MCMI findings. This is consistent with everything in the clinical literature about dissociative disorders (see Chapter Six). The DES is not just picking out a dissociative anomaly that is unconnected to anything else.

This study helps to validate the DDIS. An interesting finding was noted when we did an analysis to see which sections of the DDIS best predicted DES score. The section of the DDIS that best differentiated the high- and low-DES scorers was the section called Secondary Features of Dissociative Identity Disorder. The items in this section are very similar to many questions in the DES, but were independently derived. We had not seen the DES before constructing the DDIS. This means that the two instruments are measuring the same phenomena, one by self-report and one by structured interview.

In another study (Ross, Miller, Reagor, et al., 1990), we found that in 82 DID subjects who completed both the DES and the DDIS, the Secondary Features of DID section predicted DES scores with a beta weight of 0.61 in a stepwise regression analysis, and was the only DDIS section to enter the regression equation at $p < .05$. This was consistent with the findings in the college student study.

A study by Draijer and Boon (1993) validated the DES against the SCIDD using a receiver operating characteristics analysis and found that the self-report and structured interview measures worked well together, and validated each other. These three independently developed measures, the DES, DDIS, and SCID-D, each based on distinct logic and scoring rules, all seem to be measuring the same domain in a reliable and valid fashion.

Because of these properties of the DES, and its extensive research base, It is the best self-report instrument for measuring dissociation available. The complete scale is available in the original paper (Bernstein & Putnam, 1986), except that question 25 is inadvertently missing. Question 25 reads, "Some people find evidence that they have done things that they do not remember doing. Mark the line to show what percentage of the time this happens to you." The new form of the DES, with no questions missing, is available in Carlson and Putnam (1993). The DES has been translated into many different languages and used in published research by many different researchers, many of whom are not primarily identified with the dissociative disorders field.

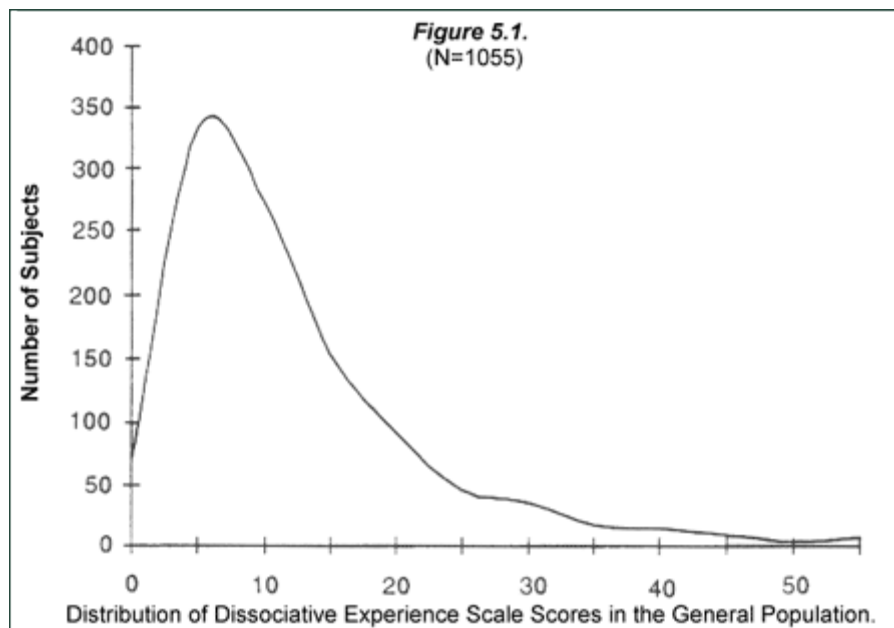
Van Ijzendoorn and Schuengel (in press) recently completed a metaanalysis of over 100 published DES studies involving 11,914 subjects. Their analysis involved 827 DID subjects from 30 different studies who had a mean DES score of 45.1 compared, for example, with 811 subjects with personality disorders from 12 different studies who had a mean DES score of 18.0. The meta-analytic data confirmed the robust psychometric properties of the DES, especially its ability to discriminate DID from other diagnostic groups.

An important result of the meta-analysis was that in 10 studies involving 2,513 subjects the combined effect size for the relationship between dissociation and hypnosis was only $d=0.27$, which is very modest, and classified as a weak degree of convergent validity between the measures: Moderate effect sizes are above 0.50, and strong ones above 0.80. By comparison, the combined effect size for pooled studies comparing DES scores of DID subjects to those with epilepsy was 1.16.

Dissociation in the General Population

One study of dissociation has been conducted in the general population in North America (Ross, 1991a; Ross, Joshi, & Currie, 1990; Ross, Joshi, & Currie, 1991), and one in Europe (Vanderlinden, 1993). A stratified cluster sample of 1,055 adults in the city of Winnipeg, Canada, completed the Dissociative Experiences Scale (DES) and provided demographic information. Details about the procedure and sample are given in the main paper arising from the study (Ross, Joshi, & Currie, 1990). The sample was representative of the city as a whole when compared with census data, and there were no methodological problems with the sampling procedure.

The distribution of DES scores among the 1,055 respondents is shown in Figure 5.1. The curve is highly left-skewed. It shows that most people in the general population have very few dissociative experiences, while a small number have a lot: The vast majority of individuals in the general population report never experiencing the most pathological DES items. A reanalysis of the data done by Neils Waller (Waller & Ross, unpublished data, 1995), showed that, based on a statistical method called the HIT- MAX, 3.3% of the 1,055 subjects were in the taxon. This is a technical term meaning that 3.3% of the respondents appeared to have pathological dissociative experiences, and therefore presumptively had a dissociative disorder. Subjects were clearly either in the taxon or out of it, with few or no intermediate or grey-zone cases.



A principal components analysis of the 1,055 DES responses (Ross, Joshi, & Currie, 1991) showed that the DES has three factors. These three factors have been found in most DES studies involving college students and are called absorption/imaginative involvement, amnesia, and depersonalization/derealization. In our paper, I called the amnesia factor activities of dissociated states, but this term is too cumbersome.

All DES factor studies show that the absorption/imaginative involvement items are much more common than those in the other two factors. All investigators are agreed that the absorption items are not inherently pathological, even when an individual item score is high. It appears from reanalysis of DES data gathered by Frank Putnam and Eve Carlson (Waller, unpublished data, 1995) that the three DES factors are a statistical artifact of frequency of item endorsement. When one controls statistically for how common the different experiences are, then a single DES factor emerges. I include this information to show that current research on the epidemiology of dissociation involves sophisticated statistical analyses.

The main point remains valid, that most of the items on the DES are not inherently pathological, and that clinical interest should be focused on the average score for the critical items. I will discuss the details of all of this in Chapter Seven. The scores on the 28 different DES items in the sample of 1,055 people from the general population are shown in Table 5.1.

The items in Table 5.1 are ranked from the highest to the lowest average score: The possible score for each item ranges from 0 to 100,

depending on how frequently one has the given experience. The overall DES score is the sum of the 28-item scores divided by 28, and therefore also ranges from 0 to 100. The second column in Table 5.1 is the frequency of endorsement of each item, or the prevalence: This is the percentage of respondents scoring above zero for that item. The third column is the percentage of respondents who experience this item more than 30% of the time: I chose 30 because it is regarded as a cutoff score for the pathological range by many investigators.

Among the 1,055 respondents, there were no differences in overall DES scores due to any demographic factors, including gender, income, family composition, religion, and ethnic background. The only exception was a slight decline in scores with age: this decline was statistically significant but of doubtful clinical or theoretical significance, since it involved a drop in average score from 15.2 in the 18-29 age range to 5.9 in the 60-69 age range. Differences this small within the normal range of DES scores are of unknown if any significance.

Vanderlinden ⁽¹⁹⁹³⁾ found a similar distribution of dissociative experiences in the Netherlands and Belgium using his Dissociation Questionnaire (DIS-Q). Based on DIS-Q scores, he predicted that the prevalence of dissociative disorders in his sample was 2.1%. The number of subjects scoring in the range for DID was 0.52%.

A number of DES studies have been done in college students in a variety of countries, and the findings are highly consistent. The average DES score usually lies between 10.0 and 20.0 and the distribution is highly left-skewed. I have summarized these findings elsewhere ^(Ross, 1996b). These studies have been conducted in Japan ^(Hattori & Ross, unpublished data, 1995); Canada ^(Ross, Ryan, Voigt, & Edie, 1991), and the United States ^(Frischholz et al., 1990; Ray & Faith, 1995); other related studies are reviewed by Ray ⁽¹⁹⁹⁶⁾.

Table 5.1. Dissociative Experience Scale Scores in the General Population in the City of Winnipeg, Canada (N = 1,055)			
Item	Mean Score	Prevalence %	Subjects Scoring > 30 (%)
Able to ignore pain	25.6	74.7	33.4
Missing part of a conversation	24.3	83.0	29.0
Usually difficult things can be done with ease and spontaneity	22.8	73.1	28.4
Not sure whether one has done something or only thought about it	21.2	73.1	24.7
Absorption in television program or movie	20.2	63.9	24.2
Remembering past so vividly one seems to be reliving it	17.4	60.4	19.2
Staring into space	15.3	62.6	25.7

Talking out loud to oneself when alone	15.2	55.6	17.7
Finding evidence of having done things one can't remember doing	13.5	58.4	14.3
Not sure if remembered event happened or was a dream	12.6	54.6	12.5
Being approached by people one doesn't know who call one by a different name	12.2	52.4	4.1
Feeling as though one were two different people	11.5	47.0	11.8
So involved in fantasy that it seems real	10.0	44.5	10.9
Driving a car and realizing one doesn't remember part of the trip	9.0	47.8	7.5
Not remembering important events in one's life	8.8	37.9	9.5
Being in a familiar place but finding it unfamiliar	8.6	40.0	8.2
Being accused of lying when one is telling the truth	7.3	40.8	6.0
Finding notes or drawings that one must have done but doesn't remember doing	6.7	34.0	6.3
Seeing oneself as if looking at another person	5.3	28.6	4.3
Hearing voices inside one's head	5.3	26.0	7.3
Not recognizing friends or family members	5.1	25.8	4.6
Other people and objects do not seem real	4.9	26.3	4.1
Looking at the world through a fog	4.7	26.3	4.0
Finding unfamiliar things among one's belongings	4.5	22.1	4.1
Feeling as though one's body is not one's own	3.9	22.7	3.6
Finding oneself in a place but unaware of how one got there	2.8	18.8	2.0
Finding oneself dressed in clothes one doesn't remember putting on	1.9	14.6	1.4
Not recognizing one's reflection in a mirror	1.8	13.6	1.2

I haven't gone into this literature in a comprehensive fashion because it is too technical. The overall conclusions are clear, however: The distribution of dissociative experiences in the general population closely resembles that in college students, except that students are younger and do not manifest the slight decline in DES scores that occurs with age; the findings are consistent across many studies and in a variety of different cultures and languages; most people do not report any pathological dissociative experiences; many dissociative experiences are normal and benign; and extrapolations from self-report data set the lifetime prevalence of dissociative disorders in the general population in the range of 2% to 11%.

Dissociative Disorders in the General Population

To date, only one study has attempted to determine the lifetime prevalence of the dissociative disorders in the general population (Ross, 1991a). An attempt was made to reinterview the 1,055 respondents in Winnipeg who completed the DES using the DDIS: the structured interviews were administered by trained undergraduates who were blind to the DES scores. We were able to find and interview 502 of the 1,055 respondents: Comparison of the 502 subjects who participated in the structured interview with the 553 who did not revealed no differences in demographics or DES scores.

The paper reporting these findings (Ross, 1991 a) presents an analysis of only the first 454 respondents, since data collection was not completed in time for publication in the special issue of *Psychiatric Clinics of North America*.

There are a number of serious methodological limitations to the DDIS portion of this study: No validating clinical interviews were conducted; the validity of the DDIS in nonclinical populations is unknown; the sample size is too small; the data come from only one city; and no other standardized interview was administered. Because of these limitations, the data from the study, shown in Table 5.2, must be regarded only as first approximations.

The 1% prevalence of DID is a conservative interpretation of the data, because over 3% of respondents endorsed DSM-III-R criteria for multiple personality disorder. I excluded most of these people as false positives because they reported neither trauma histories nor the rest of the DDIS symptom profile for DID. It is clear that the DID cases detected in this study are far milder in symptom severity than clinically diagnosed cases, including their DES scores.

Several other interpretations of the data are possible. First, the prevalence of severe DID may be less than 0.2% because no such cases were detected in a sample of 502 respondents. Second, these data provide the strongest existing scientifically based (as opposed to ideologically based) argument in favor of the iatrogenic amplification of DID. If cases existing in the general population are mild, and those diagnosed clinically are severe, it is possible that symptom levels get amplified during recruitment into the mental health system in a substantial proportion of cases.

Much more research and more advanced methodology are required before any firm conclusion can be reached about the epidemiology of DID in the general population.

However, two additional studies with the DDIS have been done in college student populations, and these yield roughly the same findings as the general population study. Ross, Ryan, Voigt, and Edie ⁽¹⁹⁹¹⁾ administered the DES to 345 college students in Winnipeg, then gave a battery of further measures including the DDIS to 22 students scoring under 5 on the DES and 20 scoring above 22.6. The high scorers were selected by starting with the highest DES score in the sample of 345 students, and working downward until 20 subjects had consented to complete the follow-up battery.

Table 5.2. The Prevalence of Dissociative Disorders in the General Population of Winnipeg, Canada (N = 502)	
Disorder	Percent
Dissociative amnesia	6.0
Dissociative fugue	0.0
Depersonalization disorder	2.8
Dissociative identity disorder	3.0
Dissociative disorder NOS	0.2
A dissociative disorder of some kind	12.2

High and low DES scorers differed at very high levels of significance on all measures: Of the 20 subjects scoring above 22.6 on the DES, 14 (70%) met DDIS criteria for a dissociative disorder including 8 with DID. None of the low scorers had a DDIS dissociative disorder.

Extrapolations from the data based on simple arithmetic yielded a lifetime prevalence for DID of 6.3% and for the dissociative disorders overall of 11.0%. I don't believe that 6.3% is the true prevalence of DID in college students, but the data do lead to this conclusion. The limitations of the study are the same as for the general population study. It is impossible to say whether the consistent figure of about 11% for the lifetime prevalence of dissociative disorders in the general population is an artifact or an accurate finding.

In the other college student study, in which I also participated, Pat Murphy ⁽¹⁹⁹⁴⁾ administered the DES to 415 college students in Idaho, then gave the DDIS to a follow-up sample. She found a mean DES score of 14.7 (SD 10.8), with 8.9% of the sample scoring above 30, which is similar to all other studies. She administered the DDIS to a subsample of 18 students scoring above 30 on the DES and 9 who

scored below 30: Of the 18 students scoring above 30, 16 met criteria for a dissociative disorder including 4 with DID. This sets the conservative prevalence of DID on the DDIS among Idaho college students at 1%. Murphy's conclusion was that the lifetime prevalence of dissociative disorders in the general population may be in the range of 5% to 10%.

My role in the Murphy study was to review 8 of the DDISs to render an opinion as to whether I agreed with the diagnostic conclusions of the trained college students who administered the DDIS. I agreed in 7 cases, but in one disagreed because I did not think there was enough symptomatology to warrant a diagnosis of DDNOS.

So far, no studies have disconfirmed the finding that about 10% of people in the general population will suffer from a dissociative disorder at some time in their lives. More conservative estimates based on sophisticated statistical analyses of DES scores set the figure closer to 3% - even 3%, however, means about 10 million cases in North America. If we set the prevalence of full clinical DID at about 0.1%, this means hundreds of thousands of current cases in North America.

A reasonable conclusion from the existing data is that DID and the other dissociative disorders are unlikely to be rare in the general population. DID could be about as common as schizophrenia and bipolar mood disorder, but also might prove to be only one tenth as frequent.

Dissociative Disorders in Clinical Populations

Much more work has been done on DID in clinical populations, and the work has been replicated in a number of different countries and institutional settings. All existing studies show that most clinically diagnosed DID patients score in the top few percent of the general population distribution of DES scores; that is, they are in the taxon. Findings from Canada, the United States, the Netherlands, Turkey, and Puerto Rico (four languages on three continents) are shown in Table 5.3.

Table 5.3.		
Dissociative Experiences Scale Scores in Dissociative Identity Disorder		
Study	N	Average DES Score
United States		
Fink	16	48.6
Loewenstein	9	47.5
Frischholz	33	55.0

Canada/United States		
Ross	82	41.4
Carlson	228	42.8
Netherlands		
Ensink	7	49.3
Turkey		
Tutkin	20	47.2
Puerto Rico		
Martinez-Taboas	16	60.3

These data do not tell us the relative contributions of the four pathways to DID, but they do indicate that DID patients report far more pathological dissociation than anyone else. They endorse the rare DES items at high levels. This is why the DES functions as a screening tool for DID-high scores on the critical items increase the odds that the person has DID or another dissociative disorder.

A number of different studies including one of ours (Chu & Dill, 1990; Ross, Anderson, Fleisher, & Norton, 1992) have shown that the distribution of DES scores is shifted right in clinical compared with nonclinical populations, but the difference is not dramatic. The prevalence of DID has been studied in two clinical populations: general adult psychiatric inpatients and chemical dependency patients, with consistent results, as shown in Tables 5.4 and 5.5.

Table 5.4.		
Prevalence of Dissociative Identity Disorder and the Dissociative Disorders among General Adult Psychiatric Inpatients		
Study	DID %	Dissociative Disorder (%)
Canada		
Ross	5.4	20.7
Horen	6.0	17.0
USA		
Saxe	4.0	15.0
Latz	12.0	46.0
Norway		
Knudsen	4.7	8.2

Table 5.5. Prevalence of Dissociative Identity Disorder and the Dissociative Disorders among Chemical Dependency Patients		
Study	DID %	Dissociative Disorder (%)
Ross (<i>N</i> = 100)	14.0	39.0
Leeper (<i>N</i> = 99)	5.1	15.4
Ross (<i>N</i> = 102)	18.6	56.9
Dunn (<i>N</i> = 100)	7.0	15.0

I won't go into all the methodological details of these studies, but they all involve screening with the DES and interviewing follow-up subjects with a structured interview, either the DDIS or Marlene Steinberg's ⁽¹⁹⁹⁵⁾ Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D). In our study in Winnipeg, we also did validating clinical interviews on subjects positive for DID on the DDIS and matched controls, conducted by an interviewer blind to the DES and DDIS results. The other studies did not involve screening as large a sample or as rigorous a methodology for clinical validation ^(Horen, Leichner, & Lawson, 1995; Knudsen, Draijer, Haselrud, Boe, & Boon, 1995; Latz, Kramer, & Hughes, 1995; Saxe et. al., 1993). Except for the higher figures obtained by Latz and colleagues, the prevalence of undiagnosed DID among general adult psychiatric inpatients is very consistent in the range of 4% to 6%. I consider this prevalence rate to be accurate and conservative, and I predict that it will be confirmed by systematic replications throughout the world. Confirming data should emerge from Turkey, Australia, England, France, Japan, and other countries within the next decade.

The prevalence of DID and the other dissociative disorders varies more widely in chemical dependency populations. In my opinion, this is more likely due to an actual greater variability in psychopathology across the different clinical settings, compared with the inpatient samples, than to imprecision of measurement.

Our sample of 100 subjects came from a teaching hospital setting in Winnipeg ^(Ross, Kronson, Koensgen, Barkman, Clark, & Rockman, 1992), whereas our sample of 102 subjects was from Charter Behavioral Health System of Dallas, a freestanding private for-profit psychiatric hospital ^(Ellason, Ross, Sainton, & Mayran, 1996). The two other studies involve Veterans Administration samples in the United States ^(Dunn, Paolo, & Ryan, 1993; Leeper, Page, & Hendricks, 1992).

A realistic conclusion concerning the prevalence of DID in chemical dependency populations is that it is at least as common as among general adult inpatients, possibly affecting as many as 15% of patients in treatment for drug and alcohol problems. The existing data suggest that dissociative disorders are at least as common a form of comorbidity as mood and anxiety disorders in chemical dependency populations, and are vastly underdiagnosed clinically.

When we administered the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer, Williams, Gibbons, & First, 1990) to 85 chemical dependency subjects who also completed the DDIS, out of our overall Dallas sample of 102 patients, we found that mood disorders had occurred in 40.0% and anxiety disorders in 36.5%, which is typical of the findings from a large number of other comorbidity studies, none of which assessed for dissociative disorders. It appears that our Dallas sample is representative of chemical dependency patients in terms of overall comorbidity, therefore the findings for dissociative disorders may be accurate.