

Interaction of life quality with alexithymia, temperament and character in male alcohol-dependent inpatients

CUNEYT EVREN¹, ERCAN DALBUDAK¹, MINE DURKAYA¹, RABIA CETIN¹ & BILGE EVREN²

¹Bakirkoy State Hospital for Mental Health and Neurological Disorders, Alcohol and Drug Research, Treatment and Training Center (AMATEM), Istanbul, Turkey, and ²Department of Psychiatry, Baltalimani State Hospital for Muskuloskeletal Disorders, Istanbul, Turkey

Abstract

Introduction and Aims. The aim of this study was to investigate the relationship of life quality with alexithymia, temperament and character dimensions of personality. **Design and Methods.** Participants were 156 consecutively admitted male alcohol dependents. Patients were investigated with the Toronto Alexithymia Scale, the Temperament and Character Inventory, the Michigan Alcoholism Screening Test and the Medical Outcomes Study Short Form 36-item health survey. **Results.** Among alcohol-dependent inpatients 30.1% were considered as alexithymic. Severity of alcohol related problems was higher in alexithymic group, whereas quality of life (QoL) was lower. Alexithymia, novelty seeking (NS) and harm avoidance (HA) were negatively, reward dependence, self-directedness and cooperativeness were positively correlated with QoL scores. 'Difficulty in identifying feelings' (DIF) factor of alexithymia and HA were the determinants of physical dimension of Life Quality in Linear Regression model, whereas DIF, HA and NS were the predictors of mental dimension score. **Discussion and Conclusions.** Among alcohol-dependent men, DIF factor of alexithymia and personality dimensions, particularly HA and NS are associated with impairment of QoL. Direction of this relationship and factors that may mediate this relationship is unclear. [Evren C, Dalbudak E, Durkaya M, Cetin R, Evren B. Interaction of life quality with alexithymia, temperament and character in male alcohol-dependent inpatients. *Drug Alcohol Rev* 2010;29;177–183]

Key words: alcohol abuse, alexithymia, character, quality of life, temperament.

Introduction

In alcohol dependents, quality of life (QoL) has become an important outcome measure [1]. Life quality is the result of a complex interplay between internal and external factors. Among the internal factors, personality seems to play a substantial role with respect to QoL or related concepts, such as life satisfaction and well-being [2]. Personality traits and living conditions are stable, whereas illness and other negative life events make for changes in state that influence QoL [3].

For describing personality, which has an important role related with QoL, there exist two main types of frameworks: categorical and dimensional models [4]. Studies that evaluated the relationship of personality disorders (PDs) and QoL in elderly patients [5], in

primary care patients [6], in patients with PDs [7] and in opiate dependents [8] found that the presence of PDs predicts lower QoL. Finally in a population study, PDs appeared to be more important statistical predictors of life quality than sociodemographic variables, somatic health and axis I disorders [9]. Skodol *et al.* found correspondingly that PDs added to drug disorders reduced the Global Assessment of Functioning score [10]. Consistent with this, the more PDs that existed and the more personality criteria fulfilled (PD traits), the poorer the QoL, pointing to the importance of comorbidity and continuity [9].

Indeed there is a consensus in the classification of PDs dimensionally [11]. Dimensional models conserve more information about individual patients than categorical models [4]. Temperament and Character

Cuneyt Evren MD, Ercan Dalbudak MD, Mine Durkaya MD, Rabia Cetin MD, Bilge Evren MD. Correspondence to Cuneyt Evren MD, Icadiye Cad. Mentese Sok., Selcuk Apt. 1/17 Kuzguncuk, 34674 Uskudar, Istanbul, Turkey. Tel: +90 (216) 3410609; Fax: +90 (212) 6600026; E-mail: cuneytevren@yahoo.com; cuneytevren@hotmail.com

Received 15 February 2009; accepted for publication 18 June 2009.

Inventory (TCI) is an instrument to measure personality dimensionally and it evaluates four basic temperament and three basic character dimensions [12]. The psychobiological model assumes interactions between temperament and character scales, eliciting secondary emotions, which are important in the development of personality [13]. Individual differences in personality structure and development have a strong influence on the risk of all forms of psychopathology, including alcohol abuse [14]. The relationship between personality features based on Cloninger's seven-factor model and QoL or life quality related concepts have been investigated in the few existing studies. In these studies, novelty seeking (NS), reward dependence (RD), self-directedness (S) and cooperativeness (C) were positively associated with QoL, whereas harm avoidance (HA) was negatively correlated with QoL [15–18]. Consistent with these results, in a recent study among psychiatric outpatients, neuroticism and HA had negative correlations with QoL, whereas extraversion, C and S correlated positively with life quality. Also in this study, a considerable part of the QoL variance was explained by personality; Cloninger's character factors were superior to the Five Factor Model domains of personality [19].

Alexithymia is a multifaceted personality construct defined as the inability to distinguish one's feelings from the accompanying bodily sensations, the inability to communicate feelings to others, and an externally orientated cognitive style reflecting an absence of inner thoughts and fantasies [20]. The prevalence of alexithymia among alcoholic patients has been reported to range from 42% to 79% in several studies and these rates were not different in alcohol-dependent Turkish men (48–56%) [21–23]. In a recent study among alcohol dependents high HA and self-transcendence (ST) and low S were the predictors of alexithymia suggesting that alexithymia can be explained by specific dimensions within Cloninger's psychobiological model of personality in this population [24]. There are few studies that evaluated the relationship of alexithymia with QoL. The social function subscale of the Medical Outcomes Study 36-item Short Form Survey (SF-36) was related to alexithymia in patients with ulcerative colitis [25]. In another study progressive reduction of the SF-36 score was observed during follow up among colorectal cancer patients and patients undergoing laparoscopic cholecystectomy for cholelithiasis with high alexithymia, which suggested that surgery significantly improves the QoL in high alexithymic patients [26].

Best to our knowledge this is the first study to evaluate relationship between personality dimensions and QoL in alcohol dependents. Measurement of QoL within the scope of treatment programs would help to identify treatment requirements in alcohol-dependent

inpatients [1]. Although QoL assessments should reflect the physical, psychological and social situation of the individual, personality traits are relatively stable factors that may influence QoL [3,27]. The aim of this study was to investigate the relationship of temperament and character dimensions and alexithymia as personality traits with QoL among alcohol-dependent inpatients. We also controlled the effect of age and severity of problems related with alcohol use, while evaluating this relationship.

Methods

Settings and sample

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 specialised centre 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 met 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, that is 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, that is 4–6 weeks after the last day of alcohol use.

Measures

All patients were assessed by using a semistructured sociodemographic 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), [28] Turkish version, [29] conducted by trained interviewer (C. E.).

Toronto Alexithymia Scale. Alexithymia was assessed with the Turkish version of the 20-item Toronto

Alexithymia Scale (TAS-20) [30,31]. Items 4, 5, 10, 18 and 19 are negatively keyed. The first factor (difficulty in identifying feelings; DIF) in the three-factor model for the TAS-20 consists of seven items (items 1, 3, 6, 7, 9, 13, 14) assessing the ability to identify feelings and to distinguish them from the somatic sensations that accompany emotional arousal. Factor 2 (difficulty in describing feelings; DDF) consists of five items (items 2, 4, 11, 12, 17) assessing the ability to describe feelings to other people. Factor 3 (externally oriented thinking; EOT) consists of eight items (items 5, 8, 10, 15, 16, 18, 19, 20) assessing EOT. The total scores of the TAS-20 were dichotomised as a score of ≥ 61 , which indicated alexithymia, and a score of < 61 , which indicated no alexithymia. The approved form has been validated in a Turkish population study [32].

Temperament and Character Inventory. For evaluation of temperament and character traits, the TCI of Cloninger *et al.* was used in the Turkish version, a 240-item, forced-choice, self-report scale [33,34]. Dimensions of temperament were: (i) HA; (ii) NS; (iii) RD; and (iv) persistence (P). Dimensions of character were: (i) SD; (ii) C; and (iii) ST. The reliability and validity of the Turkish version of the TCI were supported by its psychometric properties and construct validity [33].

The Short-Form 36. Perhaps the most well-documented schedule for the measurement of QoL is SF-36, which assesses two broad dimensions of physical and mental health, each consisting of four specific domains [3]. The SF-36 consists of the following eight scales with 36 items [35]: 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 [35]. The raw scores for each of the eight 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). Its internal and external validity in alcohol-dependent populations is established [36,37]. In the present study QoL was measured with the Turkish version of the SF-36 [38]. For the initial assessment, a SF-36 version referring back to the last 4 weeks was used.

Michigan Alcoholism Screening Test. The severity of dependence was assessed by using the Michigan Alcoholism Screening Test (MAST), [39] 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 [40]. The Cronbach's alpha was 0.75 in the present study.

Statistical methods

The statistical package spss 11.5 (SPSS Inc., Chicago, IL, USA) for Windows was used for all the analyses. Categorical variables were compared by means of the chi-squared statistics. We used Mann-Whitney *U*-test to compare the groups on continuous variables. Correlation analyses (Pearson, bivariate) between the QoL, alexithymia and personality dimensions were performed. Taken life quality scores as dependent variable, Linear Regression models were performed. For all statistical analysis *P* values were two-tailed and differences were considered significant at $P < 0.05$.

Results

Among 156 alcohol-dependent inpatients 30.1% were considered as alexithymic. Mean age did not differ between the alexithymic group (42.02 ± 7.98) and the non-alexithymic group (45.16 ± 9.42) ($z = -1.88$, $P = 0.06$). Duration of education also did not differ between alexithymic (8.83 ± 3.46) and non-alexithymic (9.93 ± 4.06) groups ($z = -1.36$, $P = 0.18$). In alexithymic group, 23 (48.9%) patients were married, seven (14.9%) were divorced and 17 (36.2%) were never married. Seventy-one patients (65.1%) were married, seven (6.4%) were divorced and 31 (28.4%) were single in the non-alexithymic group ($\chi^2 = 4.69$, d.f.: 2, $P = 0.10$). The difference in marriage rates was not significant. Rate of being unemployed did not differ between alexithymic (42.6%, $n = 20$) and non-alexithymic groups (28.4%, $n = 31$) ($\chi^2 = 5.77$, d.f.: 3, $P = 0.12$) (not shown). Mean scores of MAST were higher in alexithymic group, whereas all the subscales of SF-36 other than role emotional were lower (Table 1).

Alexithymia score was negatively correlated with both physical ($r = -0.37$, $P < 0.001$) and mental ($r = -0.39$, $P < 0.001$) dimensions of life quality. Among factors of alexithymia, DIF (physical dimension: $r = -0.43$, $P < 0.001$; mental dimension $r = -0.41$, $P < 0.001$) and DDF (physical dimension $r = -0.25$, $P < 0.01$; mental dimension $r = -0.29$, $P < 0.001$) were negatively correlated with QoL. Correlations between personality dimensions and QoL were also evaluated. Physical dimension was negatively correlated with HA ($r = -0.42$, $P < 0.001$) and positively correlated with RD ($r = 0.25$, $P < 0.01$), S ($r = 0.39$, $P < 0.001$) and C ($r = 0.27$, $P < 0.01$), whereas mental dimension was negatively correlated with NS ($r = -0.29$, $P < 0.001$) and HA ($r = -0.48$, $P < 0.001$) and positively correlated

Table 1. Scale scores among alcohol-dependent men according to the alexithymia status

Scale scores	No Alexithymia (<i>n</i> = 109)		Alexithymia (<i>n</i> = 47)		<i>z</i>	<i>P</i>
	Mean	SD	Mean	SD		
Michigan Alcoholism Screening Test	25.99	10.74	31.68	8.07	-3.20	0.001
Physical functioning	78.85	20.69	64.79	25.58	-3.32	0.001
Role physical	42.89	40.84	23.40	33.14	-2.71	0.007
Bodily pain	62.47	28.5	48.00	26.26	-2.92	0.004
General health	52.84	20.62	40.66	21.82	-3.09	0.002
Physical component summary (PCS)	237.06	84.02	176.85	74.21	-4.11	<0.001
Vitality	54.73	21.94	37.45	21.57	-4.13	<0.001
Social functioning	52.52	26.94	36.17	21.84	-3.45	0.001
Role emotional	30.28	39.43	21.99	32.06	-0.97	0.33
Mental health	51.89	19.72	35.32	16.81	-4.59	<0.001
Mental component summary (MCS)	189.41	89.08	130.92	68.52	-3.64	<0.001

SD, standard deviation.

Table 2. Determinants of physical and mental dimensions of SF-36 score in two Linear Regression model

	Unstandardised coefficients		Standardised coefficients		<i>P</i>
	B	Standard error	Beta	<i>t</i>	
Physical dimension (Constant)*	390.447	23.561		16.572	<0.001
TAS-20 DIF Factor	-4.672	1.095	-0.318	-4.267	<0.001
Harm avoidance	-4.451	1.067	-0.311	-4.171	<0.001
Mental dimension (Constant)**	421.679	31.462		13.403	<0.001
Harm avoidance	-5.802	1.051	-0.394	-5.522	<0.001
Novelty seeking	-4.420	1.339	-0.225	-3.300	0.001
TAS-20 DIF Factor	-3.186	1.107	-0.211	-2.877	0.005

*F = 27.97, SD = 2, 151, *P* < 0.001, Adjusted R²: 0.26, **F = 25.61, SD = 3, 150, *P* < 0.001, Adjusted R²: 0.33. Age, Michigan Alcoholism Screening Test, DIF, difficulty in describing feelings, externally oriented thinking factors of TAS-20 and temperament and character dimensions were covariates. DIF, difficulty in identifying feelings; SD, standard deviation.

with RD (*r* = 0.22, *P* < 0.01), P (*r* = 0.17, *P* < 0.05), S (*r* = 0.40, *P* < 0.001) and C (*r* = 0.25, *P* < 0.01) (not shown).

In two linear regression model, when age, DIF, DDF, EOT factors of TAS-20, MAST and seven temperament and character dimensions were taken as independent variables, DIF and HA were the determinants of physical dimension, whereas together with these two variables NS was the predictor of mental dimension of life quality (Table 2).

Discussion

The main findings in the present study are that DIF and HA predicted both physical and mental dimensions of life quality, whereas NS predicted only mental dimension. This shows that higher scores on DIF, HA and NS are related with impairments in QoL among

alcohol dependents. In two studies that evaluated the relationship of alexithymia with QoL in different populations, one found alexithymia to be related with social functioning [25] and the other found that in high alexithymic patients, QoL improved significantly after surgery [26]. Alexithymia is considered as both trait [41] and state (transitory reaction to negative affect) [42] in alcohol-dependent patients. Nevertheless, studies showed that alexithymia related negatively with the maintenance of abstinence [43] and was associated with poor outcomes in alcoholic inpatients [44,45]. These associations may also be accounted for by the overlap between alexithymia and related or more general constructs, such as negative affects [46]. Symptoms of negative affects accompanying alcohol addiction lead to an increase in severity of the problems associated with the addiction and have a negative impact on QoL [1]. Alcohol-dependent patients with

negative emotions, such as anxiety or depression, may drink alcohol to relieve these emotions externally [47] and may have alexithymia as a defence mechanism internally [42]. Although severity of alcohol-related problems was controlled in the present study, the effect of anxiety and depression were not evaluated, which can be considered as limitation of the study. Also, since this study is cross-sectional, causal relationship between alexithymia and QoL and factors that may mediate this relationship can not be determined. Finally, DIF may effect how the person perceives her/his life quality, which might be considered as another limitation of the present study.

The HA was the most important personality dimension related with impairments in life quality. HA is a hereditary tendency to inhibition or cessation of behaviour, such as pessimistic worry in anticipation of future problems, passive avoidant behaviours, such as fear of uncertainty and shyness of strangers, and rapid fatigue [12,35]. The disadvantages occur when danger is unlikely but still anticipated; such pessimism or inhibition leads to unnecessary worry [12]. This worry may also cause unnecessary avoidance resulting in negative affect, which may in return cause impairments in QoL. In a previous study, Akvardar *et al.* found higher HA scores among Turkish alcoholics than healthy controls. In this study it was suggested that, individuals high in HA might use alcohol to relieve negative emotions [48]. Consistent with this, HA was found to be negatively correlated with QoL in previous studies [18–21]. It was suggested that a low QoL of patients with mood or anxiety disorders is not only determined by the disease or the current health, but is also shaped by personality traits that are relatively stable throughout an individual's life time [49]. Nevertheless, stability of TCI dimensions in alcohol dependents is a question of debate. Berglund *et al.* suggested that long duration of excessive alcohol consumption appears to have an influence on personality traits in male alcohol-dependent individuals and these personality traits may therefore be a consequence of, rather than preceding alcoholism in these individuals [50].

In previous studies NS was positively associated with QoL, suggesting that rather than the high scores, low scores on NS cause impairments in QoL [15–18]. In contrast with this, the present study revealed that higher NS score has negative impact on mental dimension of the QoL in alcohol dependents. Individuals high in NS tend to be quick-tempered, excitable, exploratory, curious, enthusiastic, ardent, easily bored, impulsive and disorderly [34]. Researches suggest that NS represents a vulnerability factor for substance abuse in general [51,52], associated with craving scores [53] and a predictor of relapse in detoxified male alcohol dependents [54]. Thus, these findings suggest that NS tem-

perament, which is directly related with occurrence, maintenance and relapse of alcohol dependence, might also be related with impairments in QoL among this population, whereas for other populations this dimension might have a protective role for life quality.

Temperament dimension RD and character dimensions SD and C were positively correlated with QoL, suggesting that lower scores on this personality dimensions are related with impairments in QoL. Other than high scores on NS, severe substance abusers had high scores on RD dimensions [55] and alcohol dependents were characterised by lower SD [56]. Individuals low on the RD dimension are often described as practical, tough minded, cold and socially insensitive [34] and higher levels of RD were related to more satisfaction from social relationships [16]. All categories of PD are distinguished by low SD, regardless of the cluster or category of PD [34,57]. Likewise, most individuals with PDs are low in C, which is defined by poor interpersonal functioning and described as being intolerant, narcissistic, hostile or disagreeable, critical, unhelpful, revengeful and opportunistic [12,58]. Since low RD, high NS and HA scores were related with impairments in QoL, this may suggest that PDs might be well represented, regardless of the personality Clusters, in those with lower life quality [59]. Consistent with this, substance abusers with PDs differ in their personality profile from abusers without PDs and score lower on the total QoL. As regards to TCI scales, NS, RD and SD predict the age of onset of the abuse, while C was a predictor of the number of community admissions in previous study [18]. A cognitive theory emphasises that our personality determines how we interpret the things that happen to us, thus personality traits are important for the QoL perception [3]. Also coping style can be seen as an aspect of personality, defined as the individual's ability to overcome and adapt to stresses caused by illness or other negative life events.

Evaluating the QoL and the factors related with life quality would help to identify treatment requirements in alcohol-dependent inpatients. Results of the present study suggest that among alcohol-dependent men, DIF factor of alexithymia and personality, particularly HA and NS dimensions are associated with impairments in QoL. Direction of this relationship and factors that may mediate this relationship is unclear. Both alexithymia and personality traits, which are important in this aspect, might also effect how the person perceives his/her life quality.

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