COGNITIVE ASPECTS

Assessment of the Mode of Anger Expression in Alcohol Dependent Male Inpatients

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Abstract — Aims: To assess the relationships between trait anger (T-Anger) and anger expression styles and emotional states—suicide probability, depression, state and trait anxiety and self-esteem—in alcohol-dependent inpatients. Methods: The patients included in this study were 142 male inpatients with alcohol dependence according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria. The Suicide Probability Scale, the Coopersmith Self-Esteem Inventory, the Beck Depression Inventory, the Beck Hopelessness Scale, the Spielberger State-Trait Anxiety Scales, and the T-Anger and Anger Expressions Scales were used for the assessment of the emotional states of the patients. Pearson correlation, analysis of variance and linear regression were used in the statistical analysis. Results: There were significant correlations between suicide probability, depression, state and the trait anxiety, and the T-Anger and all of the anger expression subscales. The presence of high probability for suicide was related to a high level of T-Anger, Anger-out and Anger-in. Finally, a low level of hopelessness was associated with a high level of T-Anger, and a high level of the trait anxiety was associated with a low level of the Anger Control (AEX-Con). Conclusion: The findings indicated that suicide probability, hopelessness and trait anxiety predict T-Anger levels and anger expression styles. Therefore, anxiety, hopelessness and suicide probability must be considered as risk for anger and anger expressions in alcohol-dependent patients. Furthermore, alcohol treatment programmes should attach importance to anger management and AEX-Con training.

INTRODUCTION

Manifestations of anxiety, anger and depression are psychological vital signs that are strongly related to an individual’s well-being. Variations in the intensity of these emotions provide necessary information about a person’s mental health (Spielberger and Reheiser, 2009). Therefore, it is essential to evaluate emotional states in diagnosis and treatment. Anger, one of the most frequently experienced emotions, is described as a negative phenomenological experience that exists on a continuum in which the frequency, the intensity and the duration of the experience, along with the expressive (i.e. subjective, physiological, interpretive and behavioural) characteristics, often lead to significant impairment (Olatunji and Lohr, 2005). Anger has also been defined as a primary emotional state that consists of feelings not motivated by any particular goal and that varies in intensity from mild irritation or annoyance to intense fury and rage (Spielberger and Reheiser, 2009). 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emotional and background factors in hospitalized alcohol-dependent are lacking. Careful assessment of the experience, the expression and the control of anger is essential in psychological diagnosis and treatment planning in clinic. Assessing emotional vital signs and providing timely and meaningful feedback in the treatment will also enhance awareness and understanding of a person’s feelings, and help patients to recognize and cope more effectively with their anger emotions.

The aim of this study was to assess the relationships between T-Anger and anger expression styles and a variety of emotional states—suicide probability, depression, state and trait anxiety and self-esteem—in alcohol-dependent inpatients, in the belief that determining the relationships between anger and these emotional states would be helpful in the treatment of alcohol-dependent patients.

METHODS

Subjects

The sample consisted of 142 male alcohol-dependent inpatients hospitalized in the Ankara University Psychiatry Clinic, Alcohol and Substance Abuse Treatment Unit. All of the subjects were diagnosed with alcohol dependence according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria by psychiatrists. Patients who had a past history or were currently suffering from neurological disease, including convulsive disorder or brain damage, and who had any evidence of comorbid psychiatric conditions of schizophrenia, bipolar disorder, mental retardation or substance use disorder other than alcohol and nicotine were excluded.

The mean age for the sample was 45.77 years (SD: 9.23; range: 19–69). Demographical and background variables are shown in Table 1.

Clinical assessment

The following scales were used for the assessment of the emotional state of the patients:

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Marital status</td>
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<td></td>
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<tr>
<td>Single</td>
<td>11</td>
<td>7.7</td>
</tr>
<tr>
<td>Married/together</td>
<td>82</td>
<td>57.7</td>
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<tr>
<td>Divorced</td>
<td>35</td>
<td>24.6</td>
</tr>
<tr>
<td>Remarried</td>
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<td>4.9</td>
</tr>
<tr>
<td>Widowed</td>
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<td>2.1</td>
</tr>
<tr>
<td>Not stated</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>Level of education</td>
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<td></td>
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<td>11.3</td>
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<tr>
<td>Secondary/High school</td>
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<td>62.7</td>
</tr>
<tr>
<td>University/College</td>
<td>34</td>
<td>23.9</td>
</tr>
<tr>
<td>Not stated</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Employment status</td>
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<tr>
<td>Employed</td>
<td>79</td>
<td>55.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>9</td>
<td>6.3</td>
</tr>
<tr>
<td>Retired</td>
<td>47</td>
<td>33.1</td>
</tr>
<tr>
<td>Not stated</td>
<td>7</td>
<td>4.9</td>
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<tr>
<td>Presence of suicidal history</td>
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<td></td>
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<tr>
<td>Suicide attempt</td>
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<td>20.5</td>
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<tr>
<td>Suicide plan/thought</td>
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<td>34.2</td>
</tr>
<tr>
<td>None</td>
<td>53</td>
<td>45.3</td>
</tr>
</tbody>
</table>

The T-Anger and the Anger Expressions Scale (T-Anger-AngerEX): This was developed by Spielberger (1988) and adopted to the Turkish population by Ozer (1994). Four independent subscales comprise the T-Anger-AngerEX, including the T-Anger, the Anger-in (AEX-In) (the anger that is experienced but held in or suppressed), the Anger-out (AEX-Out) (the anger expressed towards other people or objects in the environment) and the Anger Control (AEX-Con) (how frequently a person endeavours to control the anger feelings). Higher score in the T-Anger-AngerEX reflects a higher level of anger. Cronbach’s α was 0.78, 0.62, 0.78 and 0.84, respectively.

The Suicide Probability Scale (SPS): This scale was first developed by Cull and Gill (1990) and its validity and reliability studies for the Turkish population were carried out by Tugcu (1996). This scale consists of 36 items and 4 subscales, namely hopelessness, suicidal ideation, negative self-evaluation and hostility. The greater the score, the higher is the probability of suicide. Cronbach’s α was 0.93, test-retest reliability correlation coefficient was 0.92.

The Beck Hopelessness Scale (BHS): This self-rating scale consists of 20 true–false statements that assess the extent of pessimism and negative beliefs about the future. The psychometric properties of the BHS were originally studied by Beck et al. (1974) and its adaptation to the Turkish language was carried out by Durak (1994). The three subscales of the BHS are Feelings about the Future, Loss of Motivation and Expectations. A higher score in the BHS reflects a higher level of hopelessness. Alpha reliability coefficients ranged from 0.74 to 0.86.

The Coopersmith Self-Esteem Inventory (CSI): This scale was developed by Coopersmith (1986) and adapted to the Turkish population by Tufan (1988). It consists of 25 items. A high score corresponds to high self-esteem in the individual (belief of the individual that he is skilled, successful and valuable). Cronbach’s α was 0.62, and test-retest reliability correlation coefficient ranged from 0.65 to 0.76.

The Spielberger State-Trait Anxiety Inventory (STAI I-II): This scale is made up of two separate scales originally developed by Spielberger et al. (1970). Its adaptation, validity and reliability studies for Turkey were done by Oner and Le Compte (1985). The State Anxiety Inventory assesses how one feels in particular situations at particular times, reflecting the anxiety one feels in specific situations. The Trait Anxiety Inventory defines how one feels in general.

The Beck Depression Inventory (BDI): This is a self-rating scale determining the level of depression, consisting of 21 items, each containing four statements. It was originally developed by Beck (1961) and adapted to the Turkish population by Hisli (1989). Higher scores in the BDI reflect a higher level of depression. The alpha reliability coefficient was 0.74.

Procedures

After 2–3 weeks of detoxification period, patients completed standardized assessments, including questions concerning demographics, and retrospective alcohol use history. The psychological state of the patients was assessed using the above-mentioned scales.
Analysis
The relationships between the T-Anger-anger expressions and the scores for suicide probability, depression, hopelessness, self-esteem and state-trait anxiety, were investigated using Pearson correlation analysis. The relationships among T-Anger-anger expressions and some emotional factors were analysed using multiple linear regression. Self-esteem, depression, hopelessness, suicide probability, trait and state anxiety, were taken as independent variables. Four separate regression models were tested for each of the subscale variables, namely T-Anger, the AEX-In, the AEX-Out and the AEX-Con, which were taken as dependent variables. Assumptions related to the model error, epsilon, is validated first. Then, the fitted regression equation containing only statistically significant variables (P < 0.05) along with the analysis of variance (ANOVA) are taken. SPSS 16.0 and Minitab 16.0 statistical software program were used for the statistical analyses.

RESULTS
Scores of psychological tests that were used for the assessment of the emotional state of the patients are shown in Table 2. The correlation coefficients of the test scores are seen in Table 3.

According to the bivariate analysis, moderate positive correlations were found between SPS score and the T-Anger, AEX-Out and AEX-In scores. Again, moderate positive correlations were found between the BDI and STAI I-II scores and the three mentioned subscores of the T-Anger-Anger-EX Scale scores (Table 3).

Four regression models were tested, taking each of the T-Anger-Anger EX subscores as the dependent variable. Significance and variance of the models and results of the linear regression analyses are shown in Table 4.

The multiple linear regression model 1 is developed to express the relationship between the response, T-Anger, and the predictors helplessness and suicide probability. A low hopelessness score and a higher suicide probability predicted a higher level of T-Anger. Model 1 explains 29.3% of the variation in the response, the T-Anger. According to the regression models 2 and 3, suicide probability score predicted the AEX-Out and AEX-In scores. Model 2 explains 27% of the variation in the response, the AEX-Out. Model 3 explains 35.3% of the variation in the response, AEX-In. A higher suicide probability was related to a higher level of the AEX-Out and the AEX-In.

Finally, the model 4 is built to express the relationship between the response, AEX-Con and the predictors trait anxiety. Model 4 explains 9.9% of the variation in the response, AEX-Con. A high level of trait anxiety was the only significant predictor of a low level of the AEX-Con.

DISCUSSION
This study revealed that different modes of anger expression are related to the different emotional states such as greater suicide probability, hopelessness and trait anxiety. The higher the suicide probability, the higher are the levels of T-Anger, the AEX-In and the AEX-Out among men with alcohol dependence. A low level of hopelessness was associated with a high level of T-Anger, and a high level of trait anxiety was associated with a low level of AEX-Con.

In this study, low hopelessness and high suicide probability were predictors of T-Anger; however, unexpectedly, depression score was not found to be related to anger and anger expression scores in the multivariate analyses. In Baltimore Epidemiologic Catchment Area Study, the association between suicidality and hopelessness was found to be stronger and more stable than the association of suicidality with the presence of depression. Hopelessness was predictive of suicidal behaviours (Kuo et al., 2004). Thus, it can be suggested that a depressive emotional state alone does not
predict suicidality, but hopelessness is the main emotional state that is associated with suicidality in alcohol-dependent males.

Moreover, a high level of T-Anger is a risk factor for alcohol-related aggression, particularly for men (Giancola et al., 2009). Gerevich et al. (2007) stated that the co-occurrence of high levels of trait aggression and alcohol dependence is mediated by the co-morbidity of alcohol dependence with the antisocial personality disorder. Anger is related to several personality disorders (Parrott et al., 2003; Bakim et al., 2007), which were not considered in the present study. Therefore, further studies taking both comorbid personality disorders and anger and mood disorders would be more explanatory.

According to the results of this study, there was a low correlation between the tendency to regulate the outward expression of angry feelings adaptively and depression, the suicide probability, the hopelessness, as well as the state and the trait anxiety. While the findings show that trait anxiety was a predictor of the control angry feelings, the prediction rate of model 4 was low (9.9%). The patients who had high levels of trait anxiety may have difficulty about how they express the anger feelings and they may choose to control of these emotions. On the other hand, AEX-Con may be a crucial risk factor in determining whether someone’s tendency to anger will lead to an intoxicated aggression following provocation (Parrott and Giancola, 2004). Higher levels of AEX-Con were significantly related to a decreased likelihood and intensity of state anger as well as less severe anger-related consequences (Parrott and Giancola, 2004).

Suicide probability was found to be among the important associated variables for T-Anger and that style of anger expression in which there is a tendency to experience anger but also to suppress its overt expression. The association between anger and being suicidal has been demonstrated before (Haw et al., 2001). A previous study demonstrated that alcoholics scored higher than controls on the AEX-In and the AEX-Out assessments, and these positively correlated with depression in both male and female alcoholics (Tivis et al., 1998). State anger, AEX-In and aggression inhibition showed a positive correlation with self-aggressive behaviour. Furthermore, AEX-In was confirmed to be a significant predictor of the impulsive attempt. Alcohol dependence has sometimes being described as a chronic suicidal act, alcoholic patients being said to direct hostile and aggressive feelings towards themselves for punishment (Haw et al., 2001; Koller et al., 2002; Demirbas et al., 2009; Giegling et al., 2009).

Limitations of this study are its cross-sectional design and the reliance on self-report measures. All patients were male. It is important to note that female patients may have a different profile. Also, the patients who had a neurological disease and/or comorbid psychiatric conditions (schizophrenia, bipolar disorder, mental retardation or substance use disorder other than alcohol) that can be related to anger were excluded from the study. Therefore, results are not generalizable to comorbid and/or other psychiatric disorders. Finally, the study group was restricted to a treatment population, and therefore it is not possible to generalize the findings to non-treatment groups.

In summary, the results of the present study indicated that the different modes of anger expression appear to be related to the different emotional states. Suicide probability, hopelessness and trait anxiety are associated with T-Anger levels and anger expression styles. Alcohol and substance abuse treatment programmes should attach importance to anger management and AEX-Con training, and assist patients to develop helpful behaviour repertoires to cope with the emotions of anger.

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REFERENCES


