

Traumatic experiences and posttraumatic stress disorders: differences between treatment-seeking early- and late-onset alcoholic patients

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Abstract

Childhood traumatic experiences have been suggested to relate to early-onset alcoholism and to negatively influence the severity and course of alcohol use disorders. Early-onset alcoholic ($n = 54$) and late-onset alcoholic ($n = 65$) inpatients were compared as to the severity of their childhood traumatic experiences, prevalence of current and lifetime posttraumatic stress disorder (PTSD), and depressive symptoms.

The early-onset alcoholic patients had a higher number and more severe childhood traumatic experiences compared with the late-onset alcoholic patients. More female than male alcohol-dependent patients had lifetime PTSD diagnosis. Finally, specifically within the female alcoholic patients the severity of early childhood experiences was positively associated with the severity of current substance use and related problems.

Within early-onset alcoholic treatment-seeking populations, active screening for childhood traumatic experiences and current PTSD is advised in view of treatment planning.

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1. Introduction

Childhood adversities are common within the general population, and data from the US National Comorbidity Survey (NCS) show the existence of strong clustering among childhood adversities and lifetime comorbidity among adult disorders [1]. However, the role of traumatic childhood experiences and adverse circumstances in developing adulthood mental disorders is complex and still in need of comprehensive research [1,2]. Indeed, the impact of adversities is probably composed of a wide range of factors from direct causal associations to complex, interacting environmental effects, and variations in the reported associations reflect the differing genetic and environmental transmission mechanisms of mental disorders [2].

The NCS data indicated that childhood adversities were consistently associated with onset, but not persistence, of mood disorders, anxiety disorders, addictive disorders, and acting-out disorders. This suggests that the effects of childhood adversities are specifically on first (early) onset

of psychiatric disorders rather than on the creation of vulnerabilities that lead to increased risk of persistence [1].

An early start of alcoholism, that is, before 25 years of age (early-onset alcoholism), has been associated with a number of childhood or adolescent (distal) factors that may contribute to both an early start and a more severe course of the alcohol use disorder. Indeed, early-onset alcoholism relative to late-onset alcoholism (onset after 25 years of age) has been associated with a higher genetic loading (ie, positive family history of alcoholism), behavioral disinhibition, and impulsive personality traits [3–7]. In addition, early-onset alcoholic (EOA) patients (or type II alcoholic patients) have recently been reported to have deficient coping styles relative to late-onset alcoholic (LOA) patients, that is, increased suppression of problem management, which may relate with the genesis and maintenance of family and social problems [8].

Childhood traumatic experiences are frequently reported within alcohol-dependent patients and have been proposed to negatively influence the course of alcohol use disorders [9–11]. As suggested by the NCS data, childhood traumatic experiences may constitute an important distal factor relating specifically to an early start of alcoholism. However, the relation between childhood traumatic experiences

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and the age at onset of alcoholism, that is, differences between EOA and LOA, have up to now not been explored. Furthermore, the etiologic relation between childhood traumatic experiences and subsequent early start of alcohol abuse has been questioned. Breslau et al [12] suggested that childhood traumatic experiences do not increase risk for substance use disorders, but that posttraumatic stress disorder (PTSD) might be a causal risk factor for substance use disorders. In this respect, high prevalence of PTSDs has been documented within alcohol-dependent patients [13]. Furthermore, next to PTSD, a possible (causal) relation between childhood trauma and early-onset alcoholism may be explained by a number of other factors, for example, growing up in an alcoholic family, sex differences, or simply reflect a more chronic course of alcohol disorder (more accumulative years of alcohol abuse).

Thus, in the current study, we tested in a sample of stably abstinent EOA and LOA inpatients the hypotheses that, relative to LOA patients, EOA patients would have more childhood traumatic experiences. Furthermore, we expected that high levels of childhood traumatic experiences would relate to currently more severe substance abuse and depressive problems.

2. Sample and method

2.1. Sample

Participants were 54 EOA patients and 65 LOA patients. Recruitment procedure and sample characteristics have been described earlier [6,7]. In short, all alcohol-dependent participants were recruited from an inpatient addiction treatment facility. During a period of 18 months (2003–2004), every second patient hospitalized for treatment of his/her alcohol problem was invited to participate in the present study. Abstinence on the ward was monitored by regular, randomized controls on alcohol, medication, and illicit drug use. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* diagnosis [14] of alcohol dependence was made during a psychiatric interview and supplemented by collateral information (family), data from the European version of the Addiction Severity Index (EuropASI), and laboratory tests (blood and urine analysis). Patients with a current or lifetime history of psychotic disorders, amnesic disorders, brain disorders (eg, trauma, epilepsy), or severe somatic disorders (liver cirrhosis, AIDS, thyroid disorders, visual problems) were excluded. Furthermore, patients who could not read or did not possess the required intellectual, social, or educational level to respond to the questionnaires were excluded.

All participants gave informed consent. The study was approved by the hospital's medical ethics committee.

2.2. Procedure

The 119 participants were assessed on their substance use problem severity and trauma characteristics within the

first 2 weeks of their inpatient stay. Early-onset alcoholism was defined as having severe alcohol use-related problems and symptoms of alcohol dependence before the age of 25 years. Late-onset alcoholism was defined as having symptoms of alcohol dependence after the age of 25 years. Age at onset was assessed during a clinical interview using the time-line method and complemented with data from the EuropASI interview and, if possible, collateral information. Family history of alcohol dependence was assessed by means of a clinical interview using a family-tree method [15] and completed with the data from the EuropASI interview and, if possible, with additional collateral information (family, spouse). Paternal family history and maternal family history were defined as positive if the biological father or mother of the participant was diagnosed as (lifetime) alcohol dependent.

Patients who chose to follow a long-term inpatient treatment program ($n = 80$), after this 2-week detoxification period, were assessed with the PTSD module of the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (SCID) [16] and the Beck Depression Inventory (BDI). The other patients ($n = 39$) left the inpatient facility after the 2 weeks of detoxification and were oriented for further outpatient treatment, most of them in their region of origin. This sample did not differ significantly with the sample that stayed longer with respect to age, education, sex ratio, age at onset, and number of years of alcohol abuse.

2.3. Method

2.3.1. Traumatic experiences checklist

The Traumatic Experiences Checklist (TEC) [17] was developed in the context of a research study that aimed to assess the correlations among a wide range of reported traumatic experiences, including emotional neglect and emotional abuse, and somatoform, as well as psychological, manifestations of dissociation [18]. The psychometric characteristics of the TEC have been studied earlier in a population of Dutch psychiatric outpatients [19]. The TEC involves items that assess events that are not necessarily traumatizing to every individual, as is true for any self-report questionnaire. At the same time, experiences that are not traumatic to most individuals can be quite traumatic to others.

The TEC [17] is a self-report questionnaire inquiring about 29 types of potential trauma, including criterion A events of PTSD ("the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others," American Psychiatric Association [14]), as well as other potential overwhelming events: loss of significant others; life threat by disease or assault; war experience; emotional neglect; emotional abuse; physical abuse, sexual harassment, and sexual trauma. The TEC total score ranges from 0 to 29. With respect to emotional

Table 1

Differences between EOA and LOA patients on age, age at onset of alcohol abuse, number of years of alcoholism, BDI, and the ratio of men, and participants with a parental alcoholism (PFH+)

	EOA (n = 54)	LOA (n = 65)	t (P)
Age	38.27 (9.79)	45.92 (8.79)	-4.375 (<.001) ^a
Age at onset	17.94 (3.13)	34.00 (7.48)	-14.437 (<.001) ^a
Years of alcohol abuse	20.33 (9.96)	11.92 (7.51)	5.106 (<.001) ^a
BDI	18 (12)	17 (12)	0.423 (.674)
% Men	71	68	$\chi^2_1 = 1.608$ (.205)
% PFH+	58	38	$\chi^2_1 = 3.787$ (.052)

PFH indicates paternal family history.

^a Significant ($\alpha < .05$).

neglect, emotional abuse, physical abuse, sexual harassment, and sexual abuse the TEC specifically addresses the setting in which such trauma occurred, that is, the family of origin, extended family, or any other setting. It rates the subjective and current degree of traumatic stress associated with the trauma. The questions contain short descriptions that are intended to define the events of concern. All items are preceded by the phrase, “Did this happen to you?” An example of sexual harassment is, “Sexual harassments (acts of a sexual nature that DO NOT involve physical contact) by your parents, brothers, or sisters.” A sexual abuse item is, “Sexual abuse (unwanted sexual acts involving physical contact) by your parents, brothers, or sisters.”

The format of the TEC allows for calculating trauma area presence scores with respect to emotional trauma (emotional neglect and emotional abuse in various settings, 6 items), sexual trauma (sexual harassment and sexual abuse in various settings, 6 items), and bodily threat (ie, physical abuse in various social settings, intentional threat to life from a person, bizarre punishment, intense pain, 6 items). The TEC format also allows the calculation of trauma severity scores using 4 variables: (a) presence of the event; (b) age at onset, indicating whether the trauma had occurred or started in the first 6 years of life or thereafter; (c) duration of the trauma, indicating whether the trauma had lasted shorter or longer than 1 year; and (d) subjective response, indicating whether the subject felt not traumatized or only slightly traumatized, vs moderately, severely, or extremely traumatized by the event(s). These variables are given a score of 1 if they apply and a score of 0 if they do not apply. The scores are calculated per setting in which the trauma occurred; that is, in the family of origin, in the extended

family, or in other settings. Next, these scores are added up. As to the life threat from a person, pain, and bizarre punishment, the TEC does not specifically assess the setting in which the event occurred. The composite scores for life threat from a person, pain, and bizarre punishment are added to the physical abuse composite scores for the indicated 3 settings. Thus, the possible trauma area severity scores range from 0 to 12 for emotional neglect, emotional abuse, physical abuse, sexual harassment, and sexual abuse, and from 0 to 24 for bodily threat.

The dependent variables in the current analysis are the total composite scores (TCS) for 3 age periods (age 0–6 years, TCS1; age 6–12 years, TCS2; and age 12–18 years, TCS3), which are calculated as above based upon a weighting of different aspects occurring at the time of the trauma taking, thus taking into account not only the nature, intensity, and number of the traumatic experiences, but also the psychosocial context in which the trauma took place.

2.3.2. European addiction severity index

Substance abusers completed the Belgian adaptation of the Dutch version of the EuropASI [20]. This structured interview provides reliable, valid, and sensitive measures of problem severity in 7 domains for the 30-day period preceding the interview, with higher scores reflecting more severe problems.

2.3.3. Beck depression inventory

The BDI [21] is an easily administrated, easily scored 21-item scale that has had wide acceptance as a clinical and research instrument. The Dutch translation has been validated and has good psychometric properties [22].

2.3.4. Posttraumatic stress disorders

The Anxiety and Posttraumatic Stress Disorder module of the SCID [16] was administered. We used the Dutch version [23].

2.4. Statistical analysis

If not specified otherwise, general linear model procedures were used. Depending on whether only one variable or multiple variables had to be compared, we used univariate or multivariate analyses of variance.

Table 2

Mean scores (SD) and differences between the EOA and the LOA patients on the TCS of the 3 age periods (age 0–6 years, TCS1; age 6–12 years, TCS2; age 12–18 years, TCS3), the ratio of participants with lifetime diagnosis of PTSD, and the ratio of participants with a history of childhood traumatic experiences

	EOA	LOA	F (P)	F (P) (PTSD and sex corrected)
TCS 0-6	5.67 (10.34)	2.98 (5.94)	3.481 (.065)	10.159 (.002) ^a
TCS 6-12	7.85 (10.90)	3.20 (6.05)	6.089 (.015) ^a	12.987 (.001) ^a
TCS 12-18	8.37 (10.90)	3.03 (5.75)	8.528 (.004) ^a	15.457 (<.001) ^a
% Patients with traumatic experiences	91	74	$\chi^2_1 = 5.587$, $P = .018^a$	
% Patients with PTSD	32	23	$\chi^2_1 = 1.289$, $P = .256$	

^a Significant ($\alpha < .05$).

Table 3

Correlations (within the whole sample) between the EuropASI severity scores for the different domains and the BDI with the TCS of the TEC in the 3 age periods (age 0–6 years, TCS1; age 6–12 years, TCS2; age 12–18 years, TCS3)

	Health	Work	Alcohol	Drug	Legal	Social	Psychiatric	BDI
TCS1	0.130 (0.163)	0.086 (0.368)	0.185 (0.047)	−0.243 (0.008)	0.249 (0.007)	0.226 (0.013)	0.218 (0.019)	0.239 (0.048)
TCS2	0.115 (0.215)	0.058 (0.545)	0.220 (0.018)	0.267 (0.004)	0.285 (0.002)	0.267 (0.004)	0.251 (0.007)	0.318 (0.008)
TCS3	0.107 (0.249)	0.063 (0.514)	0.224 (0.015)	0.285 (0.002)	0.294 (0.001)	0.273* (0.003)	0.264* (0.004)	0.311 (0.009)

Bonferroni-corrected significance level is $P < .05/10 = .005$.

* $P < .005$ (significant).

For the comparison of group mean scores without taking covariates into account, we deemed Student *t* tests for independent groups to be sufficiently appropriate. For categorical variables, χ^2 tests were used.

Pearson correlations were used with post hoc comparisons of means corrected for multiple comparisons by the Bonferroni procedure at $\alpha = .05$ level (significance level $P < .005$; $.05/10$).

All analyses were performed using SPSS-11 statistical software (SPSS, Chicago, Ill).

3. Results

3.1. Sample description

Sample characteristics are presented in Table 1. Relative to the LOA patients, the EOA patients were younger, had (by definition) an earlier start of alcohol abuse, more accumulative number of years of alcoholism, and a larger portion of individuals with a paternal history of alcoholism (marginally significant). In contrast, both groups were similar with respect to sex and severity of depressive symptoms.

3.2. Trauma variables

Overall, 97 (81%) of 119 of the alcoholic patients reported a history of traumatic experiences. In addition, 21 (26%) of 80 alcoholic patients fulfilled the criteria for lifetime PTSD diagnosis. More female alcoholic patients had lifetime PTSD (48%) than male alcoholic patients (17%) ($\chi^2_1 = 7.658$, $P = .006$).

The differences between EOA and LOA samples are presented in Table 2. An analysis of variance with group (EOA, LOA) as fixed factor and the TCS for 3 age periods as dependent variables and controlling for sex, parental alcoholism, and number of years of alcoholism was significant for group ($F_{3,104} = 3.994$, $P = .010$), whereas

multivariate tests were not significant for sex, parental alcoholism, and years of alcoholism.

Between-subjects effect showed that, relative to the LOA patients, the EOA patients had higher scores on the TCS2 and TCS3 and marginal on the TCS1 (Table 2).

When controlling additionally for PTSD and sex and, in a smaller sample ($n = 80$), the overall multivariate tests remained significant for group (EOA/LOA) ($F_{3,65} = 5.101$, $P = .005$) and the differences between EOA/LOA remained strong and significant with respect to all 3 TCS scores (observed power in this analysis remained good, 0.905) (Table 2). In addition, no significant effects were found for neither sex ($F_{3,65} = 0.583$, $P = .628$) nor PTSD ($F_{3,65} = 1.444$; $P = .238$) on the TCS scores.

Finally, alcoholic individuals with a lifetime PTSD diagnosis (26% of the sample) had higher scores on the TCS2 ($F_{1,79} = 5.265$, $P = .025$) and the TCS3 ($F_{1,79} = 7.484$, $P = .008$), and marginally higher score on the TCS1 ($F_{1,79} = 3.318$, $P = .073$).

3.3. Correlations

Correlations are presented in Tables 3–5. Overall, regarding the whole sample, with the exception of social and psychiatric problem severity, no significant correlations were found between the different trauma measures and measures of substance abuse severity (Table 3). However, there proved to be distinct differences regarding the correlations between sexes. Within the female alcohol-dependent sample, significant and strong positive correlations were found specifically between the TCS3 (traumatic experiences within the age period of 12–18 years) and the severity of alcohol, drug use, and the legal, social and psychiatric repercussions (Table 4). In contrast, the only significant correlation that was found within the male sample was a moderate, negative correlation between the severity of alcohol use and the TCS3 (Table 5).

Table 4

Correlations (within female sex) between the EuropASI severity scores for the different domains and the BDI with the TCS of the TEC in the 3 age periods (age 0–6 years, TCS1; age 6–12 years, TCS2; age 12–18 years, TCS3)

	Health	Work	Alcohol	Drug	Legal	Social	Psychiatric	BDI
TCS1	0.387	0.197	0.353	0.387	0.340	0.384	0.366	0.154
TCS2	0.370	0.102	0.458	0.468 (0.005)	0.449	0.490* (0.003)	0.463	0.321
TCS3	0.342	0.034	0.486* (0.003)	0.495* (0.002)	0.477* (0.004)	0.517* (0.002)	0.491* (0.003)	0.343

Bonferroni-corrected significance level is $P < .05/10 = .005$.

* $P < .005$ (significant).

Table 5

Correlations (within male sex) between the EuropASI severity scores for the different domains and the BDI with the TCS of the TEC in the 3 age periods (age 0–6 years, TCS1; age 6–12 years, TCS2; age 12–18 years, TCS3)

	Health	Work	Alcohol	Drug	Legal	Social	Psychiatric	BDI
TCS1	0.161	−0.098	−0.255	0.163	−0.003	0.024	0.008	0.198
TCS2	0.178	−0.142	−0.288	0.163	0.016	0.095	0.022	0.211
TCS3	0.157	−0.076	−0.324* (0.004)	0.193	−0.004	0.028	0.027	0.213

Bonferroni-corrected significance level is $P < .05/10 = .005$.

* $P < .005$ (significant).

Finally, within both sexes, only weak and nonsignificant correlations were found between the TCS scores and the BDI.

4. Discussion

The findings in the current study lead us to conclude that specifically early-onset alcoholism is associated with more childhood traumatic experiences than late-onset alcoholism. In addition, childhood traumatic experiences related strongly with current substance use and related problem severity within female alcoholic individuals. In contrast, no such relation was found within male alcoholic individuals.

Within alcoholic populations the association between alcohol abuse in adulthood and childhood traumatic experiences, and family of origin dysfunction has been reported earlier [10,13,24]. Childhood experience of physical violence in the family was reported in 14% and 11%, respectively, of alcohol-dependent patients [11,25]. In addition, compared to persons with no adverse childhood events, the risk of heavy drinking, self-reported alcoholism, and marrying an alcoholic were increased 2- to 4-fold by the presence of multiple adverse childhood events, regardless of parental alcoholism [26]. However, in none of these studies were childhood traumatic experiences explored with respect to their association with an early onset of the alcohol use disorder. The EOA patients in our study had higher scores reflective of traumatic experiences in all 3 age periods compared with the LOA patients. Our findings suggest that childhood traumatic experiences may be one of the factors involved in an early initiation of alcohol use and subsequent early development of alcoholism.

Several mechanisms may mediate the relation between an early onset of alcoholism and childhood traumatic experiences. First, early-onset alcoholism has been associated with a high prevalence of (paternal) family history of alcoholism. Thus, childhood traumatic experiences may be a direct consequence of growing up in an alcoholic family. Indeed, children growing up in alcoholic households are more likely to have adverse experiences. However, the differences between our alcoholic samples were independent of parental alcoholism, which suggests that other factors are involved. Our findings are consistent with others showing a relation between childhood adverse experiences and alcoholism risk, regardless of parental alcoholism [26]. Second, early-onset alcoholism has been associated with impulsive personality traits, novelty seeking, and disinhi-

bited behavioral patterns [3–7]. Thus, personal reaction styles of engaging in arousing situations, and impulsive acting, without consideration of possible consequences, may all result in higher risk for adverse experiences. In this respect, prospective studies have shown that childhood impulsive and disinhibitory personality traits were associated with early school problems (dropout), deviant peer association, and early engagement in substance use [27,28]. All these factors may combine into a “risk-prone” lifestyle. Finally, an early start of alcoholism may reflect an attempt to mediate the psychological pain caused by the traumatic experiences. However, although this “self-medication” hypothesis has been substantiated with respect to PTSD in adult life, the evidence regarding an early onset of alcoholism is limited. Indeed, the relation between age at onset of alcoholism and childhood traumatic experiences was not mediated by comorbid PTSD in our study. This finding is in contrast with those of a prospective study reporting that PTSD, not childhood traumatic experiences, was a risk factor with respect to subsequent substance use disorders [12]. However, both studies are difficult to compare. Breslau et al [12] used a prospective design in a large community-based sample, whereas our cross-sectional study included severely alcohol-dependent inpatients. One possible explanation is that childhood traumatic experiences constitute a risk factor for both early substance abuse and PTSD later in life. In this respect it needs to be noted that the relation between substance abuse, traumatic experiences, and PTSD symptoms is complex [10,13,29,30].

Although the reports of childhood traumatic experiences in our sample specifically related with an early start of alcohol problems for both female and male alcoholic individuals, some important sex differences were found. First, we need to note that more (adult) female alcoholic individuals had a lifetime PTSD diagnosis relative to their male counterparts. In addition, specifically within the female alcoholic individuals and not in the males, the severity of childhood traumatic experiences correlated, positively, with current problem severity and depressive symptoms. This finding is in line of an earlier study relating posttraumatic stress symptoms with the severity of alcohol and drug use in adolescent girls but not in boys [31]. In addition, our findings are consistent with earlier studies reporting a higher substance use severity and more behavioral and psychological problems specifically in women with histories of childhood abuse [32–34]. Overall, these and our findings may indicate that, although early

traumatic life events are associated with an early engagement in substance abuse in both men and women, these early traumatic experiences seem to have more negative consequences (psychiatric, ie, PTSD, and substance use and related problem severity) later on in adulthood for female compared to male alcoholic individuals.

Substance abusers with histories of childhood traumatic experiences are more prone to relapse as indicated by more and more frequent treatment attempts [34,35]. Thus, the high prevalence of childhood traumatic experiences within our EOA sample may be of clinical relevance, warranting specific therapeutic attention, that is, relapse prevention strategies, for this subgroup. In addition, overall, a sizeable portion (21%) of our alcoholic inpatients had a current comorbid PTSD diagnosis, whereas 5% were diagnosed as PTSD in full remission. Comorbid PTSD is known to not only affect the clinical presentation, but also exerts substantial influence on treatment service use, course, and outcome of substance-dependent individuals [30,36,37]. Alcohol-dependent individuals with PTSD, in comparison to those without, have been found to be at greater risk for relapse, have significantly more drinks per drinking day, and have more heavy drinking days [38,39]. Alcohol-dependent individuals report increased craving in response to trauma memories, which might be a potential contributing factor in the poorer substance abuse treatment outcome [40]. In addition to higher relapse rates, substance abusers with PTSD show greater psychological (eg, suicide), psychosocial, and occupational impairments [10,11,36,39,41].

However, and despite the frequency with which patients with both substance use disorders and childhood traumatic experiences (and PTSD) present for treatment, no systematic treatment approach of proven efficacy has been developed for this population. Indeed, a recent study revealed a significant heterogeneity regarding effect sizes of different programs for women with co-occurring disorders and trauma [42]. Of importance, in this meta-analysis, programs with more integrated counseling produced more favorable results on both mental health and substance use severity. Next, little is known about the impact on substance use disorder outcomes of the medications and psychosocial interventions commonly used to treat PTSD, or vice versa [30]. Indeed, patients with PTSD who also have alcohol dependence are typically excluded from treatment trials because it is thought that the stress of exposure therapy will increase alcohol use and that these patients are at a high risk for premature termination from therapy [43]. Indeed, comorbidity with alcohol and substance dependence appears to make it less likely that patients will complete treatment of PTSD [44–46].

Taken together, the findings in our study indicate that an early age at onset of alcohol abuse relates to early childhood and/adolescent traumatic experiences. Furthermore, these findings remained significant after controlling for sex. This is of importance. Indeed, despite the fact that alcohol abuse is more common among males, most prior studies that investigated the influence of traumatic experiences on the

risk of alcoholism have tended to focus on women [26]. Thus, our findings indicate that within both male and female alcoholic individuals, childhood traumatic experiences are an important distal factor in the development of early-onset alcoholism. Overall, these findings add to the presumption that early-onset alcoholism is a distinct form of the disorder in which multiple vulnerability factors, that is, personality traits, genetic loading, dysfunction within the family of origin, and childhood traumatic experiences, all contribute to an earlier start and more severe course of the alcohol disorder [3,4,6–8,46,47].

Some limitations in our study need to be mentioned. First, our sample consisted of severely alcohol-dependent inpatients. Typically, inpatients are characterized by a high problem severity and multiple psychiatric comorbidities (Berkson's fallacy). Thus, the results in our study cannot be extended with respect to less impaired alcoholic populations. In addition, given the naturalistic population, many possible factors that potentially confound the relation between childhood traumatic events and early-onset alcoholism could be involved. Although we statistically corrected for some of the most important factors (ie, sex, parental family history, years of alcoholism, and comorbid PTSD), many other factors could be involved (eg, personality disorders, comorbid illicit drug abuse). Future studies within larger samples are needed to explore these multiple interactions. Next, we tried to maximize the data reported in the case of having $n = 80$ SCID available for the $N = 119$ overall subject group. However, although both samples did not differ on various demographic and substance use variables, indicating that a bias between both samples is not likely, we cannot consider the smaller sample as being fully representative of the larger sample; thus, careful interpretation of our results is warranted when extrapolating our findings to the larger sample. Finally, the use of self-report measures in assessing traumatic history can be debated. However, it needs to be noted that, specifically regarding sensitive topics such as disclosure of abuse, the use of self-report measures may remove interpersonal concerns of embarrassment and distress and has proven to provide reliable information [48].

5. Conclusion

Childhood traumatic experiences are highly prevalent within clinical samples of EOA patients compared with LOA patients. This finding adds to the expanding evidence that early-onset patients accumulate multiple distal risk factors. In addition, important sex differences were found. Female alcohol-dependent patients report more lifetime PTSD, and, specifically within the female patients, a history of childhood traumatic experiences is associated with a higher substance abuse and related problem severity. Screening of alcoholic patients, specifically those with early-onset alcohol use disorders, for a range of traumatic events is recommended.

Acknowledgment

This research was supported by an internal research grant by the Psychiatric Centre, Brothers Alexians, Boechout, Belgium. Preparation of this article was also supported by VAGGA, Centre for Ambulatory Health Care, Antwerp, Belgium.

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