Childhood trauma in treated alcoholics. Prevalence and relevance for clinical impairment
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Trauma and Dissociation in Treatment-Seeking Alcoholics: Towards a Resolution of Inconsistent Findings

Willie Langeland, Nel Draijer and Wim van den Brink

Abstract
There is consistent empirical evidence for a trauma-dissociation relation in general population samples and in psychiatric patients. However, contradictory findings have been reported on this relation among substance abusers. The present study attempts to resolve these inconsistencies by testing a series of hypotheses related to problems regarding the measurement of childhood abuse, the measurement of psychological dissociation, and the potential existence of substance abuse as a form of chemical dissociation. Alcoholic patients (N = 155) were administered the Dissociative Experiences Scale (DES), the Structured Trauma Interview (STI), the European Addiction Severity Index (EuropASI), and the Posttraumatic Stress Disorder (PTSD) section of the Composite International Diagnostic Interview (CIDI). The DES showed good psychometric properties. Substantial rates of traumatization and PTSD were observed, as well as a significant trauma-PTSD relation. However, the mean DES score was low (11.4) and dissociation was not related to trauma (childhood or lifetime) or to PTSD. Years of lifetime regular medicine use, however, was significantly correlated with the severity of dissociative symptoms and PTSD, particularly in males. Overall, these findings suggest that absence of a trauma-dissociation relation in alcoholics may not be due to measurement problems of childhood abuse and/or dissociation. Rather, a trauma-dissociation link may not exist, particularly in male alcoholics, because these individuals may abuse substances to achieve dissociative-like states. Additional research is needed to further evaluate the utility of the DES in alcoholic samples and to examine the notion of chemical dissociation.

7.1 Introduction

Dissociation is commonly conceptualized as a psychological defense mechanism that develops as a reaction to overwhelming traumatic events, especially childhood trauma (Spiegel & Cardeña, 1991). Empirical support for the relation between (several types of)

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1 This study has been published in Compr Psychiatry 2002; 43:195-203. The authors thank Maarten Koeter, Ph.D. who performed the confirmatory factor analysis.
trauma and dissociation is consistently found in both general population and clinical samples (Gershuny & Thayer, 1999).

However, the results of similar studies on the trauma-dissociation relation among patients with a substance use disorder have been highly inconsistent. Of the seven studies using either the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) or the Dissociative Disorders Interview Schedule (DDIS; Ross et al., 1989) to assess dissociation - four report no (significant) trauma-dissociation link. More specifically, regarding childhood abuse (physical, sexual, emotional), four studies found no significant relation between abuse and severity of dissociation (Ross et al., 1992; Dunn et al., 1993, 1994, 1995), whereas a fifth study did report a significant relation between childhood physical and/or sexual abuse and dissociation level (Ellason et al., 1996). Concerning lifetime trauma histories, two studies among patients with a substance use disorder reported a trauma-dissociation link (Hodgins et al., 1996; Zlotnick et al., 1997). In one (Hodgins et al., 1996), DES scores were associated with lifetime history of sexual abuse, but not with physical or emotional abuse. In the other (Zlotnick et al., 1997), subjects classified with a history of a distressing traumatic event (e.g. physical/sexual assault, robbery, natural disasters) reported higher levels of dissociation.

The present study attempts to resolve these inconsistencies in the findings regarding the trauma-dissociation relationship among treated alcoholics. Three hypotheses are tested focusing on reasons why a childhood trauma-dissociation relation may be absent in alcoholic patients. In order to be able to test these hypotheses, the following data were collected: a broad range of childhood traumatic experiences (including physical and sexual abuse, early parental loss, and domestic violence); perceived parental dysfunction; presence of posttraumatic stress disorder (PTSD; trauma-related syndrome with a dissociative component). The first two variables are included because recent studies suggest a close link between early prolonged parental separation, witnessing domestic violence, or parental dysfunction (particularly maternal alcohol problems) and adult dissociation (Draijer & Boon, 1993; Irwin, 1994; Zlotnick et al., 1995; Draijer & Langeland, 1999). PTSD is included because recent studies suggest a clear link between child abuse and PTSD (Widom, 1999) and between PTSD and dissociation measured with the DES (Van Ijzendoorn & Schuengel, 1996).

**Hypothesis 1:** absence of the relation results from underreporting of child abuse experiences leading to an underestimation of effect on dissociation. In contrast to studies in
other populations indicating childhood trauma-dissociation links (Draijer & Langeland, 1999), studies among substance abusers that have not reported such links frequently used less specific methods to assess childhood abuse, e.g. only one broad question, such as “Were you physically abused?” Generally, multiple questions about specific events are preferred, omitting the word “abuse” to minimize the potential for underreporting of childhood abuse histories. In our study we, therefore, used a comprehensive assessment method for childhood abuse with rather conservative definitions of what constituted physical or sexual abuse. Based on this methodology, a potential childhood abuse-dissociation link as well as a childhood abuse-PTSD link should be strengthened. Hypothesis 1 is corroborated if both a childhood abuse-dissociation and a childhood abuse-PTSD relation are observed, and substantial rates of childhood abuse and PTSD are present.

Hypothesis 2: absence of the relation results from reporting substance-related symptoms on the DES. The distinction between independent and substance-related coexisting psychiatric symptoms in patients with a substance use disorder is an important issue (Weiss et al., 1992). Dissociative symptoms may resemble intoxication or withdrawal symptoms such as dissociative amnesia versus an alcohol induced state of amnesia (‘blackout’) (Good, 1989). Ideally, screening should be delayed for 2 weeks after admission, whereas diagnosis should be delayed for a period of 3 to 4 weeks post-detoxification to minimize reports of substance-related symptoms. In the first weeks of abstinence, elevated scores are found for a range of psychiatric symptoms, including dissociation. Among treatment-seeking substance abusers, length of abstinence from all substances was associated with a decrease in mean DES scores (Hodgins et al., 1996). In the four studies reporting no childhood abuse-dissociation link, assessment took place either at treatment entry (n = 2) or after detoxification without further reference of the exact time frame (n = 2). Elevated dissociative symptom levels due to effects of recent intoxication or withdrawal may have added to the nonsignificant results. Therefore, in the present study, screening with the DES was postponed until 4 to 8 weeks after admission to treatment. Since the DES is a self-report questionnaire with only a brief instruction on the cover sheet specifying that subjects should not consider the listed experiences to be present in the case of intoxication, DES scores rely heavily on the ability of individuals to differentiate substance-related and independent symptoms. It is not unlikely that alcoholics, even after some weeks in treatment, will have difficulties distinguishing these symptoms, particularly those with a long history of substance abuse (Wenzel et al., 1996).
However, if the DES does measure dissociation in substance abusers as originally conceptualized (i.e. a psychological defense mechanism), it should be related to exposure to traumatic experiences (not only childhood abuse) and to PTSD. Hypothesis 2 is corroborated if childhood and lifetime traumatic experiences are related to the presence of PTSD but not to dissociation according to the DES; if DES-dissociation and PTSD are not associated; and if chronicity of substance use is positively related to DES scores.

Hypothesis 3: absence of the relation results from a low prevalence rate of psychological dissociation in substance abusers. Traumatized individuals with limited capacities to psychologically dissociate may attempt to produce similar soothing or numbing effects by using psychoactive substances, in particular alcohol, benzodiazepines and marijuana (Briere & Runtz, 1987; Roesler & Dafler, 1993; Evans & Sullivan, 1995). These substances are used to enter and maintain dissociative-like states (Neiss, 1993): “chemical dissociation”. Both substance abuse and dissociation are assumed to be emotional avoidance behaviors. Based on the notion of differential susceptibility toward the development of dissociative symptoms, substance-abusing patients with significant childhood abuse, relatively little dissociative symptoms, and no amnesia represent a subgroup with low dissociative capacity, which is reflected in a small proportion of subjects who are high dissociators (i.e. a DES score > 30) (Waller et al., 1996). Hypothesis 3 is corroborated if high rates of trauma and PTSD are observed together with relations between regular substance use and trauma/PTSD, low rates of high dissociators, and a low dissociation level in the total sample, in particular, among childhood abuse victims. For a comparison of dissociation levels particularly in the abused group, the present findings are compared with those in a previous study among psychiatric inpatients that used the same measures for dissociation and childhood abuse (Draijer & Langeland, 1999).

For further differentiation between hypotheses 2 and 3, the reliability and construct validity of the DES was assessed using factor analysis and measures of internal consistency as indicators for the validity of the three commonly reported subscales (Carlson & Putnam, 1993). Hypothesis 3 is corroborated by the good psychometric properties of the DES. In addition, because the validity of the DES to measure a broad range of dissociative symptoms, including nonpathological types, has been criticized (Frankel, 1996), data were reanalyzed using the DES-T (Waller et al., 1996), which is assumed to more accurately reflect pathological dissociation. The hypotheses regarding the relationship between the level of
dissociation and other variables are similar for the DES and DES-T (Table 1). However, hypothesis 3 is corroborated when the mean DES-T score is much lower than mean DES score, indicating that treated alcoholics lack core dissociative pathology.

Table 1. Corroborating findings for the three hypotheses schematized

<table>
<thead>
<tr>
<th>Findings</th>
<th>Hypothesis 1: Underreporting child abuse</th>
<th>Hypothesis 2: Substance-related DES symptoms</th>
<th>Hypothesis 3: Low prevalence dissociation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma and PTSD rates</td>
<td>Substantial</td>
<td>Substantial</td>
<td>Substantial</td>
</tr>
<tr>
<td>Mean DES score/percent high scores</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Construct validity DES</td>
<td>Good</td>
<td>Not good</td>
<td>Good</td>
</tr>
<tr>
<td>Childhood abuse X PTSD</td>
<td>Significant</td>
<td>Significant</td>
<td>Significant</td>
</tr>
<tr>
<td>DES X PTSD</td>
<td>Significant</td>
<td>Nonsignificant</td>
<td>Nonsignificant</td>
</tr>
<tr>
<td>Other trauma X PTSD</td>
<td>Significant</td>
<td>Significant</td>
<td>Significant</td>
</tr>
<tr>
<td>Other trauma X DES</td>
<td>Significant</td>
<td>Nonsignificant</td>
<td>Nonsignificant</td>
</tr>
<tr>
<td>Childhood abuse X DES</td>
<td>Significant</td>
<td>Nonsignificant</td>
<td>Nonsignificant</td>
</tr>
<tr>
<td>Substance abuse X trauma/PTSD</td>
<td>(Non)-significant</td>
<td>Significant</td>
<td>Significant</td>
</tr>
<tr>
<td>Substance abuse X DES</td>
<td>(Non)-significant</td>
<td>Significant</td>
<td>Significant</td>
</tr>
</tbody>
</table>

7.2 Method

Data were collected as part of a larger research project on psychiatric comorbidity and treatment outcome of a consecutive series of alcoholics and gamblers applying for treatment in a treatment center for substance use disorders. The Centers’ Internal Review Board and the Human Research Review Board of the Academic Medical Center, University of Amsterdam approved the research protocol. All patients provided written informed consent.

7.2.1 Subjects

For study inclusion, patients had to enter an inpatient or outpatient alcohol abuse treatment program on a voluntary basis, have sufficient command of the Dutch language, and have no severe cognitive impairments. Furthermore, inpatients had to remain in treatment for at least 30 days and outpatients for at least 3 weeks in order to be included in the larger research protocol. Among 274 eligible participants, 155 could be included in the current study (study completers). The other 119 patients (noncompleters) were excluded due to the following reasons: (1) incomplete dataset (n = 94), (2) withdrawal at some time during the study (n = 23), and (3) too unstable to participate according to the attending physician (n = 2).

2 In the original publication the two tables included were accidentally switched.
7.2.2 Instruments

Dissociative symptoms were assessed with the 28-item Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986). The DES is a highly reliable and internally consistent self-report questionnaire (Carlson & Putnam, 1993).

Childhood stressors were indexed by the Structured Trauma Interview (STI; Draijer, 1989). A detailed description of this instrument is provided elsewhere (Draijer & Langeland, 1999). Definitions for stressors are: (1) child physical abuse (CPA), i.e. severe parental aggression (including step/adoptive parents and primary caretakers) before age 16, including recurrent and chronic forms of physical violence frequently inflicting injuries such as repeatedly being kicked or hit with fist; (2) child sexual abuse (CSA), including any reported pressured or forced sexual contact (fondling to penetration) before age 16; (3) child witness of domestic violence, including experiences of witnessing physical/sexual violence between parental figures before age 16; (4) early loss, including loss of a natural parent or caretaker by death, divorce, or a variety of other possible prolonged separations longer than 6 months and experienced before age 12; (5) parental dysfunction (including step/adoptive parents), including dysfunction resulting from recurrent illness, nervousness, depression, use of sedatives, and hospitalizations. Based on these five items, a sumscore for both parents was calculated, indicating the degree of dysfunction. In contrast to an earlier study (Draijer & Langeland, 1999), maternal and paternal alcohol problems were used as separate variables due to the nature of the current sample. No significant correlations were observed between parental dysfunctioning scores and parental alcohol problems: mothers ($r = .09$), fathers ($r = .05$).

Chronicity of substance use was estimated from subjects’ reports of years of lifetime regular substance use obtained through the European Addiction Severity Index (EuropASI; Kokkevi & Hartgers, 1995). The EuropASI is an adaptation of the fifth edition of a widely used and extensively validated structured interview, the Addiction Severity Index (ASI; McLellan et al., 1992). Regular substance use is defined in both instruments as use at least three times per week (irrespective of dosage) or binge use for at least 2 consecutive days per week that involves significant negative consequences (e.g. in family life or work). Substances included use of alcohol (any dosage and at least 5 glasses per day), cocaine, heroin,
amphetamines, medicines, cannabis, and polysubstance use. Medicines mostly include benzodiazepines. Use of barbiturates is rarely reported in Dutch samples.

DSM-III-R diagnoses of alcohol abuse and dependence were generated from a fully structured interview: the Composite International Diagnostic Interview (CIDI; Robins et al., 1988). The CIDI was also used to obtain histories of exposure to traumatic events (criterion A) and the diagnoses of PTSD according to both DSM-III-R and ICD-10 (Peters et al., 1996).

7.2.3 Procedure

During the admission to treatment, the EuropASI was administered by trained staff members or research assistants. In the first 6 weeks after admission, patients were assessed with the CIDI. Approximately 4 to 8 weeks after the EuropASI, both the DES and the STI were administered (i.e. first the DES). CIDI and STI interviews were conducted by trained interviewers who were supervised during data gathering and were blind to the DES results. In the majority of cases, administration and scoring of the STI was carried out blind to CIDI results. However, some clients asked for the same interviewer, because they were reserved about disclosing abuse histories again to a different interviewer.

7.2.4 Data analysis

The data were analyzed using chi-square and t/F tests. In the analyses, the nature of CSA was included as follows: CSA severity (coded as: 0 = absent, 1 = fondling, 2 = penetration), CSA type (0 = absent, 1 = intrafamilial only, 2 = extrafamilial only, 3 = both intra- and extrafamilial), CSA chronicity (0 = absent, 1 = <1 year, 2 = ≥1 year), and the number of perpetrators (0 = absent, 1 = one perpetrator, 2 = more than one perpetrator). Pearson correlations were used to determine associations between chronicity of substance use and the level of dissociation. Given the multiplicity of t and F tests, a significance level of p < .01 was used to prevent Type I errors. Reliability of the DES and DES-T were assessed by internal consistency (Cronbach’s alpha coefficient). To be able to adequately interpret the estimate of alpha, additional information regarding the dimensionality of the DES scale was gathered. To assess the construct validity, a multigroup method of confirmatory analysis (Nunnally, 1978) at item level was run using simultaneous components analysis (Kiers, 1990)
to test the commonly observed three-dimensional structure of the DES. Items of each subscale were assigned a weight of 1 on their respective scales and a weight of 0 on the two other scales. Factor intercorrelations were allowed to vary freely.

7.3 Results

7.3.1 Sample characteristics

Of the 155 subjects, 122 (79%) were male and the mean age of the sample was 41.0 years (SD = 9.4; range 23 to 70). Patients were evenly divided over treatment setting (inpatients/outpatients). Most subjects met DSM-III-R criteria for alcohol dependence (n = 150); the remaining five subjects met criteria for DSM-III-R alcohol abuse. Study completers (n = 155) and noncompleters (n = 119) did not significantly differ in demographic characteristics (sex, age, marital status, educational level), problem severity in the EuropASI domains, and EuropASI reports of lifetime physical and sexual abuse.

7.3.2 Reliability and construct validity of the DES

Cronbach’s alpha for all the DES items was .93. The confirmatory analysis corroborated the three-dimensional structure of the DES (internal consistency of subscales: amnesia alpha = .77; absorption alpha = .87; depersonalization alpha = .83). These findings indicate that the DES is highly reliable and internally consistent in this sample.

7.3.3 Hypotheses

Hypothesis 1 is rejected. Because substantial childhood abuse rates (CPA 14.2%; CSA 23.9%) as well as substantial PTSD rates (16.8%) were observed, hypothesis 1 can be rejected. The presence of a PTSD diagnosis was related to childhood abuse, whereas dissociation level was not (Table 2). After controlling for gender, the relations between childhood abuse (CPA and CSA) and dissociation were still nonsignificant.
Table 2. Relations between trauma and neglect measures and both dissociation level and PTSD diagnosis

<table>
<thead>
<tr>
<th>STI and CIDI-PTSD</th>
<th>Relationship with dissociation (DES)</th>
<th>Relationship with CIDI-PTSD diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$t/F$</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>CPA (n = 22; 14.2%)</td>
<td>$t = -0.90$</td>
<td>153</td>
</tr>
<tr>
<td>CSa (n = 37; 23.9%)</td>
<td>$t = -1.61$</td>
<td>153</td>
</tr>
<tr>
<td>Severity</td>
<td>$F = 2.29$</td>
<td>2,149</td>
</tr>
<tr>
<td>Type</td>
<td>$F = 2.88$</td>
<td>3,153</td>
</tr>
<tr>
<td>Chronicity</td>
<td>$F = 1.34$</td>
<td>2,154</td>
</tr>
<tr>
<td>No. of perpetrators</td>
<td>$F = 2.44$</td>
<td>2,153</td>
</tr>
<tr>
<td>CPA and CSA (n = 10; 6.5%)</td>
<td>$t = -1.16$</td>
<td>153</td>
</tr>
<tr>
<td>Early loss (n = 31; 20%)</td>
<td>$t = 0.26$</td>
<td>153</td>
</tr>
<tr>
<td>Witness violence (n = 37; 23.9%)</td>
<td>$t = 0.03$</td>
<td>145</td>
</tr>
</tbody>
</table>

Childhood neglect

<table>
<thead>
<tr>
<th>Alcohol problems</th>
<th></th>
<th></th>
<th>$t/F$</th>
<th>$df$</th>
<th>$p &lt; .05$</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>$p &lt; .05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother (n = 18; 11.6%)</td>
<td>$t = 0.62$</td>
<td>151</td>
<td>NS</td>
<td>$\chi^2 = 0.49$</td>
<td>1</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father (n = 52; 33.6%)</td>
<td>$t = 0.92$</td>
<td>147</td>
<td>NS</td>
<td>$\chi^2 = 3.06$</td>
<td>1</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysfunction</td>
<td></td>
<td></td>
<td>$t/F$</td>
<td>$df$</td>
<td>$p &lt; .05$</td>
<td>$\chi^2$</td>
<td>$df$</td>
<td>$p &lt; .05$</td>
</tr>
<tr>
<td>Mother</td>
<td>$F = 1.67$</td>
<td>5,151</td>
<td>NS</td>
<td>$t = 0.59$</td>
<td>149</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>$F = 0.29$</td>
<td>1,149</td>
<td>NS</td>
<td>$t = 0.96$</td>
<td>149</td>
<td>NS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adult trauma

| Sexual assault (n = 17; 11%) | $t = -1.82$                           | 153 | NS | $\chi^2 = 7.71$ | 1 | .01 |
| Physical trauma (n = 65; 41.2%) | $t = 0.32$ | 153 | NS | $\chi^2 = 0.25$ | 1 | NS |

CIDI-PTSD (lifetime)

| Trauma exposure (n = 112; 72.3%) | $t = -1.82$                           | 149 | NS | $\chi^2 = 10.94$ | 1 | .001 |
| Diagnosis PTSD (n = 26; 16.8%)  | $t = -1.28$                           | 149 | NS | NA | NA | NA |

$^a$ Extrafamilial sexual abuse only was associated with dissociation at $p < .05$. However, a Bonferroni correction was used to adjust the .05 level of significance to .01 to control type I errors.

Abbreviations: NS, not significant; NA, not applicable.

Hypothesis 2 is partly rejected. Psychometric properties of the DES were good. Both the mean DES score (11.4) and the proportion of high dissociators (6.5% with a DES score > 30) were rather low, despite substantial trauma and PTSD rates. The results regarding the relation between chronicity of substance use and DES scores were mixed. Years of regular use of alcohol (both any dosage and 5 of more glasses per day), cocaine, heroin, amphetamines and cannabis were not related to DES scores. However, dissociation level was associated with years of regular medicine use ($r = .34, p < .001$) and polydrug use ($r = .21, p < .01$). These associations were only significant for males (medicines: $r = .38, p < .001$; polydrug: $r = .23, p < .01$). The small sample size may have reduced statistical power to detect significant relations in females. Years of regular medicine use and polydrug use were strongly interrelated ($r = .53, p < .001$), reflecting the fact that polydrug use mostly included combinations of medicines and alcohol. Further analyses revealed no relations between DES scores and trauma and neglect measures within the groups reporting regular medicine use ($n =$...
41; range of years of regular use, 1 to 31) or regular polydrug use (n = 61; range of years of
regular use, 1 to 25). Furthermore, PTSD diagnosis was related to other trauma histories,
whereas dissociation level was not (Table 2). Associations between childhood neglect and
both dissociation level and PTSD diagnosis were nonsignificant. After controlling for gender,
relations between trauma and neglect measures and dissociative symptoms remained non-
significant. Finally, PTSD diagnosis and dissociative symptoms were not significantly
related.

Hypothesis 3 is corroborated. Compared to our psychiatric inpatient sample,
dissociation levels in this alcoholic sample were considerably lower: mean DES score 17.4
(SD = 16.8) in the psychiatric group versus 11.4 (SD = 10.4) in the current sample of
alcoholics; 25.2% of the psychiatric group versus only 10.3% of the alcoholics had a score
greater than 25, and 18% versus 6.5% scored greater than 30. Furthermore, mean DES scores
of subjects who reported childhood abuse histories were much lower in alcoholic patients
compared to psychiatric inpatients: 26.71 (SD = 21.61) in the psychiatric group versus 13.27
(SD = 12.47) in the alcoholics for CPA; 26.07 (SD = 18.57) versus 13.80 (SD = 10.49) for
CSA; and 34.51 (SD = 22.32) versus 15.11 (SD = 11.18) for combinations of CPA and CSA.
Results regarding the relation between regular substance use and trauma/PTSD were mixed.
Years of regular use of alcohol, cocaine, heroin, amphetamines, and cannabis were not
related to trauma measures. However, PTSD was significantly related with years of regular
medicine use in male patients (p = .01).

7.3.4 Pathological dissociation: reanalysis of data using the DES-T

Cronbach’s alpha for the eight-item DES-T was .81, indicating good reliability in this sample.
The mean DES-T score was much lower than the mean DES score: 6.15 (SD = 9.13).
Reanalysis of our data using the DES-T did not yield different findings.

7.4 Discussion

Our aim was to study the relationship between childhood abuse and dissociation and to
resolve inconsistencies in the findings regarding a trauma-dissociation relation in patients
with a substance use disorder. Three hypotheses were tested in an attempt to explain the
absence of significant associations between childhood abuse and dissociation. Only one of our hypotheses was entirely corroborated, suggesting that the absence of a childhood abuse-dissociation relation in treated alcoholics is caused by a low capacity or diminished tendency of alcoholics to use psychological dissociation.

The present study found good psychometric properties of the DES. The DES was highly internally consistent. With a Cronbach’s alpha of .93, the internal consistency is identical to the mean alpha reliability reported in a meta-analytic review of the DES (Van Ijzendoorn & Schuengel, 1996). Because a high estimate of alpha may indicate the presence of items that are contributing to reliability through introducing systematic errors, additional information regarding the dimensionality of the scale was examined. The confirmatory factor analysis supported the commonly observed three-dimensional structure of the DES, showing no indications for the presence of systematic errors.

The first hypothesis, assuming measurement problems in the assessment of childhood abuse, was rejected. Using a more rigorous method for the assessment of childhood abuse compared to several previous studies (Dunn et al., 1993, 1994, 1995), still no significant childhood abuse-dissociation relation was found, despite substantial rates of childhood abuse.

The second hypothesis, assuming measurement problems in the assessment of dissociation, was partly rejected. With regard to measurement problems of psychological dissociation, one would have expected a much higher mean DES score if substance related symptoms would have contributed to and would have obscured the meaning of the DES score (as suggested by the correlations between medicine/poly drug use and DES scores). However, the mean DES score was almost identical to the mean score for normal subjects in the majority of studies on the DES: 11.40 (SD = 10.47) vs. 11.57 (SD = 10.63) (Van Ijzendoorn & Schuengel, 1996). In fact, low levels of dissociation are consistently reported in studies among alcoholics (Bernstein & Putnam, 1986; Weingartner et al., 1995; Spitzer et al., 1998).

In a study using the DDIS, the prevalence of dissociative disorders among alcoholics was even lower than in a general population sample: 0.8% (Dunn et al., 1995) versus 11.2% (Ross, 1991). The dissociation level in our sample is slightly higher than previously found in alcoholics (Bernstein & Putnam, 1986; Weingartner et al., 1995; Spitzer et al., 1998), and somewhat lower than reported in the broader group of substance abusers (Ross et al. 1992; Dunn et al., 1993, 1994, 1995; Ellason et al., 1994, 1996; Hodgins et al., 1996). The elevated mean DES score (26.2) in Wenzel’s et al. study (1996) among male alcoholics may stem
from their time of DES administration, which was soon after detoxification. Overall, present findings seem to reflect the fact that (pathological) dissociative symptoms are not very prevalent among detoxified alcoholics, including alcoholics with traumatic experiences. However, additional research is necessary to evaluate the utility of the DES in alcoholic samples to be able to fully reject hypothesis 2, especially regarding predictive validity. The fact that the DES did not discriminate subjects with PTSD is in very sharp contrast with results reported in other populations (Van Ijzendoorn & Schuengel, 1996) and is not in agreement with the instruments’ original conceptual basis. Interestingly, however, PTSD and pathological dissociation (DES-T) were also not significantly associated.

The third hypothesis was corroborated: in the current study trauma and PTSD rates were substantial, DES scores were low, DES-T scores were even lower, and neither trauma nor PTSD was (significantly) related to (pathological) dissociation. This is in clear contrast to the findings in other populations (Draijer & Boon, 1993; Irwin, 1994; Zlotnick et al., 1995; Draijer & Langeland, 1999). Even dissociation levels in alcoholics with PTSD were rather low in the present study, indicating the lack of a psychological dissociative component in PTSD in our sample. The alcohol-dependent men with PTSD reported more often regular use of medicines, a finding supporting the chemical dissociation hypothesis. The fact that two studies among patients with a substance use disorder have reported significant trauma-dissociation relations (Hodgins et al., 1996; Zlotnick et al., 1997) may be explained by differences in sampling in terms of chronicity and comorbid psychopathology, trauma severity, or the higher proportion of females included. Almost half of the subjects included in the two studies reporting a significant trauma-dissociation relation were female. Furthermore, inclusion of very distinct types of trauma (e.g. serious accidents, natural disasters, robbery, physical and sexual assault) (Zlotnick et al., 1997) may explain some of the differences in outcome. In addition, differences in the timing of the assessments may be relevant (Hodgins et al., 1996). The existence of a low dissociative capacity was further corroborated by the fact that the alcoholic patients in the present study showed much lower levels of dissociation than the psychiatric inpatients in a study using the same assessment procedures both in the total groups and in the subgroups reporting childhood abuse (Draijer & Langeland, 1999).

The current findings are most consistent with the chemical dissociation hypothesis. Several pathways may be responsible for this situation. For example, peritraumatic dissociation is
known to predict long-term psychological dissociative symptomatology (Bremner & Brett, 1997). It could, therefore, be hypothesized that alcoholics were using or were forced to use alcohol, drugs, or medicines during the traumatic incidents leading to both instant chemical dissociation and long-term chemical dissociation in some individuals. Unfortunately, we only asked about forced use of substances during sexual abuse. However, the group of subjects that reported such forced substance use was too small (n = 5) to perform meaningful analyses. Also, abuse victims may discover substance use as a means for inducing dissociative-like states during adolescence (Roesler & Dafler, 1993), possibly implying an early onset of substance abuse.

Clearly, further research is necessary to identify the factors that contribute to the explanation of the reported low dissociation levels in alcoholics. Some other possible explanations for reported low dissociation levels in substance abusers have been mentioned in the literature. Patients with comorbid dissociative disorders typically were early dropouts from substance abuse treatment programs (Kolodner & Frances, 1993). Others have suggested that dissociative symptoms in alcoholics may be underreported due to an impairment in reflective cognitive functions or state-dependent effects of alcohol regarding recalling past dissociative experiences (Weingartner et al., 1995). Finally, it is possible that some alcoholics misinterpret substance-independent dissociative symptoms as substance-related, resulting in low dissociation levels. Based on present results, we would encourage the further examination of gender differences in trauma-dissociation relation among alcoholics and other substance abusers. Although no gender effects on DES scores have been reported, pathological forms of dissociation reflected in dissociative disorders are female-dominated disorders, whereas alcohol use disorders are male-dominated disorders, leaving open the possibility that psychological dissociation as response to trauma is more common in women, whereas chemical dissociation in response to trauma is more common in men. Sex differences have been reported in adaptive response patterns of traumatized children (Perry et al., 1995; Chandy et al, 1996). Perry et al. (1995) described two major neuronal response patterns important for traumatized children: a sensitized hyperarousal system (more often found in males) and a sensitized dissociative system (more often found in females). Links have been reported between the type of adaptive response present in the original traumatic situation and the symptoms that will develop (hyperarousal or dissociative), with each
response type activating a unique combination of neural systems. These latter findings point
to the importance of neurobiological studies to further investigate gender differences in
trauma response patterns, and particularly in the study of the trauma-dissociation relation in
alcoholics.

Finally, some study limitations should be noted. This is a cross-sectional study based
on retrospection, implying temporal ambiguity of cause and effect. The correlational nature
of findings precludes drawing any firm causal conclusions. To overcome the reduction of
statistical power due to the complex study design as well as limited sample size, replication
of this study in a larger sample, particularly of female alcoholics, is encouraged. Also, the
DES is not a diagnostic instrument. Of the existing diagnostic tools to assess dissociation and
dissociative disorders, the Structured Clinical Interview for Dissociative Disorders (SCID-D)
is probably the most appropriate format. The DDIS has limited utility in identifying
dissociative disorders in chemically dependent persons (Steinberg, 1996), since the DDIS
criteria - in contrast to the SCID-D - do not systematically state that symptoms should not be
related to (withdrawal from) substances. Furthermore, the validity of the trauma reports being
based on self-report, for which no corroborating evidence was sought, cannot be ensured.
Finally, though none of the subjects had severe cognitive impairments, memory impairments
due to the toxic effects of substances as alcohol and benzodiazepines cannot be ruled out
completely.

7.5 Conclusions

Like most previous reports in substance abusers, this study found no childhood abuse-
dissociation relation in treated alcoholics. It is suggested that low levels of psychological
dissociation, particularly in traumatized male alcoholics, are primarily responsible for the
absence of a trauma-dissociation link. It is hypothesized that (male) alcoholics are more
likely to respond to trauma with a chemical form of dissociation than with psychological
forms of dissociation. In future studies trying to sort out contributions of substance-related
symptoms, the SCID-D should be the preferred instrument to measure psychological
dissociation. In addition, gender differences in dissociative comorbidity among alcoholics
need to be studied in greater depth. Finally, neurobiological research strategies and the study
of the perceptions of the functionality of substance use in traumatized alcoholics may shed light on the notion of chemical dissociation as a defense mechanism.