

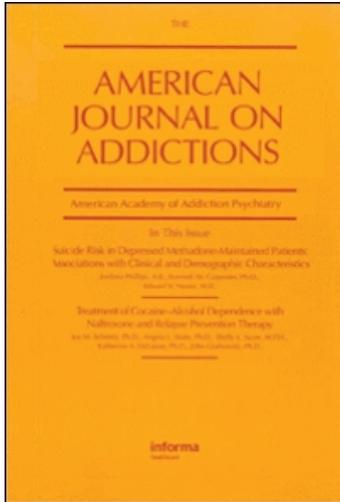
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Sexual Abuse and the Outcome of Addiction Treatment

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The objective of this prospective follow-up study was to examine the effects of sexual abuse on substance use disorder patients' clinical presentation and course in treatment. Consecutive admissions to the MUHC's Addictions Unit were assessed at intake (N = 206) and six-month follow-up (n = 172). Assessments evaluated socio-demographic and psychiatric characteristics, addiction severity, and physical and/or sexual abuse histories. Upon entering treatment, 23% reported prior sexual abuse with or without physical abuse. Patients with a sexual abuse history had higher rates of psychological problems, stronger family histories of substance use disorders, and more impaired family relationships. At six months, there were no differences between patients with and without sexual abuse histories in their response to treatment, or their utilization of treatment services. The current study failed to show that prior sexual abuse compromised short-term treatment outcomes. (Am J Addict 2007;16:93–100)

700 mixed substance abuse patients, those with a history of physical and/or sexual abuse had higher rates of psychiatric comorbidity, more severe psychological and social problems, and lower global assessments of functioning scores (GAF), but displayed no differences in alcohol or drug problems than those who reported never being abused.⁷

Other studies have demonstrated that substance use disorder patients with an abuse history are more impaired in terms of both psychiatric and addiction characteristics.^{5,6} For example, in a U.S. program collecting naturalistic data on 20,611 veterans diagnosed with mixed substance use disorders,¹⁰ veterans who reported prior physical or sexual abuse had more severe problems in all seven areas of functioning measured by the Addiction Severity Index (ASI),¹¹ including worse alcohol, drug, and psychiatric problems, than veterans who reported never being abused.⁶

Given the varied negative effects of physical and sexual abuse on substance use disorder patients' clinical presentation, the addiction literature has begun to examine the relationship between abuse experiences and response to treatment. Two recent studies indicated that abuse histories may be associated with worse treatment outcome.^{7,12} Specifically, a 12-month follow-up study of the large U.S. veterans' sample found that lifetime physical or sexual abuse predicted greater impairment post-treatment in six out of seven areas of functioning measured by the ASI, with the exception of drug problems.¹² However, the authors noted that the direct effect of abuse on treatment response (after controlling for problem severity at intake) was of small magnitude.

Similarly, in Greenfield et al.'s study of 100 patients hospitalized for alcohol dependence, survival analysis showed that sexual abuse history was associated with shorter times to first drink and to first relapse.³ They also found that participants who were single, less educated, without full-time employment, or suffering from depression had worse outcomes. When adjusted for these characteristics, the associations between sexual abuse and drinking were no longer significant.

INTRODUCTION

The majority of women and a significant minority of men who seek treatment for substance use disorders report a history of physical and/or sexual abuse.^{1–9} The impact of physical and/or sexual abuse for addiction patients have been examined by a number of clinical studies. In general, patients with an abuse history are found to have more severe psychiatric problems but not necessarily worse alcohol or drug problems at entry into addiction treatment.^{2,3,7,9}

In a study of 100 patients hospitalized for alcohol dependence, those with a history of sexual abuse were more likely to suffer from major depression and other psychiatric disorders, but had comparable drinking patterns to patients with no sexual abuse history.³ Among

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Other studies have failed to show that prior physical or sexual abuse compromised treatment outcomes.^{13,14} Among 330 substance use disorder patients participating in 26 outpatient treatment programs, sexual abuse had no impact on drug use or treatment participation at short-term follow-up.¹⁴ In a two-year follow-up of the same patients, the authors concluded that the impact of sexual abuse on relatively longer treatment outcomes was minimal, including drug use, treatment participation, 12-step participation, family functioning, and psychiatric symptoms.¹³ The inconsistent results regarding the relationship between abuse experiences and response to treatment may be attributed to the diversity of the samples (eg, an alcohol only population³ or a primarily male veteran sample¹²), the failure to distinguish between the effects of physical and sexual abuse,^{7,12} and the lack of consideration given to treatment utilization during the follow-up period.³

Despite the sometimes small and inconsistent effects of abuse experiences on addiction treatment outcome, a number of studies have suggested that clinicians may consider increasing the duration and intensity of interventions to temper the potential negative effects of abuse on outcome.^{7,12} However, the data do not yet support a modified or intensified treatment approach to address the specific needs of the abused addiction population, which may represent approximately half of substance use disorder patients.

The objectives of this six-month follow-up study were to prospectively explore the associations between sexual abuse and clinical presentation among men and women entering addiction treatment and investigate the effects of sexual abuse on patients' course in addiction treatment. The current study will add to the existing literature by taking into account treatment utilization and in-treatment performance throughout the six-month follow-up period (eg, clinic attendance, need for inpatient detoxification or psychiatric medication, results of random urine tests, self-reported relapses, duration and amount of substance use, and therapist-reported patient progress notes).

METHOD

Participants and Procedures

The sample included men and women who sought treatment at the McGill University Health Centre (MUHC) Addictions Unit. The Addictions Unit provides comprehensive ambulatory care to adults with all forms of psychoactive substance use disorders and pursues a treatment philosophy of total abstinence. Upon entering treatment, patients were consecutively approached to participate in a prospective follow-up study involving interviews and self-report questionnaires at intake and at six-month follow-up; 206 patients provided written informed consent, and four declined to participate. The

study's procedure and consent form were approved by the MUHC Research Ethics Committee.

All research assessments were conducted by trained interviewers who were uninvolved in clinical care. Information obtained from the research assessments was confidential and not disclosed to any of the treatment providers. Subjects completed intake interviews and questionnaires within one week of entering treatment and completed follow-up interviews and questionnaires at six months. Interviewers recontacted all subjects, including those who had dropped out of treatment, and invited them to attend follow-up interviews. At six months, 172 subjects (83%) attended the follow-up interviews and completed questionnaires, 18 (9%) provided information about their substance use during telephone interviews but did not complete questionnaires, and the remaining 16 (8%) refused to participate.

Measures

Research assessments were conducted using the Addiction Severity Index (ASI).¹¹ The ASI is a structured clinical interview that collects a wide range of information and assesses problem severity in seven areas: alcohol use, drug use, family/social functioning, medical status, employment/support, legal status, and psychological status. For each of these problem areas, the severity is measured in terms of number, duration, frequency, and intensity of symptoms experienced during the past 30 days, and a composite score is obtained with a range from 0 (least severe) to 1 (most severe). The psychometric properties of the ASI have been found to be excellent, with high inter-rater reliabilities for all composite scores.¹⁵

The intake interview also collected information on subjects' self-reported psychological problems, the quality of their family and social relationships (eg, perceived closeness and conflicts with family, friends, neighbors, and co-workers), and any history of physical and/or sexual abuse. Regarding psychological problems, subjects were asked "at any time during your life, have you had a significant period of time (that was not a direct result of alcohol or drug use) in which you have experienced 1) serious depression, 2) serious anxiety, 3) trouble controlling violent behavior, 4) thoughts of suicide, or 5) attempted suicide." Subjects were also asked "in the past 30 days, have you had a significant period of time (that was not a direct result of alcohol or drug use) in which you have experienced" the same five psychological problems. Regarding physical and/or sexual abuse, subjects were asked "at any time during your life, did any of these people—mother, father, brothers/sisters, partner/spouse, children, other significant family, close friends, neighbors, co-workers—abuse you 1) physically (cause you physical harm) or 2) sexually (force sexual advances or sexual acts)?" Subjects were also asked the same question but over the time frame of the past 30 days. The questions

on physical and sexual abuse were used in earlier studies^{16,17} and showed good specificity and slightly lower sensitivity for sexual abuse (specificity of 0.94 and 0.96, sensitivity of 0.69 and 0.46, respectively). Subjects were divided into three groups (no abuse, physical abuse only, sexual abuse with or without physical abuse) based on their responses to these questions (ie, they were categorized as having been physically or sexually abused only if they remembered and reported the abuse during the intake interview).

The six-month follow-up interview included questions regarding change in addiction severity (achievement of abstinence, duration of continuous abstinence). At both intake and six-month follow-up, subjects completed self-report questionnaires measuring psychological distress (SCL-90-R)¹⁸ and depressive symptomatology (BDI).¹⁹ Subjects also provided a urine sample for drug screening (cloned enzyme donor immunoassay, CEDIA).

Data Recorded from Clinic Files

Data collected from subjects' clinic files included information on clinic attendance (eg, total number of group therapy sessions, individual therapy sessions, and psychiatric appointments attended), need for inpatient detoxification or psychiatric medication, results of random urine tests, self-reported relapses, duration and amount of substance use, and therapist-reported patient progress notes.

Standard Addiction Treatment

During the six-month follow-up study, subjects were offered standard treatment: outpatient detoxification, 1–2 90-minute group therapy sessions per week, ≥ 4 50-minute individual therapy sessions, and random urine drug screens throughout treatment. The 90-minute weekly group therapy sessions combined psychoeducational, supportive, and relapse prevention interventions. The group sessions helped patients adjust to an alcohol- and drug-free lifestyle, examine the functions that alcohol/drugs have served in their lives, identify and cope with high-risk situations, develop an appropriate social support system, and resolve problems that impede psychological growth and social adjustment. The 50-minute weekly individual psychotherapy sessions promoted self-efficacy and personal responsibility for change, evaluated and enhanced the motivational level of the patient and readiness for change, and educated the patients about strategies that produce change and prevent relapses. The expected duration of treatment was six to nine months.

All addiction therapists had more than five years of experience as addiction counselors and held degrees in nursing, occupational therapy, or psychology. All subjects received a psychiatric evaluation at intake. Further medical/psychiatric care was provided on an as-needed basis throughout treatment. If subjects were unable to tolerate

or to adhere to outpatient detoxification regimens, they were offered inpatient detoxification. Subjects were encouraged but not required to attend mutual help groups, such as AA.

Statistical Analyses

All statistical analyses were conducted using the micro-computer version of SPSS (version 11.5). Associations were examined using the chi-square test for categorical data, and comparisons between groups or time points were assessed using analysis of variance techniques (ANOVA), including those for multiple variables and repeated measures (MANOVA). Post-hoc tests were conducted using Scheffe, Tukey, or t-tests; in cases where multiple comparisons were conducted on the same set of data, corrections for Type I error were made using a Bonferroni correction.

RESULTS

Sample Description

Demographic and Substance Use Characteristics of the Sample

The sample consisted of a mixed substance use disorder population, predominantly white (92%) and male (66%), with a mean age of 41.7 (± 12.5) years. The sample had high rates of unemployment (37% unemployed, 33% employed full-time), was largely unmarried (41% single, 24% separated or divorced, 33% married), and had received some post-secondary education (26% graduated from university, 28% completed some junior college, 23% completed high school only).

The overall sample was divided into three groups based on their report of lifetime history of physical and/or sexual abuse during the intake interview (no abuse, physical abuse only, sexual abuse with or without physical abuse). Half of the sample ($n = 103$) reported no history of abuse, 27% ($n = 55$) reported a history of physical abuse only, and 23% ($n = 48$) reported a history of sexual abuse with or without physical abuse. The rate of lifetime sexual abuse was significantly higher among women than men (45% vs. 12%) [$\chi^2 = 29.46$, $df = 2$, $p < 0.001$]. Otherwise, there were no significant differences among the three abuse groups with regard to demographics (employment, marital status, education) or substance use characteristics (duration of problem use, primary substance used, frequency of alcohol and drug use, ASI composite scores for alcohol use severity and drug use severity). Substance use characteristics of the sample are presented in Table 1.

Psychiatric Characteristics of the Sample

The overall sample reported elevated rates of both lifetime and current psychological problems during the intake interview. In general, the rates of lifetime and current psychological problems increased significantly with

TABLE 1. Substance use characteristics of the sample at intake

Substance use characteristics*	No abuse (<i>n</i> = 103)	Physical abuse only (<i>n</i> = 55)	Sexual ± physical abuse (<i>n</i> = 48)
Number of years of alcohol or drug problems (SD)	9.9 ± 7.6	13.1 ± 9.9	10.9 ± 10.6
Primary substance used			
Alcohol	35% (<i>n</i> = 36)	33% (<i>n</i> = 18)	25% (<i>n</i> = 12)
Cocaine	30% (<i>n</i> = 31)	26% (<i>n</i> = 14)	33% (<i>n</i> = 16)
Sedatives	18% (<i>n</i> = 19)	27% (<i>n</i> = 15)	31% (<i>n</i> = 15)
Other Drugs	17% (<i>n</i> = 17)	14% (<i>n</i> = 8)	11% (<i>n</i> = 5)
Alcohol use severity: ASI Composite Score (SD)	0.36 ± 0.29	0.34 ± 0.27	0.32 ± 0.27
Drug use severity: ASI Composite Score (SD)	0.14 ± 0.12	0.15 ± 0.13	0.19 ± 0.12

*Note: There were no significant differences among the three groups regarding their substance use characteristics at intake.

the severity of abuse (ie, the lowest rates displayed by the no abuse group, higher rates among those who experienced physical abuse alone, and highest rates among those who experienced sexual abuse with or without physical abuse; see Table 2).

Family Substance Use History and Family Relationships

Sexual abuse often occurs along with multiple other risk factors that reflect disturbed family functioning, including family substance use, psychiatric illness, and impaired parent-child relationships.²⁰⁻²² Additional analyses were conducted to examine family history of alcohol and drug problems, as well as subjects' reported closeness with their mothers and fathers. Both abuse groups (physical abuse only, sexual abuse with or without physical abuse) had higher rates of family alcohol problems than

the no abuse group [$\chi^2 = 10.16$, *df* = 2, *p* = 0.006]. Subjects who experienced sexual abuse with or without physical abuse also had higher rates of family drug problems [$\chi^2 = 9.08$, *df* = 2, *p* = 0.011], as well as more impaired relationships with their mothers [$\chi^2 = 7.61$, *df* = 2, *p* = 0.022] (see Figure 1).

Addiction Severity at Six Months

At six months, 190 subjects (92%) participated in the six-month follow-up interviews (172 face-to-face and 18 telephone interviews). A total of 55% of patients were abstinent at six months, with a mean duration of 81.6 ± 70.6 days of continuous abstinence. There were no significant differences among the three abuse groups (no abuse, physical abuse only, sexual abuse with or without physical abuse) in terms of their course in addiction

TABLE 2. Lifetime and current psychological problems reported by the sample at intake

Psychological problems (self-report)	No abuse (<i>n</i> = 103)	Physical abuse only (<i>n</i> = 55)	Sexual ± physical abuse (<i>n</i> = 48)
Depression (lifetime)*	71% (<i>n</i> = 73)	86% (<i>n</i> = 47)	94% (<i>n</i> = 45)
Anxiety (lifetime)	77% (<i>n</i> = 79)	84% (<i>n</i> = 46)	96% (<i>n</i> = 46)
Suicide attempts (lifetime)*	24% (<i>n</i> = 25)	40% (<i>n</i> = 22)	52% (<i>n</i> = 25)
Suicide attempts (current)	24% (<i>n</i> = 25)	40% (<i>n</i> = 22)	52% (<i>n</i> = 25)
Suicidal thoughts (lifetime)*	56% (<i>n</i> = 58)	71% (<i>n</i> = 39)	85% (<i>n</i> = 41)
Suicidal thoughts (current)	21% (<i>n</i> = 22)	24% (<i>n</i> = 13)	33% (<i>n</i> = 16)
Violence (lifetime)*	50% (<i>n</i> = 51)	69% (<i>n</i> = 38)	79% (<i>n</i> = 38)
Violence (current)*	21% (<i>n</i> = 22)	22% (<i>n</i> = 12)	44% (<i>n</i> = 21)
BDI score (SD) ^{†,a}	17.6 ± 10.3	17.7 ± 10.2	23.0 ± 11.9 [†]
SCL90R GSI (SD) ^{*,b}	1.16 ± 0.75	1.22 ± 0.61	1.57 ± 0.72 [†]
Psychological problems: ASI composite score (SD)*	0.36 ± 0.25	0.39 ± 0.24	0.51 ± 0.21 [†]

**p* < 0.05, corrected for multiple comparisons.

[†]Indicates a significant difference from the "no abuse" group, by post-hoc Scheffe.

^aPossible scores range from 0 to 63, with scores of 10-18 indicating mild to moderate depression, 19-29 indicating moderate to severe depression, and 30-63 indicating severe depression.

^bPossible scores range from 0 to 4, with higher scores indicating greater levels of psychological distress.

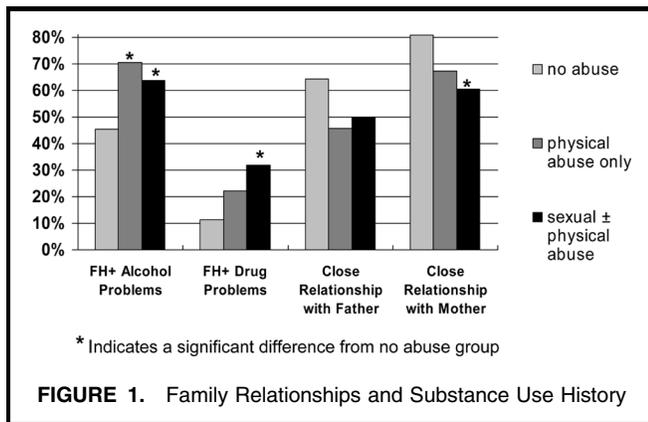


FIGURE 1. Family Relationships and Substance Use History

treatment (see Table 3), including rate of abstinence, duration of continuous abstinence, rate of positive urine toxicology screens, and ASI composite scores (which include alcohol, drug, psychological, and social problems).

Two-way ANOVAs with repeated measures were conducted, with factors of group (three levels) and time (two levels), in order to examine the changes in addiction severity from intake to six-month follow-up. The changes over time in ASI composite scores for alcohol and drug problems were similar for all three groups. As shown in Figure 2, repeated measures analyses showed a significant effect of time only for alcohol [$F(1,187) = 69.02, p < 0.001$] and drug problems [$F(1,187) = 52.50, p < 0.001$]. However, there were group differences in the degree of improvement in ASI composite scores for psychological and social problems over the follow-up period. As shown in Figure 3, repeated measures analyses showed significant group by time interactions for both psychological [$F(2,187) = 3.27, p = 0.040$] and social problems [$F(2,187) = 7.70, p = 0.001$].

Service Utilization During the Six-Month Follow-Up Period

Patients' files were reviewed to determine clinic attendance and other indicators of progress. In the current sample, there were no significant differences among the

three abuse groups (no abuse, physical abuse only, sexual abuse with or without physical abuse) in terms of their utilization of treatment services during the six-month follow-up period (see Table 4), including the length of stay in treatment, the number of group therapy sessions attended, the number of individual therapy sessions attended, the number of medical appointments attended, the rate of hospitalization for detoxification, and the rate of new prescriptions for psychiatric medications (largely antidepressants).

DISCUSSION

The elevated rates of lifetime physical and/or sexual abuse in the current study are consistent with the addiction literature.¹⁻⁹ The 71 female patients were significantly more likely to report a lifetime history of sexual abuse than the 135 male patients. The female:male ratio for sexual abuse was approximately 4:1, which is similar to findings in other studies of addiction populations,^{2,3,5-8} as well as those of large surveys of the general population.^{23,24}

In the current study, patients with a sexual abuse history did not have a significantly different alcohol or drug use severity upon entering addiction treatment than patients with no abuse history. However, their clinical presentation was marked by higher rates of both lifetime and current psychological problems. While this association between sexual abuse and psychological problems does not demonstrate causality, the findings suggest a correlation between the severity of abuse and the rates of psychological problems (ie, the lowest rates of psychological problems were displayed by the no-abuse group, higher rates among those who experienced physical abuse alone, and highest rates among those who experienced sexual abuse with or without physical abuse).

Patients with a sexual abuse history also described stronger family histories of substance use disorders and more impaired relationships with their mothers than patients with no abuse history. The association between sexual abuse and disturbed family functioning undoubtedly involves complex interactions. Parental substance abuse may be linked to a more chaotic lifestyle and a lack

TABLE 3. Outcome of addiction treatment at six-month follow-up

Treatment outcome*	No abuse (<i>n</i> = 103)	Physical abuse only (<i>n</i> = 55)	Sexual ± physical abuse (<i>n</i> = 48)
Rate of early dropouts (<i><</i> 45 days of treatment)	27% (<i>n</i> = 28)	20% (<i>n</i> = 11)	38% (<i>n</i> = 18)
Duration of continuous abstinence in days (SD)	75.7 ± 70.6	93.2 ± 71.4	81.4 ± 69.8
Abstinent at six months	60% (<i>n</i> = 58)	47% (<i>n</i> = 23)	53% (<i>n</i> = 24)
Percentage + urine drug screens during treatment	24.8 ± 35.1	25.1 ± 38.6	17.1 ± 29.7

Note: There were no significant differences among the three groups regarding the outcome of addiction treatment at six-month follow-up.

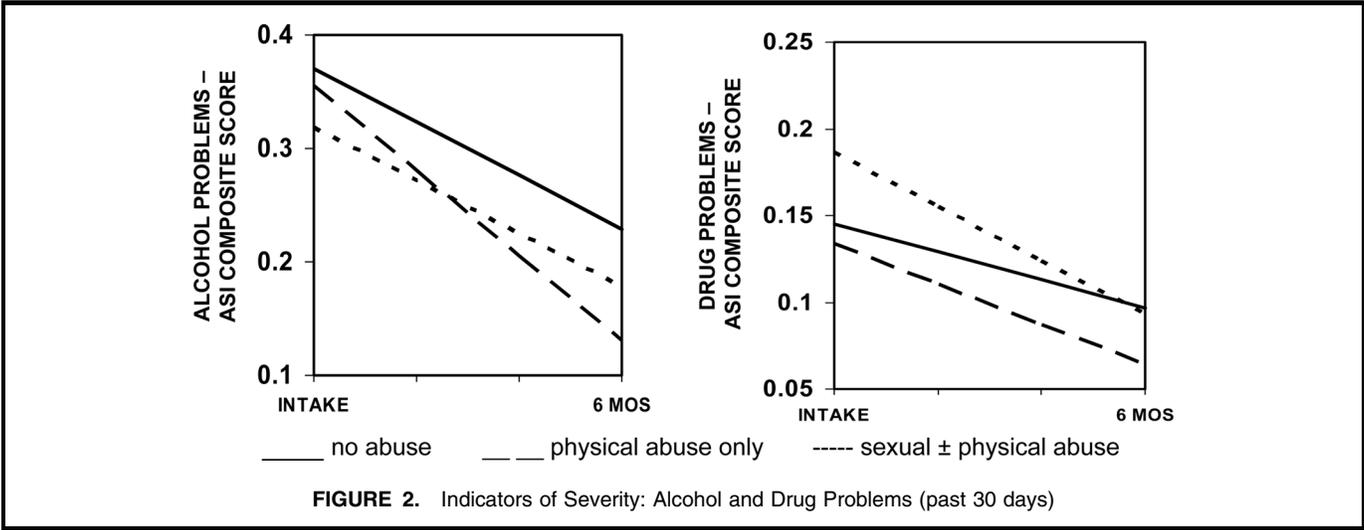


FIGURE 2. Indicators of Severity: Alcohol and Drug Problems (past 30 days)

of supervision, which in turn puts children at greater risk for sexual abuse.²⁵ Alternatively, the lack of a close relationship with the mother may stem from the failure of the mother to fulfill the protector role and/or may lead to a decreased likelihood of disclosing the abuse.²⁰

In the current study, patients who reported sexual abuse experiences did not have a significantly different course in treatment than patients who reported never being abused. They had comparable rates of early drop-out; durations of abstinence; alcohol, drug, psychological, and social problem severity at six months. In fact, patients with a history of sexual abuse experienced a sharper decline in psychological and social problems during the six-month follow-up period; differences in psychological and social problems at intake were no longer observable at six months. These results are consistent with the findings of earlier studies^{13,14} but contrast the conclusions of two more recent studies.^{7,12} The authors of the latter studies have suggested that more intense interventions may temper the potential negative

effects of abuse on addiction treatment outcome. Accordingly, this study attempted to account for treatment utilization and in-treatment performance throughout the follow-up period. However, in this sample, the lack of differences in addiction severity at six months could not be explained by an increased use of treatment resources by patients with a sexual abuse history.

One limitation of the current study is the lack of a more detailed assessment of the severity of sexual abuse. Three characteristics of sexual abuse have been found to be associated with more severe and lasting effects among women in the general community and clinical samples: penetration, a perpetrator who is a family member, and the use of force.²⁶ It is possible that if sexual abuse severity had been assessed and then treated as a continuous variable, a relationship between sexual abuse and addiction treatment outcome may have been observable. Similarly, the current study design did not allow for an examination of the relationship between sexual abuse

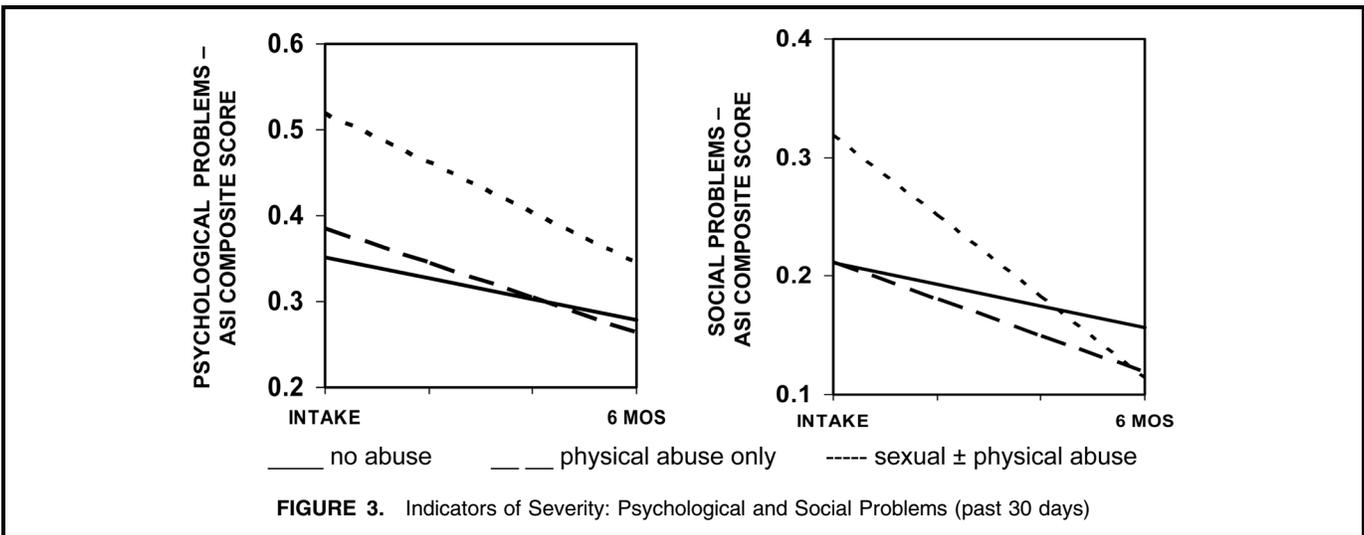


FIGURE 3. Indicators of Severity: Psychological and Social Problems (past 30 days)

TABLE 4. Utilization of treatment services during the six-month follow-up period

Treatment utilization*	No abuse (<i>n</i> = 103)	Physical abuse only (<i>n</i> = 55)	Sexual ± physical abuse (<i>n</i> = 48)
Duration of active treatment in days (SD)	113.6 ± 66.0	127.9 ± 67.2	103.9 ± 73.4
Number of individual therapy sessions (SD)	3.7 ± 3.7	4.1 ± 4.0	4.8 ± 4.2
Number of group therapy sessions (SD)	13.1 ± 12.6	16.4 ± 12.8	11.3 ± 11.7
Number of MD appointments (SD)	1.9 ± 3.1	2.8 ± 4.3	2.1 ± 2.9
Inpatient detoxification	18% (<i>n</i> = 19)	16% (<i>n</i> = 9)	21% (<i>n</i> = 10)
Psychiatric meds	38% (<i>n</i> = 36)	46% (<i>n</i> = 22)	54% (<i>n</i> = 26)

*Note: There were no significant differences among the three groups regarding their utilization of treatment services during the six-month follow-up period.

and a PTSD diagnosis. A community survey found that sexual abuse was linked to the intensity of alcohol problems among women, but that this relationship was mediated by the number of PTSD symptoms reported.²⁷ There may be a subgroup of patients with a lifetime history of sexual abuse and PTSD who experience a more complicated course in addiction treatment, as well as poorer treatment outcomes.

Other limitations include a possible lack of generalizability to other addiction populations, as the sample was primarily white and well-educated. There may have been recall bias as well, as sexual abuse was determined by retrospective self-report. Lastly, follow-up data were obtained for a relatively short time period. It is possible that patients with a history of sexual abuse fare well in the first six months after entering addiction treatment, but their underlying vulnerabilities leave them less resilient to future stress, more prone to symptom substitution, and more in need of other interventions, such as mental health services, over the long term.

CONCLUSIONS

Patients with a lifetime history of sexual abuse were more symptomatic upon entering addiction treatment than patients with no abuse history: they had higher rates of lifetime and current psychological problems, stronger family histories of substance use disorders, and more impaired family relationships. Despite a significantly different clinical presentation, patients with a sexual abuse history did not require any additional treatment interventions and had comparable short-term addiction treatment outcomes. Addressing prior sexual abuse experiences of patients entering treatment for alcohol or drug problems may be justified on humanistic grounds but may not significantly improve the effectiveness of addiction treatment nor alter the patient's course in treatment.

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