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Alexithymia, craving and attachment in a heavy drinking population

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Abstract

Up to fifty per cent of individuals with Alcohol use disorders (AUD) also have alexithymia a personality construct hypothesized to be related to attachment difficulties. The relationship between alexithymia, craving, anxious attachment and alcohol-dependence severity was examined in 254 patients participating in a Cognitive-Behavioral Therapy (CBT) program for alcohol-dependence. Participants completed the Toronto Alexithymia Scale (TAS-20), the Obsessive Compulsive Drinking Scale (OCDS), the Revised Adult Attachment Anxiety Subscale (RAAS) and the Alcohol Use Disorder Identification Test (AUDIT). MANOVA indicated that individuals with alexithymia reported significantly higher levels of total OCDS, obsessive thoughts about alcohol, compulsive drinking urges and behavior, compared to the non-alexithymic group. Regression analyses found that anxious attachment partially mediated the relationship between alexithymia and craving. Anxious attachment may be a potential treatment target to reduce alcohol consumption in those with alcohol-dependence and alexithymia.

Keywords: Alexithymia, Craving, Attachment, Alcohol-dependence

Alexithymia is defined as a difficulty identifying and communicating feelings, difficulties differentiating feeling and somatic sensations of emotional arousal, a diminution of fantasy and imagination and an externally oriented cognitive style (Nemiah, Freyberger, & Sifneos, 1976). Research on alexithymia has found significant positive associations between alexithymia, Difficulties Identifying Feelings (DIF), Difficulties Describing Feelings (DDF) and alcohol problems (Thorberg, Young, Sullivan, & Lyvers, 2009; Thorberg, Young, Sullivan, Lyvers, Connor & Feeney, 2010). Individuals with alcohol-dependence and alexithymia report more suicidal ideation, a longer duration of alcohol abuse, and more severe alcohol problems compared to those with alcohol-dependence alone (Sakuraba, Kubo, Komoda, & Yamana, 2005; Uzun, Ates, Cansever, & Ozsahin, 2003). They also have poorer treatment outcomes (Loas, Fremaux, Otmani, Lecercle, & Delahousse, 1997; Ziolkowski, Gruss, & Rybakowski, 1995).

Attachment theory is a widely used framework for understanding emotion regulation as well as alexithymia, and this perspective has also been applied to understand alcohol use disorders. One hypothesized function of attachment is the interpersonal regulation of affective experiences (Shaver & Mikulincer, 2007; Sroufe, 1977). In the development of alexithymia, attachment theories stress the importance of significant others in childhood (Krystal & Krystal, 1988; Nemiah, 1977; Taylor et al., 1997). Evidence suggests that alexithymia is related to dysfunctional parenting (Thorberg, Young, Sullivan & Lyvers, in press). Insecure attachment is associated with alexithymia and both harmful drinking and alcohol-dependence (Cooper, Shaver, & Collins, 1998; De Rick & Vanheule, 2006; Thorberg & Lyvers, 2006; Thorberg, Young, Sullivan, Lyvers, Connor & Feeney, 2009). In addition, alcohol abuse has been hypothesized to be a consequence of alexithymia (Taylor, Bagby, & Parker, 1997). Individuals may use alcohol to escape feelings of rejection and establish a “secure attachment base” (Hofler & Kooyman, 1996), given alcohol’s stress and anxiety reducing effects.

Another construct relevant to alcohol-dependence is craving characterized by a strong desire for alcohol. It is associated with impaired control over drinking and includes obsessive thoughts and compulsive drinking behaviors (Addolorato, Leggio, Abenavoli, & Gasbarrini, 2005) and plays an important role in the pathogenesis of alcohol-dependence and relapse (Addolorato et al., 2005; Bottlender & Soyka, 2004; Kranzler, Mulgrew, Modesto-Lowe, & Burleson, 1999). The most widely used measure of alcohol craving is the Obsessive Compulsive Drinking Scale (OCDS; Anton, Moak, & Latham, 1995), which is designed to assess obsessive thoughts and compulsive behavior toward drinking. To date, only one study (Al Birt, Sandor, Vaida, & Birt, 2008) in a small alcohol-dependent sample ($N=30$) has investigated alexithymia and used the OCDS as an outcome measure of abstinence. The relationship between alexithymia and craving was not specifically examined. For example, differences in craving among those with and without alexithymia were not investigated, and research examining craving as a “proxy” of alcohol problems severity may provide further evidence of the more complex pathology among those with alexithymia and alcohol-dependence. Furthermore, a link between these factors is plausible from a theoretical point of view and, if demonstrated, could inform both treatment approaches and models of alcohol-dependence. Recognizing the key role that insecure attachment has in the etiology and development of alexithymia (see Thorberg et al., in press) as well as alcohol use disorders, and its role as a key risk for alexithymia, it seems possible that, if alexithymia and alcohol craving are related, this relationship is influenced by an underlying mechanism, attachment.

The objectives of the present study were to examine relationships among alexithymia, craving, anxious attachment and alcohol problems in an alcohol-dependent sample. Anxious attachment was investigated as a potential mechanism underlying the relationship between alexithymia and craving.

1. Method

1.1. Participants

Two hundred and fifty four patients (176 males and 78 females) were recruited from a hospital outpatient Cognitive Behavioral Treatment (CBT) program for alcohol-dependence. Male and female participant mean ages were 36.84 years ($SD = 11.34$) and 39.03 years ($SD = 9.25$), respectively. The study inclusion criteria included a diagnosis of alcohol-dependence in accordance to DSM-IV-TR (APA, 2000) criteria. All were evaluated before pharmacotherapy (including anti-craving medication) was introduced. Exclusion criteria included a co-morbid psychiatric disorder (e.g., schizophrenia), organic brain syndrome or polysubstance use other than tobacco.

1.2. Measures

The Toronto Alexithymia Scale (TAS-20). Alexithymia has been operationalised as a multifaceted construct that includes DIF, DDF and an Externally Oriented Thinking (EOT) style (Bagby, Parker et al., 1994). The TAS-20 consists of 20 items and a higher score indicates higher levels of alexithymia. Cut-off scores have been established to categorize individuals as alexithymic if their total score was > 61 and non-alexithymic if < 51 (Bagby, Taylor, & Parker, 1994). The TAS-20 has shown adequate validity and reliability (Bagby, Taylor et al., 1994; Parker, Taylor, & Bagby, 2003).

Obsessive Compulsive Drinking Scale (OCDS). A 14 item scale that measures obsessive thoughts about alcohol use and compulsive behaviors toward drinking (Anton et al., 1995). The OCDS yields an overall OCDS score as well as scores on three subscales (Roberts et al., 1999): Resistance/Control Impairment (RCI) assessing impaired resistance and control over drinking-related cognitions and impulses: Obsessions (OBS) measuring the frequency and impact of alcohol-related cognitions and drives: and Interference (INT)

assessing how alcohol cognitions interfere with functional aspects of life. Higher scores indicate stronger obsessions and compulsions concerning drinking alcohol. The OCDS has displayed acceptable psychometric properties (Anton et al., 1995; Connor et al., 2008).

Revised Adult Attachment Scale (RAAS)-Anxiety – A 6 item scale designed to measure anxious adult attachment (how anxious the individual feels about being rejected, abandoned or unloved in a current or recent relationship). The measure was designed based on Hazan and Shaver's (1987) adult attachment descriptions and assesses anxiety as a continuous attachment dimensions hypothesised to underlie adult attachment (Collins & Read, 1990; Collins 1996). The RAAS-Anxiety has shown adequate psychometric properties (Collins, 1996; Thorberg & Lyvers, 2010).

Alcohol Use Disorders Identification Test (AUDIT) - A 10 item measure developed to assess alcohol problems (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). A total score of 20 or higher indicates dependent drinking. The AUDIT has shown sound reliability and validity (Reinert & Allen, 2007).

1.3. Procedure

Human ethics approval was granted from university and hospital ethics committees. Only patients not requiring detoxification were entered into the CBT program. These patients had maintained between 3-14 days of abstinence prior to program entry. Because of the voluntary nature of the program, few (< 3%) offered treatment, declined participation.

1.4. Data Analyses Methods

The first set of analyses included Cronbach alphas and intercorrelations for the following scores: the TAS-20 total score, DIF, DDF, EOT, the OCDS total score, RCI, OBS, INT, the RAAS-Anxiety score and the AUDIT. The second set of analyses compared

alexithymia groups on OCDS, RCI, OBS, INT, RAAS-Anxiety, and the AUDIT. Regression analyses were conducted to establish the potential mediating effect of RAAS-Anxiety on the relationship between TAS-20 total score and OCDS total score in line with Baron and Kenny's (1986) mediational model.

In order to test for mediation, a series of criteria must be met. The predictor variable needs to be significantly correlated with the dependent variable and the predictor variable has to be significantly correlated with the mediator. The mediator needs to be significantly related to the dependent variable even after it has been entered in a regression analysis together with the independent variable. If the predictor variable is no longer significantly correlated with the dependent variable after controlling for the mediator, a perfect mediation is established. If only the first three criteria are met this indicate a partial mediation (Baron & Kenny, 1986).

2. Results

2.1. Intercorrelations

Relationships among the TAS-20 scales, OCDS scales, RAAS-Anxiety and AUDIT scale were examined by means of Pearson correlation coefficients across all participants (see Table 1).

2.2. Group Comparisons

Based on established TAS-20 classification criteria, 32.4 % of the sample was categorized as alexithymic and 42.3% as non-alexithymic. A two-way multivariate analysis of variance (MANOVA) was conducted with the independent variable of group (alexithymic, non-alexithymic), gender and the dependent variables OCDS, RIC, OBS, INT, RAAS Anxiety and AUDIT scores. The multivariate effect of group was significant, $F(5, 224) = 5.97, p = .0001$ as well as for gender $F(5, 224) = 2.92, p = .014$. There was no interaction.

Univariate effects of group were significant for OCDS total score, $F(1, 228) = 7.22, p = .008$; RCI, $F(1, 228) = 5.18, p = .024$; OBS, $F(1, 228) = 7.29, p = .007$; RAAS-Anxiety, $F(1, 228) = 26.98, p = .0001$; and AUDIT, $F(1, 228) = 4.83, p = .029$, but not for INT, $F(1, 228) = 3.65, p = .058$. Univariate effects of gender was only significant for OBS, $F(1, 228) = 3.98, p = .047$ indicating that females scored higher than males. As shown in Table 2, those with both alexithymia and alcohol-dependence scored significantly higher on OCDS total score, RIC, OBS, RAAS-Anxiety and AUDIT compared to those with alcohol-dependence alone.

2.3. Mediation Analysis

To investigate the path model, a set of regression analyses examined the possible mediating effect of anxious attachment in the relationship between alexithymia and craving. Separate regression analyses were initially conducted by gender, but yielded a non-significant results for females, thus to maximize power only the findings of the combined sample is reported here. First, a single standard regression analysis found a significant relationship between the predictor variable total TAS-20 and the dependent variable OCDS, $F(1, 250) = 36.18, p < .0001$, accounting for 12.6% of the variance ($R^2 = .126, p < .0001$). Second, using a single standard regression, a significant relationship was found between the predictor variable TAS-20 and the mediator RAAS-Anxiety, $F(1, 248) = 55.94, p < .0001$, accounting for 18.4% of the variance ($R^2 = .184, p < .0001$). Third a multiple regression analysis was performed on the OCDS with TAS-20 and RAAS-Anxiety to examine the mediational effect of RAAS-Anxiety, $F(2, 244) = 23.16, p < .0001$, indicating that both TAS-20 ($\beta = .28, t(2) = 4.26, p < .0001$) and RAAS-Anxiety ($\beta = .20, t(2) = 3.02, p < .003$) showed univariate significance. As the first three conditions of Barron and Kenny's model were met this indicated that RAAS-Anxiety partially mediated the relationship between the TAS-20 and the OCDS.

3. Discussion

Our results highlight the importance of alexithymia and difficulties identifying and describing feelings as related to preoccupation, obsessions and compulsive behaviors regarding drinking in those with alcohol-dependence. In this study 32.4% of this alcohol-dependent group was classified as alexithymic and 42.3% as non-alexithymic. This is less than previously reported prevalence rates of 45-67% (Thorberg et al., 2009). Furthermore, alcohol-dependence severity, alexithymia and insecure attachment were associated with more intrusive and interfering cognitions, ideas and impulses about alcohol, including an impaired ability to control these thoughts and impulses.

A key finding was that, higher levels of alexithymia led to a stronger desire for alcohol that was partially explained by an underlying mechanism, anxious attachment. Compromised attachment, which appears to lead to a craving for alcohol, may be one underlying mechanism for impairment in affect regulation. As the RAAS-Anxiety scale measures insecure attachment as related to a current or previous relationship, these findings may suggest that worries about being rejected, not cared for or unloved lead to an increased craving for alcohol. One explanation for this mediational relationship may perhaps be that increased relationship stress is associated with a fear of intimacy and anxious attachment that leads to increased craving and perhaps a stronger attachment to alcohol.

This study has several limitations. The cross-sectional design does not allow for an examination of causation and longitudinal research is required. Second, conclusions drawn from a treatment seeking sample may not apply to all alcohol-dependent populations. Third, previous research has attested to relationships of negative affect with both alexithymia and craving (Sinha & Li, 2007; Thorberg et al., 2009), and these factors may have influenced the findings. Finally, due to the significant intercorrelations between attachment, alexithymia and craving future research may benefit from constructing a Venn diagram to address potential

underlying overlap between the constructs that may be associated with problematic drinking. Nevertheless, given the strong relationship between alexithymia and craving, as well as the meditational effect of anxious attachment, we suggest that pre-treatment assessment of alexithymia status, craving and attachment may identify potential treatment targets in alcohol-dependent patients. More specifically, targeting anxious attachment may reduce craving which could translate into improved social and occupational function. Perhaps, Cognitive Behavioural Therapy (CBT) in combination with a pharmacological agent such as Venlafaxine, a serotonergic and noradrenergic reuptake inhibitor previously found to improve emotional awareness in individuals with both high and low levels of alexithymia (see Carvello, Caltagirone, & Spalletta, 2009) may prove useful.

The results of this study support important relationships between alexithymia, difficulties identifying and describing feelings in relation to alcohol craving. These relationships extend to significantly higher levels of obsessive thoughts and compulsive behaviors in relation to alcohol use and alcoholism severity amongst individuals with combined alexithymia and alcohol-dependence, compared with alcohol-dependence alone. This study identified anxious attachment as a potentially important mechanism, in the relationship between alexithymia and alcohol craving. Prospective research is required to investigate if interventions aimed at anxious attachment reduce alcohol consumption and dependence severity.

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Table 1

Intercorrelations between Toronto Alexithymia Scale (TAS-20) and subscales DIF, DDF, EOT, Obsessive Compulsive Drinking Scale (OCDS) and subscales RIC, OBS, INT, and Revised Adult Attachment Scale Anxiety subscale (RAAS-Anxiety) and Alcohol Use Disorder Identification Test (AUDIT)

	1	2	3	4	5	6	7	8	9	10
1. TAS-TS	-	.82**	.87**	.66**	.36**	.29**	.33**	.33**	.43**	.21**
2. DIF		-	.60**	.20**	.45**	.37**	.44**	.39**	.50**	.27**
3. DDF			-	.47**	.25**	.23**	.20**	.21**	.30**	.13
4. EOT				-	.08	.04	.07	.12*	.16*	.08
5. OCDS-TS					-	.92**	.89**	.74**	.31**	.46**
6. RCI						-	.72**	.52**	.24**	.32**
7. OBS							-	.59**	.33**	.50**
8. INT								-	.25**	.43**
9. RAAS-Anxiety									-	.19**
10. AUDIT										-

* $p < 0.05$, ** $p < 0.01$. AUDIT=Alcohol Use Disorder Identification Test, DDF=Difficulties Describing Feelings, DIF=Difficulties Identifying Feelings, EOT=Externally Oriented Thinking, INT=Interference, OBS=Obsessions, OCDS-TS=Obsessive Compulsive Drinking Scale-Total Score, RCI=Resistance/Control Impairment, RAAS-Anxiety=Revised Adult Attachment Scale-Anxiety.

Table 2

Mean (*SD*) Toronto Alexithymia Scale (TAS-20), Obsessive Compulsive Drinking Scale Total Score (OCDS-TS) and subscales RIC and OBS, Revised Adult Attachment Scale (RAAS-Anxiety) and Alcohol Use Disorder Identification Test (AUDIT) scores in alexithymic versus non-alexithymic alcohol-dependents

	Alexithymic (<i>n</i> = 82)		Non-alexithymic (<i>n</i> =102)
OCDS-TS	26.13 (10.18)	**	20.53 (10.86)
RIC	12.11 (5.25)	*	9.63 (5.82)
OBS	9.04 (3.89)	**	7.17 (3.95)
RAAS-Anxiety	21.27 (5.65)	***	16.57 (6.32)
AUDIT	30.21 (6.61)	*	27.57 (6.73)

* $p < .05$, ** $p < .01$, *** $p < .0001$. AUDIT=Alcohol Use Disorder Identification Test, OBS=Obsessions, OCDS-TS=Obsessive Compulsive Drinking Scale-Total Score, RCI= Resistance /Control Impairment, RAAS-Anxiety=Revised Adult Attachment Scale-Anxiety.

- There were significant relationships of alexithymia, craving and anxious attachment
- Alexithymic alcoholics reported higher levels of craving and alcoholism severity
- Anxious attachment partially mediated the relationship of alexithymia and craving