Alexithymia is not a stable personality trait in patients with substance use disorders

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ABSTRACT

The construct of alexithymia as a vulnerability factor for substance use disorders (SUD) is under debate, because of conflicting research results regarding alexithymia as a state or trait phenomenon. The absolute and relative stability of alexithymia were evaluated in a pre-post design as part of a randomised controlled trial, controlling for several co-variates. Assessments were done with the Toronto Alexithymia Scale (TAS-20) and the Addiction Severity Index (EuropASI) at baseline and follow-up of a 3-month trial of inpatient Cognitive Behavioural Therapy (CBT) with or without a Shared Decision Making intervention for 187 SUD patients. Paired sample t-tests and analyses of variance were performed to assess absolute stability, intraclass correlation coefficients were calculated for relative stability and multivariate linear regression models were used to evaluate the relation between co-variates and change in alexithymia. Mean level reduction of total TAS-20 and two subfactors demonstrated no absolute stability, but change in alexithymia differed for patients with low, moderate and high alexithymia scores. Relative stability of alexithymia was moderate to high for the total population, but differed according to low, moderate and high alexithymia scores. The EuropASI "psychiatry" domain, covering anxiety and depression, was related to alexithymia, but CBT-related variables were not. In conclusion, alexithymia is partly a state-dependent phenomenon, but not a stable personality trait in this SUD population.

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1. Introduction

Alexithymia refers to the difficulty in identifying and describing feelings, the inability to discriminate between feelings and physical sensations, having a limited fantasy life and the inclination to an externally oriented way of thinking (Sifneos, 1973). The Toronto Alexithymia Scale (TAS-20) is worldwide the most frequently used assessment instrument for alexithymia and includes three factors: (1) difficulty in identifying feelings (DIF), (2) difficulty in describing feelings (DDF) and (3) externally oriented thinking (EOT) (Bagby et al., 1994).

A Dutch study (van Rossum et al., 2004) reported 54% of alcohol use disorder (AUD) patients to be alexithymic with a mean score of 56 on the TAS-20, a finding that is in accord with research on alcohol-related disorders in other studies (Thorberg et al., 2009). In other substance use disorder (SUD) populations alexithymia rates up to 67% have been found (Taylor et al., 1997; El Rasheed, 2001; Dorard et al., 2008).

Based on a reduction in alexithymia scores after detoxification in a homogeneous AUD population, it is suggested that alexithymia is a state-related phenomenon resulting from anxiety and depression (Haviland et al., 1988). In a comparable study with a heterogeneous SUD population (Pinard et al., 1996), however, no change in alexithymia scores was found and alexithymia appeared to be a stable trait. In a recent study in homogeneous AUD patients, the absolute and relative stability of alexithymia was evaluated during alcohol withdrawal; an absolute reduction (i.e., no absolute stability) of alexithymia scores was found (de Timary et al., 2008). The observed high relative stability over three time points, as well as the restricted influence of anxiety and depression, supported the view that alexithymia is a stable personality trait rather than a state-dependent phenomenon. The absolute decrease in alexithymia mean level score was in this study completely explained by a decrease of the DIF-factor.

In the literature there is an extensive debate on the state versus trait concept of alexithymia that focuses on the concept of absolute and relative stability of alexithymia as a personality characteristic. Previous research showed that stability status may change according to the population that is studied (Pinard et al., 1996; Honkalampi et al., 2001; Luminet et al., 2001; Rufer et al., 2004; Saarijarvi et al., 2006; Luminet et al., 2007; Stingl et al., 2008; de Timary et al., 2008).

Absolute stability refers to the extent to which average personality scores or trait levels of a population change. It is assessed by mean-level differences over time. These indicate if and in which direction

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the population as a whole is changing (Caspi et al. 2005). A systematic review or meta-analysis on the stability of alexithymia as a personality trait does not exist, but a meta-analysis of longitudinal studies of personality traits, according to the Five-Factor Model, provided evidence for continued plasticity beyond age 30 (Roberts et al., 2006).

Relative or rank-order stability indicates the extent to which the relative differences among individuals remain the same over time and is assessed by test–retest correlations (Caspi et al., 2005). From a meta-analysis of the rank–order stability of personality, also based on the Five-Factor Model, test–retest correlations were moderate in magnitude over time (Roberts and DelVecchio, 2000). There was an increase with age and a decrease with increasing intervals between the observations. Rank–order stability peaked sometime after age 50, at a level below unity, thus also indicating that personality traits continue to change throughout adulthood. Both meta-analyses (Roberts and DelVecchio, 2000; Roberts et al., 2006) demonstrate that personality trait development is not just a phenomenon of childhood or adolescence but continues during adulthood.

Alexithymia has been associated with negative treatment outcomes in different SUD populations (Loas et al., 1997; Ziolkowski et al., 1995; Cleland et al., 2005), which could be a rationale for addressing alexithymia in treating SUD patients. However, only as a stable personality trait can alexithymia be an autonomous vulnerability factor for SUD, as has also been suggested by de Timary et al. (2008). As a state phenomenon, alexithymia is not an autonomous vulnerability factor because, as has been shown, it is highly related to anxiety and depression in different populations (Haviland et al., 1988; Honkalampi et al., 2000). Anxiety and mood disorders both have a high co-morbidity with SUD and are predictors themselves for SUD (Compton et al., 2007; Grant et al., 2009).

The stability of alexithymia during or after treatment was investigated in several studies with conflicting results with regard to absolute stability. Most studies, however, supported the relative stability of alexithymia (Porcelli et al., 2003; Rufer et al., 2004; Micolajczak and Luminet, 2006; Rufer et al., 2006; Saarijarvi et al., 2006; Luminet et al., 2007; Spek et al., 2008; Stingl et al., 2008). Depression was as a co-variable related to change in mean level alexithymia scores, especially in the DIF factor, but there was little or no relation to the EOT factor (Luminet et al., 2001).

There has been little research into the effects of psychotherapy on alexithymia and the available results are ambiguous. Some studies reported no change (Iancu et al., 2006), whereas others found a decrease in alexithymia during treatment (Lumley et al., 2007). In all these studies, the interventions were not specifically aimed at reducing alexithymia; thus, the changes seen could have reflected a reduction in associated symptoms such as depression, anxiety or psychological stress (Stingl et al., 2008).

Only a few reported studies (Beresnevaite, 2000; Gay et al., 2008) were specifically aimed at reducing alexithymic characteristics. In one of the studies group psychotherapy was associated with a decrease in mean levels of alexithymia with a resulting favourable influence on the clinical course of patients with coronary heart disease. But the relative stability was still high 2 years after therapy (Beresnevaite, 2000).

Evaluations of alexithymia in homogeneous and heterogeneous SUD (Keller et al., 1995; Rosenblum et al., 2005) did not show a specific impact of various therapies on alexithymia scores. However, in one study (Rosenblum et al., 2005) alexithymic SUD patients profited more from a cognitive behavioural treatment (CBT) than from a motivational enhancement intervention.

Given the conflicting results concerning the stability of alexithymia in detoxifying or recently detoxified homogeneous AUD and heterogeneous SUD populations (Haviland et al., 1988; Pinard et al., 1996; de Timary et al., 2008) and the assumption that alexithymia only as a stable personality trait is a vulnerability factor for SUD, we were interested in evaluating the stability of alexithymia in a detoxified heterogeneous SUD population after an inpatient treatment intervention. If alexithymia were not a stable personality trait and therefore not a vulnerability trait for SUD, there would be no need to assess and address alexithymia in SUD patients. Because the therapy was not specifically aimed at reducing alexithymic characteristics, we hypothesised that a) a mean level reduction of alexithymia and factor scores relates to a reduction in anxiety and/or depression; b) no differences in change of mean level alexithymia scores will be observed between "low", "moderate" and "high" alexithymic patients, when controlled for anxiety and depression; c) there is a moderate to high relative stability of alexithymia; and d) there is no difference in relative stability between "low", "moderate" and "high" alexithymic patients. In addition if it is shown that variance in follow-up alexithymia could be better predicted by baseline alexithymia than "state" conditions, like anxiety and depression, this will support the argument for the relative stability of alexithymia.

2. Methods

2.1. Subjects

Subjects were inpatients recruited from three addiction treatment centres in the East and South part of The Netherlands: Vincent van Gogh Institute, department Addiction Treatment, Novadic-Kentron and Tactus Addiction Treatment. The main study was a randomised controlled trial of Shared Decision Making (SDM) that was carried out from January 2005 to December 2006.

All 261 inpatients hospitalised during the study period with different forms of SUD were assessed for eligibility. Due to exclusion criteria (being under the age of 18, insufficient knowledge of the Dutch language, severe psychiatric co-morbidity precluding taking part in the study or no signed informed consent), refusal or early withdrawal, a total of 227 patients were randomised. Because seven patients later refused to participate and eight patients could not start because of an untimely stop at one study location, 107 patients started the SDM intervention (SDM-CBT) and 105 patients started in the control group: decision making as usual, i.e. treatment as usual (TAU-CBT). However, TAS-20 baseline data were available only for 187 patients and complete TAS-20 follow-up data for 140 and incomplete data (i.e. not all TAS-20 dimensions) for 151 patients. All patients had been diagnosed according to DSM-IV-TR as having one or more substance related disorders. At follow-up evaluation, patients received a voucher for EUR 20. The study was approved by the Dutch Ethical Assessment Committee for Experimental Investigations on People (No. 4.108).

2.2. Interventions

SDM-CBT was an add-on intervention on a standardised 3-month inpatient course of CBT with elements of motivational interviewing (MI), relapse prevention, social skills training and both individual and group components. SDM-CBT was a structured approach to reach a combined treatment over five sessions and was also partly based on MI techniques (Miller, 1996). The TAU-CBT group received the same standardised 3-month inpatient CBT without the SDM intervention. In The Netherlands, MI is well known and used to motivate SUD patients to participate in treatment. In the SDM-CBT group, MI was applied by protocol to evaluate indicated treatment goals. In the TAU-CBT group MI was also used but in an unstructured way and all participating centres used similar, unstructured, procedures to reach treatment agreement with patients. For a detailed explanation of the interventions, see Joosten et al. (2009).

For the alexithymia study we pooled the two groups (SDM-CBT and TAU-CBT) and controlled for intervention in the analyses.

2.3. Instruments

Alexithymia was assessed at baseline and at 3-month follow-up after a 3-month inpatient treatment using the Dutch version of the TAS-20 comprising three dimensions: (1) difficulty in identifying feelings (DIF), (2) difficulty in describing feelings (DDF) and (3) externally oriented thinking (EOT). Each item consists of a five-point Likert scale ranging from "completely disagree" to "completely agree". The TAS-20 can be analysed in its entirety or the three components can be analysed separately (Kooiman et al., 2002, Taylor et al., 1997). The TAS-20 total scores were categorised according to the empirically derived cut-off points suggested by Taylor et al. (1997): scores of 61 and above represent a "high" degree of alexithymia; scores of 51 or below indicate a "low" degree and from 52 to 60 a "moderate" degree of alexithymia. The Dutch total TAS-20 showed a good internal consistency in student and outpatient psychiatric populations with Cronbach's α varying between 0.79 and 0.82. The internal consistency for the DIF factor was good, for the DDF factor moderate to good, and for the EOT factor unsatisfactory (Cronbach's α: 0.52–0.66) (Kooiman et al., 2002).

The substance disorder was assessed and typified by using the Composite International Diagnostic Interview, Substance Abuse Module (CIDI-SAM) at baseline (Compton et al., 1996). The CIDI-SAM is an expanded and more detailed version of the substance use sections of the CIDI. The interview questions address the diagnostic