

**Araştırma / Original article****Childhood trauma and quality of life among alcohol dependent men**Cüneyt EVREN,<sup>1</sup> Ercan DALBUDAK,<sup>1</sup> Bilge EVREN<sup>2</sup>**ABSTRACT**

**Objective:** The aim of this study was to evaluate possible relationships between childhood trauma (abuse and/or neglect) and impairment of quality of life (QoL) in adulthood among alcohol dependent men. **Methods:** Participants were 156 male patients consecutively admitted to an alcohol dependency treatment inpatient unit. All patients were investigated using the Childhood Abuse and Neglect Questionnaire, the Symptom Checklist-Revised, the Michigan Alcoholism Screening Test (MAST) and the Medical Outcomes Study Health Survey-Short Form (SF-36). **Results:** The traumatized group (n=99, 63.5%) reported self-mutilative behavior, suicide attempts, and alcohol use among family members more frequently than those without a childhood trauma history. The traumatized group was younger and had elevated scores on anxiety, depression, and MAST, whereas they had lower QoL scores. Childhood trauma history predicted impairment in vitality and mental health subscales and mental health dimension of QoL. Anxiety was the main significant covariant for physical dimension, whereas depression was the main significant covariant for mental dimension of QoL. **Conclusions:** Childhood trauma has a negative impact on QoL in adulthood, particularly on mental components among alcohol dependent men. Self-destructive behavior, early problematic alcohol use and depression are significant mediators of this relationship. (*Anatolian Journal of Psychiatry* 2011; 12:245-252)

**Key words:** alcohol dependence, anxiety, childhood trauma, depression, quality of life

**INTRODUCTION**

Subjects with a childhood trauma history have significant and sustained losses in health-related QoL in adulthood.<sup>1-3</sup> This is partly due to the fact that childhood psychological trauma is an important risk factor for psychiatric disorders in later life.<sup>4,5</sup> Alcohol use is one of them.<sup>6</sup> Nevertheless, reports of childhood abuse and neglect are common among treatment-seeking alcohol and/or substance dependents.<sup>7-10</sup> Among male veterans in treatment for substance abuse, those who reported at least one type of childhood abuse range between 34% and 77%.<sup>7,8</sup> Among Turkish substance dependents, 56.1% met dichotomous criteria for some form of childhood abuse and/or neglect.<sup>11</sup> There is also a

strong relationship between childhood trauma and psychiatric comorbidity in substance use disorders which worsens clinical condition further.<sup>11-15</sup> Adverse childhood experiences are associated with ever having used alcohol and with an earlier age of onset of alcoholism and influence the course of alcohol use disorders negatively.<sup>6,9,11,14,16-19</sup>

Alcohol dependent subjects have lower levels of life quality compared to general population and to patients with other chronic health problems.<sup>20,21</sup> Despite the improvements in QoL of alcohol-dependent individuals in remission following treatment, it is unlikely that QoL becomes equal to or exceeds that of normative groups.<sup>20</sup> QoL deteriorates significantly on prolonged re-

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lapse.<sup>22</sup> QoL and related variables represent an important area to consider in assessing individuals with alcohol use disorders and in evaluating alcoholism treatment outcome.<sup>20,21</sup> Alcohol abuse is associated with a range of physical, psychological and social problems affecting individuals' physical and mental health.<sup>23</sup> This relationship appears to be moderated by a number of sociodemographic and client characteristics such as age, education, gender, and co-occurring psychiatric disorders. Since childhood traumas are related with the negative course of alcohol use disorders and higher psychiatric comorbidity in these patients,<sup>11-19</sup> we hypothesize that childhood trauma may be related with life quality of these patients both directly and indirectly.

The aim of the present study was to evaluate the prevalence of childhood abuse and/or neglect among male alcohol dependent inpatients, and to investigate its relationship to QoL. Both psychiatric comorbidity<sup>24</sup> and alcohol related problems<sup>25</sup> may also be related with QoL. Thus in order to prevent any interference, severity of alcohol-related problems, depression, anxiety and age at regular alcohol use were also assessed in the present study.

## METHODS

### Participants and settings

The study was conducted in Bakirkoy State Hospital for Psychiatric and Neurological Diseases, Alcohol and Drug Research, Treatment and Training Center (AMATEM) in Istanbul between January 2007 and January 2008. AMATEM is a specialized center for substance use disorders with 85 inpatient beds, and accepts patients from all over Turkey. The Ethical Committee of the hospital approved the study. Patient's written informed consent was obtained after the study protocol was thoroughly explained.

One hundred and eighty consecutively admitted alcohol-dependent inpatients without history of any other substance abuse were considered for participation in the study. All participants fit the DSM-IV diagnostic criteria for alcohol dependence. Excluding criteria were illiteracy, mental retardation or cognitive impairment and comorbid psychotic disorder. Five patients were excluded due to illiteracy and three patients due to cognitive deficits. Although none of the patients refused to participate in the study, 16 patients were excluded because they left some parts of the scales unfilled, did not give the forms back

or left the treatment program prematurely; i.e. before filling the forms. A total of 156 alcohol-dependent inpatients participated in the study. Interviews with the study group were conducted after detoxification period, i.e. 4-6 weeks after the last day of alcohol use.

### Assessments

All patients were assessed by using a semi-structured socio-demographic form. The diagnosis of alcohol or drug dependence in each participating patient based on the clinical examination, a screening interview based on the Structured Clinical Interview for DSM-IV (SCID-I),<sup>26</sup> Turkish version,<sup>27</sup> conducted by trained interviewer (CE).

**Childhood Trauma Reports:** Childhood emotional, physical, and/or sexual abuses were screened using a history form based on definitions by Walker et al.<sup>28</sup> for emotional abuse and Brown and Anderson<sup>4</sup> for physical and sexual abuse. Report of any of these types of abuse was considered as presence of a history of childhood trauma. Physical abuse included injuries such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, bone and skull fractures, and other evidence of physical injury. Sexual abuse (including incest) varied from those involving relatively nonspecific charges of assault and battery with intent to gratify sexual desires to more specific ones as fondling or touching in an obscene manner, including anal penetration. Emotional abuse involved excessive verbal threats, ridiculous and personally demeaning.

**Symptom Checklist-Revised (SCL-90-R):** Psychopathologic symptoms of anxiety and depression were assessed with widely used 90-item Symptom Checklist-Revised (SCL-90-R), a self-rating inventory.<sup>29</sup> The SCL-90-R is a reliable and valid measure of psychopathology and is widely used in psychosomatic researches. In the present study Turkish version of SCL-90-R was used.<sup>30</sup>

**Michigan Alcoholism Screening Test (MAST):** The severity of dependence was assessed by using the MAST,<sup>31</sup> which was developed as a 'rapid and effective screening for lifetime alcohol-related problems and alcoholism' for a variety of populations. Turkish version of the MAST is valid and reliable for screening severity of dependency of both alcohol and drug dependent patients.<sup>32</sup> The Cronbach's alpha was 0.74 in the present study.

**The Short-Form 36 (SF-36):** The SF-36 is a so-called generic QoL instrument, which has been originally derived from the Medical Outcome Study (MOS).<sup>33</sup> The SF-36 consists of the following eight scales with 36 items:<sup>34</sup> general health, physical functioning, role limitations due to physical health (role physical), bodily pain, mental health, role limitations due to emotional problems (role emotional), energy fatigue and social functioning. Internal consistencies ranged from 0.62 to 0.97.<sup>34</sup> The raw scores for each of the 8 subscales span from 0 to 100, with 0 representing worst and 100 representing best possible QoL status. The general health, vitality, and mental health subscales differ from the five other subscales in that they are bipolar. Here, a score of 100 does not denote a mere absence of problems but positive health states (e.g., happiness, pep, and well-being). The SF-36 was not specifically developed for psychiatric patients but was defined as a generic instrument for medical outcome measurement. In present study QoL was measured with the Turkish version of the SF-36.<sup>35</sup> For the initial assessment, we used a SF-36 version referring back to the last four weeks.

### Data analysis

Categorical variables were compared by means of the chi-square statistics. The Student's t test was used to compare the groups on continuous variables. Correlation analyses (Spearman, bivariate) were performed between the number of childhood abuse and neglect and clinical variables (anxiety, depression, severity of alcohol related problems and QoL). Multivariate analysis

of covariance (MANCOVA) was used to identify factors independently associated with QoL. For all statistical analysis p values were two-tailed and differences were considered significant at  $p < 0.05$ .

### RESULTS

Ninety-nine (63.5%) patients reported at least one type of childhood abuse and/or neglect, whereas 57 (36.5%) patients did not. Among traumatized patients, 57 (37.0%) had one type, 24 (15.4%) had two types, 13 (8.4%) had three types and 4 (2.6%) had four types of childhood trauma. Thirty-five (22.4%) patients reported physical abuse, 35 (22.4%) had emotional abuse, 82 (52.6%) had neglect and eight (5.1%) had a history of sexual abuse. Seventeen (10.9%) patients reported only one type of abuse, 44 (28.2%) reported only neglect, and 38 (24.4%) patients had both of them.

The traumatized group was younger than the non-traumatized group. There was no difference between two groups on age at onset of regular alcohol use, duration of education, and marital and employment status (Table 1). Self-mutilative behavior, suicide attempts and alcohol use among family members were more frequently in the traumatized group than the non-traumatized patients (Table 2).

Depression, anxiety and MAST scores were higher in the traumatized group in average compared to the non-traumatized group. Except that of the physical functioning, their subscale and summary scores of SF-36 were lower compared

**Table 1.** Sociodemographic variables

	No childhood abuse/neglect		Childhood abuse/neglect		Test	p
	n (57)	%	n (99)	%		
Age (mean±SD)	46.53±9.42		42.88±8.69		t=2.45	0.015
Duration of education	10.26±3.90		9.21±3.88		t=1.63	0.11
Age at regular alcohol use	27.09±9.57		24.73±7.39		t=1.72	0.08
Marital status					$\chi^2_{(2)}=0.91$	0.64
Married	37	64.9	57	57.6		
Divorced, widow, separate	5	8.8	9	9.1		
Single	15	26.3	33	33.3		
Employment status					$\chi^2_{(3)}=2.66$	0.45
Unemployed	17	29.8	34	34.3		
Full time job	22	38.6	35	35.4		
Part time job	5	8.8	15	15.2		
Retired	13	22.8	15	15.2		

**Table 2.** Self-mutilation, suicide attempt history and alcohol abuse in family among alcohol dependent men with and without childhood trauma

	No childhood abuse/neglect		Childhood abuse/neglect		$\chi^2$	df	p
	n (57)	%	n (99)	%			
Self-mutilation <sup>a</sup>	11	19.3	42	42.4	8.62	1	0.003
Suicide attempt <sup>b</sup>	6	10.5	24	24.2	4.38	1	0.036
Alcohol abuse in family <sup>c</sup>	19	33.3	51	51.5	4.83	1	0.028

Odds Ratio (95% Confidence Interval): <sup>a</sup> 3.08 (1.43-6.65), <sup>b</sup> 2.72 (1.04-7.12), <sup>c</sup> 2.13 (1.08-4.18)

**Table 3.** Scale scores among alcohol dependent men according to the childhood trauma status

Scale scores	No childhood abuse/neglect (n=57)	Childhood abuse/neglect (n=99)	t	p
	mean $\pm$ SD	mean $\pm$ SD		
SCL-90 anxiety	1.07 $\pm$ 0.88	1.67 $\pm$ 1.03	-3.66	<0.001
SCL-90 depression	1.31 $\pm$ 0.98	1.87 $\pm$ 0.98	-3.41	0.001
Michigan Alcoholism Screening Test	25.25 $\pm$ 11.79	29.12 $\pm$ 9.13	-2.14	0.035
Physical functioning	78.42 $\pm$ 18.45	72.42 $\pm$ 25.25	1.70	0.091
Role physical	48.25 $\pm$ 39.77	30.56 $\pm$ 38.23	2.74	0.007
Bodily pain	65.49 $\pm$ 25.92	53.86 $\pm$ 29.27	2.49	0.014
General health	57.51 $\pm$ 20.54	44.37 $\pm$ 20.90	3.80	<0.001
Physical component summary (PCS)	249.67 $\pm$ 72.06	201.21 $\pm$ 88.00	3.72	0.001
Role emotional	39.77 $\pm$ 40.06	20.88 $\pm$ 34.20	4.90	<0.001
Vitality	60.70 $\pm$ 21.18	43.08 $\pm$ 21.86	3.22	0.002
Social functioning	56.36 $\pm$ 23.16	42.55 $\pm$ 27.14	2.99	0.004
Mental health	55.65 $\pm$ 18.40	41.86 $\pm$ 19.74	4.31	<0.001
Mental component summary (MCS)	212.48 $\pm$ 80.67	148.37 $\pm$ 82.83	4.70	<0.001

**Table 4.** Spearman correlations between the number of childhood abuse and neglect and clinical variables

Scale scores	Number of childhood abuse/neglect	
	r	p
SCL-90 Anxiety	0.38	<0.001
SCL-90 Depression	0.34	<0.001
Michigan Alcoholism Screening Test	0.21	0.01
Physical functioning	-0.14	0.08
Role physical	-0.28	<0.001
Bodily pain	-0.29	<0.001
General health	-0.35	<0.001
Physical component summary (PCS)	-0.36	<0.001
Role emotional	-0.37	<0.001
Vitality	-0.33	<0.001
Social functioning	-0.34	<0.001
Mental health	-0.43	<0.001
Mental component summary (MCS)	-0.43	<0.001

to the non-traumatized group (Table 3). Number of childhood trauma types was correlated with

depression, anxiety and MAST scores positively and with subscale and summary scores of SF-

36 negatively (except that of the physical functioning) (Table 4).

In multivariate analysis of covariance (MANCOVA), depression scores being a significant covariate, a positive report of childhood trauma and/or neglect was associated with vitality dimension of QoL (Table 5). Depression scores and age of onset at regular alcohol use being significant covariates, childhood trauma was associated with the mental health dimensions of QoL as well (Table 5). When physical and mental component summary scores were taken as dependent variables, childhood trauma was associated both with mental component summary and depression scores, whereas anxiety was a significant covariate for physical component summary score of QoL (Table 6).

## DISCUSSION

In the present study, reports of childhood psychological trauma were associated with impairment in vitality and mental health subscales and mental health dimension of QoL among alcohol dependent men. Severity of childhood psychological trauma measured by number of trauma types was also related to severity of impairment in QoL alongside with severity of anxiety, depression and alcohol related problems. While the hypothesis of the present study has been confirmed in general, the dimensions of this association require to be elaborated.

In the present study, as being a significant covariate, concurrent severity of depressive symptoms seemed to be an important mediator in impairment of life quality.<sup>24</sup> Severity of anxiety -

**Table 5.** Multivariate Covariance Analysis (MANCOVA) with subscale scores of the SF-36 as dependent variables according to the CAN status

	Dependent variable	Mean square	F (df:11, 144)	p
Childhood abuse/neglect	Vitality (a)	2595.22	9.88	0.002
	Mental health (b)	1066.54	5.24	0.023
Covariants				
Anxiety	Bodily pain (c)	6310.52	9.86	0.002
	General health (d)	2815.07	9.58	0.002
Depression	Vitality	7223.36	27.51	<0.001
	Social functioning (e)	5169.24	11.35	0.001
	Mental health	5121.36	25.18	<0.001
Age at regular alcohol use	General health	1412.06	4.81	0.030
	Mental health	1769.37	8.70	0.004

Adjusted R<sup>2</sup>: a=0.51, b=0.51, c=0.22, d=0.37, e=0.35. Dependent variables were 8 dimensions of SF-36 QoL Scale. Childhood abuse/neglect was fixed factor and MAST, anxiety, depression and age at regular alcohol use were covariants.

**Table 6.** Multivariate Covariance Analysis (MANCOVA) with dimension scores of the SF-36 as dependent variables according to the childhood abuse and/or neglect status

	Dependent variable	Mean square	F (df:5, 150)	p
Childhood abuse/neglect	Physical dimension	10988.21 (a)	2.33	0.129
	Mental dimension	29654.70 (b)	7.71	0.006
Covariants				
Anxiety	Physical dimension	53295.55	11.30	0.001
	Mental dimension	11270.71	2.93	0.089
Depression	Physical dimension	6782.72	1.44	0.232
	Mental dimension	67308.72	17.50	<0.001

Adjusted R<sup>2</sup>: a=0.36, b=0.50. Dependent variables were physical and mental components of SF-36 QoL Scale. Childhood abuse/neglect was fixed factor and MAST, anxiety, depression and age at regular alcohol use were covariants.

and depressive symptoms have a negative effect on QoL among patient with alcohol dependency.<sup>21</sup> Severity of depression and anxiety symptoms may be higher among inpatient alcohol dependents, causing deterioration of life quality that initially led to the hospitalization.<sup>36</sup> Depressed individuals with a family history of alcoholism have a significantly higher prevalence of reported childhood abuse, more suicide attempts, and a greater intent to die when making their most lethal suicide attempt than individuals without a family history of alcoholism.<sup>37</sup> Indeed, symptoms of anxiety and depression accompanying alcohol dependency lead to an increase in severity of the problems associated with the disorder and have a negative effect on quality of life (QoL).<sup>21</sup> Severity of depressive and anxiety symptoms may also be extra burden for these patients, contributing in failure to recognize and manage alcohol related problems, and also resulting in negative perception of their life quality. Thus, QoL and related variables, such as severity of anxiety, depression and alcohol dependency (i.e. early age of problematic alcohol use and severity of alcohol-related problems) represent an important area to consider in assessing individuals with alcohol use disorders and in evaluating alcoholism treatment outcome.

Childhood abuse significantly increases the risk of depression, problem drinking and perceived poor health status in adolescents as well.<sup>38</sup> In the present study, age at regular alcohol use was a significant covariant for mental health subscale of life quality. This is consistent with previous studies reporting an association between childhood trauma and early onset and complicated course of alcohol use disorders.<sup>6,11,14,18,19,39,40</sup> Alcohol use is proposed to be a maladaptive coping mechanism adopted by adults who were abused as children.<sup>41,42</sup> Thus, substantial numbers of individuals with alcohol-related problems may be using alcohol to self-medicate due to a history of childhood abuse.<sup>43</sup> Patients with early-onset alcohol use have recently been reported to have deficient coping styles compared to the late-onset alcohol dependency patients, that is, increased suppression of problem management, which may relate with the genesis and maintenance of family and social problems.<sup>44</sup> Rodgers et al.<sup>45</sup> suggested

that it was important to assess a broad maltreatment history rather than trying to relate specific types of abuse to particular adverse health behaviors or health outcomes.

Childhood trauma, a family history of alcoholism and early-onset of problematic alcohol use, which are interrelated, all are linked to alcohol use disorders, major depression and self-destructive behavior such as suicide attempt and self-mutilation.<sup>46-48</sup> Consistent with findings of the present study, childhood trauma history has been shown as correlated with self-destructive behavior in several studies,<sup>49,50</sup> particularly among substance dependents, childhood abuse and/or neglect was related to both self-mutilation<sup>47</sup> and a history of suicide attempt.<sup>51</sup>

Comparison of QoL in male and female dependency patients indicates that for nearly all parameters, QoL in women is worse than that of men, for comparable levels of dependency.<sup>52</sup> Women, girls, and boys with substance use problems have higher rates of childhood abuse compared to that of the general population, while this was not the case for adult men.<sup>10</sup> Thus, the findings of the present study are expected to be more prominent in a younger population and among women in particular.

The present study has limitations. First, childhood trauma reports are of retrospective nature and, as such, they may be vulnerable to distortions in both directions. Second, the study group was restricted to a treatment-seeking population, and findings cannot be generalized to nontreatment groups. Despite these limitations the present study suggested that childhood trauma is related to impairment of QoL, particularly of mental components among alcohol dependent men. Also factors such as self-destructive behavior, early problematic alcohol use and severity of depressive symptoms in particular may have important mediating role in the relationship between childhood trauma and QoL. Thus, the present study underlines the importance of assessment of childhood psychological trauma history in alcohol dependency treatment units. Addressing unresolved trauma associated with childhood abuse and/or neglect might increase the efficacy of treatment outcomes and reduce relapse rates.<sup>53</sup>

## REFERENCES

1. Olatunji BO, Cisler JM, Tolin DF. Quality of life in the anxiety disorders: a meta-analytic review. *Clin Psychol Rev* 2007; 27:572-581.
2. Martsolf DS. Childhood maltreatment and mental and physical health in Haitian adults. *J Nurs Scholarsh* 2004; 36:293-299.
3. Corso PS, Edwards VJ, Fang X, Mercy JA. Health-related quality of life among adults who experienced maltreatment during childhood. *Am J Public Health* 2008; 98:1094-1100.
4. Brown GR, Anderson B. Psychiatric morbidity in adult inpatients with childhood histories of sexual and physical abuse. *Am J Psychiatry* 1991; 148:55-61.
5. MacMillan HL, Fleming JE, Streiner DL, Lin E, Boyle MH, Jamieson E, et al. Childhood abuse and lifetime psychopathology in a community sample. *Am J Psychiatry* 2001; 158:1878-1883.
6. De Bellis MD. Developmental traumatology: a contributory mechanism for alcohol and substance use disorders. *Psychoneuroendocrinology* 2002; 27:155-170.
7. Dunn GE, Ryan JJ, Dunn CE. Trauma symptoms in substance abusers with and without histories of childhood abuse. *J Psychoactive Drugs* 1994; 26:357-360.
8. Triffleman EG, Marmar CR, Delucchi KL, Ronfeldt H. Childhood trauma and posttraumatic stress disorder in substance abuse inpatients. *J Nerv Ment Dis* 1995; 183:172-176.
9. Westermeyer J, Wahmanholm K, Thuras P. Effects of childhood physical abuse on course and severity of substance abuse. *Am J Addiction* 2001; 10:101-110.
10. Simpson TL, Miller WR. Concomitance between childhood sexual and physical abuse and substance use problems. A review. *Clin Psychol Rev* 2002; 22:27-77.
11. Evren C, Kural S, Cakmak D. Clinical correlates of childhood abuse and neglect in substance dependents. *Addict Behav* 2006; 31:475-485.
12. Kessler RC, Davis CG, Kendler KS. Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. *Psychol Med* 1997; 27:1101-1119.
13. De Graaf R, Bijl R. V, Smit F, Vollebergh WA, Spijker J. Risk factors for 12-month comorbidity of mood, anxiety, and substance use disorders: findings from the Netherlands Mental Health Survey and Incidence Study. *Am J Psychiatry* 2002; 159:620-629.
14. Langeland W, Draijer N, van den Brink W. Psychiatric comorbidity in treatment-seeking alcoholics: the role of childhood trauma and perceived parental dysfunction. *Alcohol Clin Exp Res* 2004;28:441-447.
15. Bernstein DP, Stein JA, Handelsman L. Predicting personality pathology among adult patients with substance use disorders: effects of childhood maltreatment. *Addict Behav* 1998; 23:855-868.
16. Palmer JA, Palmer LK, Williamson D. Childhood abuse as a factor in attrition from drug rehabilitation. *Psychol Rep* 1995; 76:879-882.
17. Claus RE, Kindleberger LR. Engaging substance abusers after centralized assessment: predictors of treatment entry and dropout. *J Psychoactive Drugs* 2002; 34:25-31.
18. Dube SR, Miller JW, Brown DW, Giles WH, Felitti VJ, Dong M, et al. Adverse childhood experiences and the association with ever using alcohol and initiating alcohol use during adolescence. *J Adolesc Health* 2006; 38:444.e1-10.
19. Dom G, De Wilde B, Hulstijn W, Sabbe B. Traumatic experiences and posttraumatic stress disorders: differences between treatment-seeking early- and late-onset alcoholic patients. *Compr Psychiatry* 2007; 48:178-185.
20. Donovan D, Mattson ME, Cisler RA, Longabaugh R, Zweben A. Quality of life as an outcome measure in alcoholism treatment research. *J Stud Alcohol* 2005; 15(Suppl.):119-139.
21. Saatcioglu O, Yapici A, Cakmak D. Quality of life, depression and anxiety in alcohol dependence. *Drug Alcohol Rev* 2008; 27:83-90.
22. Foster JH, Marshall EJ, Peters TJ. Application of a quality of life measure, the life situation survey (LSS), to alcohol-dependent subjects in relapse and remission. *Alcohol Clin Exp Res* 2000; 24:1687-1692.
23. Gossop M, Marsden J, Stewart D, Lehmann P, Edwards C, Wilson A, et al. Substance use, health and social problems of service users at 54 treatment agencies: intake data from the National Treatment Outcome Research Study. *Br J Psychiatry* 1998; 173:166-171.
24. Daeppen JB, Krieg MA, Burnand B, Yersin B. MOS-SF-36 in evaluating health-related quality of life in alcohol-dependent patients. *Am J Drug Alcohol Abuse* 1998; 24:685-694.
25. Patience D, Buxton M, Chick J, Howlett H, McKenna M, Ritson B. The SECCAT survey: II. The alcohol related problems questionnaire as a proxy for resources cost and quality of life in alcoholism treatment. *Alcohol* 1997; 32:79-84.
26. First MB, Spitzer RL, Gibbon M, Williams JBW. Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I), Clinical Version. Washington D.C. and London, American Psychiatric Press, 1997.
27. Corapcioglu A, Aydemir O, Yildiz M, Esen A, Koroglu E. DSM-IV Eksen I Bozuklukları (SCID-I) için Yapılandırılmış Klinik Görüşme, Klinik Versiyon. Ankara, Hekimler Yayın Birliği, 1999. (Turkish).
28. Walker CE, Bonner B L, Kaufmann KL. The physically and sexually abused child: Evaluation and treatment. New York, Pergamon Press, 1988.
29. Derogatis LR. SCL-90. Administration, Scoring and Procedure Manual-II for the revised version, Tawson, Clinical Psychometric Research, 1983.
30. Dag I. Reliability and validity of Symptom Check List-90-Revised among university students. *Turk Psikiyatri Derg* 1991; 2:5-12. (in Turkish)
31. Gibbs LE. Validity and reliability of the Michigan Alcoholism Screening Test: A review. *Drug Alcohol Depend* 1985; 12:279-285.
32. Coskunol H, Bagdiken I, Sorias S, Saygili R. Michigan Alkolizm Tarama Testinin Geçerliliği. *Ege Tıp Dergisi* 1995; 34:15-18. (in Turkish)
33. Narud K, Dahl AA. Quality of life in personality and personality disorders. *Curr Opin Psychiatry* 2002; 15:131-133.

34. Ware JE, Sherbourne CD. The MOS 36-item Short-Form Health Survey (SF-36). I. Conceptual framework and item selection. *Med Care* 1992; 30:473-483.
35. Kocuyigit H, Aydemir O, Olmez N, Memis A. Kısa Form 36'nin (SF-36) Türkçe versiyonunun güvenilirliği ve geçerliliği. *İlaç ve Tedavi Dergisi* 1999; 12:102-110.
36. Malet L, Llorca PM, Beringuier B, Lehert P, Falissard B. AIQoL 9 for measuring quality of life in alcohol dependence. *Alcohol Alcohol* 2006; 41:181-187.
37. Sher L, Oquendo MA, Conasion AH, Brent DA, Grunebaum MF, Zalsman G, et al. Clinical features of depressed patients with or without a family history of alcoholism. *Acta Psychiatr Scand* 2005; 112:266-271.
38. Yen CF, Yang MS, Chen CC, Yang MJ, Su YC, Wang MH, et al. Effects of childhood physical abuse on depression, problem drinking and perceived poor health status in adolescents living in rural Taiwan. *Psychiatry Clin Neurosci* 2008; 62:575-583.
39. Waldrop AE, Ana EJ, Saladin ME, McRae AL, Brady KT. Differences in early onset alcohol use and heavy drinking among persons with childhood and adulthood trauma. *Am J Addiction* 2007; 16:439-442.
40. Rothman EF, Edwards EM, Heeren T, Hingson RW. Adverse childhood experiences predict earlier age of drinking onset: results from a representative US sample of current or former drinkers. *Pediatrics* 2008; 122:298-304.
41. Widom CS, Weiler BL, Cottler LB. Childhood victimization and drug abuse: A comparison of prospective and retrospective findings. *J Consult Clin Psychol* 1999; 67:867-880.
42. Trent L, Stander V, Thomsen C, Merrill L. Alcohol abuse among U.S. Navy recruits who were maltreated in childhood. *Alcohol Alcohol* 2007; 42:370-375.
43. Klanecky AK, Harrington J, McChargue DE. Child sexual abuse, dissociation, and alcohol: implications of chemical dissociation via blackouts among college women. *Am J Drug Alcohol Abuse* 2008; 34:277-284.
44. Moussas G, Dandouti G, Botsis A, Lykouras L. Coping styles of type I and type II alcohol-dependent men undergoing treatment. *Compr Psychiatry* 2006; 47:63-68.
45. Rodgers CS, Lang AJ, Laffaye C, Satz LE, Dresselhaus TR, Stein MB. The impact of individual forms of childhood maltreatment on health behavior. *Child Abuse Negl* 2004; 28:575-586.
46. Makhija N, Sher L. Childhood abuse, adult alcohol use disorders and suicidal behaviour. *QJM* 2007; 100:305-309.
47. Evren C, Evren B. Self-mutilation in substance-dependent patients and relationship with childhood abuse and neglect, alexithymia and temperament and character dimensions of personality. *Drug Alcohol Depend* 2005; 80:15-22.
48. Lim SW, Oh KS, Shin YC, Kang SG, Kim L, Park YM, et al. Clinical and temperamental differences between early- and late-onset alcoholism in Korean men. *Compr Psychiatry* 2008; 49:94-97.
49. van der Kolk BA, Perry JC, Herman JL. Childhood origins of self-destructive behavior. *Am J Psychiatry* 1991; 148:1665-1671.
50. Zweig-Frank H, Paris J, Guzder J. Psychological risk factors for dissociation and self-mutilation in female patients with borderline personality disorder. *Can J Psychiatry* 1994; 39:259-264.
51. Evren C, Evren B. The relationship of suicide attempt history with childhood abuse and neglect, alexithymia and temperament and character dimensions of personality in substance dependents. *Nord J Psychiatry* 2006; 60:263-269.
52. Peters TJ, Millward LM, Foster J. Quality of life in alcohol misuse: comparison of men and women. *Arch Womens Ment Health* 2003; 6:239-243.
53. Windle M, Windle RC, Scheidt DM, Miller GB. Physical and sexual abuse and associated mental disorders among alcoholic inpatients. *Am J Psychiatry* 1995; 152:1322-1328.