Short communication

Prone to feel guilty: Self-evaluative emotions in alcohol-dependence

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A B S T R A C T

Background: Prior research has repeatedly shown that alcohol-dependence is associated with interpersonal difficulties. However, guilt and shame, two crucial self-evaluative emotions triggered by the transgression of social norms, have not been explored among alcohol-dependent individuals despite their important role in psychiatric disorders. The present study thus aimed to investigate whether alcohol-dependence is associated with greater proneness to negatively evaluate one's own behaviors (guilt) or the entire self (shame).
Methods: 25 alcohol-dependent individuals (ADI) and 25 matched healthy individuals completed a scenario-based inventory (TOSCA-3), requiring from participants to rate the extent they will react to each scenario in terms of (contextualized) guilt and shame. Participants also completed a list of adjectives related to the frequency at which they generally experience (uncontextualized) guilt and shame (PFQ-2).
Results: When controlling for possible confounds (i.e., depression and anxiety), ADI reported greater proneness to experience guilt at the TOSCA-3 ($\eta^2 = .22$) compared to healthy individuals.
Conclusions: This study is the first to show that alcohol-dependence is associated with greater contextualized guilt-proneness, i.e., negative evaluation of one's own behaviors that transgress social norms. Therefore, these results reinforce the relevance of social disorders in alcohol-dependence and indicate that ADI may benefit of therapeutic programs to avoid a generalization of guilt towards shame.

1. Introduction

Alcohol-related disorders are among the most widespread psychiatric conditions worldwide (Harper and Matsumoto, 2005) and lead to biological, neurological, cognitive and affective deficits (Castellano et al., 2015; Leclercq et al., 2014; Stavro et al., 2013). Specifically, the frequent use of excessive alcohol consumption as a coping strategy to face emotional and interpersonal difficulties (Spada et al., 2013; Zywiak et al., 2003) might initiate a vicious circle favoring the development and maintenance of alcohol-related disorders (Kornreich et al., 2002). Beyond the cognitive factors involved in alcohol-dependence (Stavro et al., 2013), socio-emotional factors thus play a crucial role and constitute a key relapse factor (Zywiak et al., 2003).

Alcohol-dependence is associated with strong deficits in processing socio-emotional signals, encompassing deteriorated emotional decoding (Grynberg et al., 2017; Maurage et al., 2009), affective empathy (Maurage et al., 2011), and social interactions (Thoma et al., 2013). However, while the deficits in understanding others' emotional signals is well established, the way alcohol-dependent individuals (ADI) experience social emotions has been less explored. This is particularly true for guilt and shame, which are unpleasant self-evaluative feelings triggered by social norms transgressions (Tangney et al., 2007; Treeby et al., 2015) and highly involved in psychiatric disorders (Kroll and Egan, 2004). Besides their similarities, these emotions differ, as shame is a negative evaluation focused on the self while guilt focused on the (problematic) behavior (Treeby et al., 2015).

Despite their high prevalence in other psychiatric disorders (Dirkse et al., 2014; Webb et al., 2007), guilt and shame have been largely unexplored in alcohol-dependence (DSM-IV) or severe alcohol-use disorder (DSM-V criteria). Alcohol abuse (Treeby and Bruno, 2012) and substance-use problems (Dearing et al., 2005) are positively associated with shame-proneness and negatively with guilt-proneness. Moreover, lower guilt-proneness is related to higher drug use in adolescence (Evans et al., 1978; Quiles et al., 2002; Schill and Althoff, 1975). Only two studies examined shame and guilt-proneness in clinical populations (Meehan et al., 1996; O'Connor et al., 1994), showing that compared to

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healthy control individuals (CI), polysubstance abusers reported lower guilt-proneness and higher shame-proneness. Previous findings also indicate that higher shame levels are associated with relapse in alcohol-dependence (Wiechelt and Sales, 2001), and that guilt feelings correlate with psychological distress among ADI taking part in self-help discussion groups, after talking about past drinking (Randles and Tracy, 2013).

These preliminary findings clearly underlined the importance of these self-evaluative emotions in substance-use disorders, but presented two main limitations. First, no study specifically focused on ADI, as earlier works either included non-dependent alcohol consumers (i.e., mild or moderate alcohol-use disorder) or polysubstance abusers. However, ADI are distinct from these participants, as: (1) the relationship between alcohol intakes and emotional/interpersonal problems is not linear, a qualitative gap existing between mild-moderate and severe alcohol-use disorders (Bellos et al., 2016); (2) polysubstance abusers present cognitive and psychological characteristics which differentiate them from ADI (e.g, depression, social anxiety, memory and inhibition deficits; (Oakland and McChargue, 2014; Schmidt et al., 2017). Therefore, conclusions drawn on previous works cannot be directly transferred to alcohol-dependence. Second, it is important to disentangle the effect of alcohol-dependence and comorbidities (depression and anxiety), as these comorbidities have a high prevalence in ADI (Gilman and Abraham, 2001).

The present paper thus aims to overcome these limitations by evaluating guilt and shame-proneness among ADI, using two measures, namely the Test of Self-Conscious Affect-3 (TOSCA-3) (Tangney et al., 2000), and the Personal Feelings Questionnaire-2 (PFQ-2) (Harder and Zalma, 1990), with a strict control of potentially biasing variables. The TOSCA-3 and PFQ-2 are considered as complementary measures, as supported by their significant positive correlations (e.g., Averill et al., 2002; Nugier et al., 2012). The TOSCA-3 is based on scenarios, each followed by possible reactions (including shame and guilt) for which individuals have to rate to which extent they would react this way. It thus allows the assessment of these feelings in specific situations. The PFQ-2 is an adjective checklist that refers to the proneness to experience guilt and shame in general, without referring to any specific event. Based on previous findings in substance abusers, it can be hypothesized that ADI will present increased shame proneness and lower guilt proneness.

2. Methods

2.1. Participants

Twenty-five inpatients (11 women), diagnosed with alcohol-dependence according to DSM-IV criteria (and presenting at least 8 criteria related to alcohol-use disorder in the DSM-V, thus ensuring the presence of severe alcohol-use disorder), were recruited in a detoxification center (St Luc Hospital, Belgium). Participants were tested during their third week of detoxification and had all been abstinent for at least 14 days (to 21 days). All patients were free of any other psychiatric disorder (the presence of such other psychiatric diagnosis, assessed by an exhaustive psychiatric examination conducted by a trained psychiatrist, constituting an exclusion criterion). Demographic and alcohol-consumption characteristics are presented in Table 1. Twenty-five (9 women) CI (i.e., acquaintances of the authors) who were free of any history of psychiatric disorder or drug/substance abuse were matched with ADI and presented low alcohol consumption (AUDIT score > 7). Exclusion criteria for both groups included major medical problems, neurological disease, visual impairment, serious chronic disease requiring medication and poly-substance abuse.

2.2. Test of Self-Conscious Affect-3 (TOSCA-3) (Nugier et al., 2012; Tangney et al., 2000)

This test is based on 16 scenarios (11 negative, 5 positive), each followed by four or five possible answers, referring to shame, guilt, pride, externalization (blaming external causes) and detachment (unconcern) reactions for which individuals have to rate the extent they will react this way (1 = not likely to 5 = very likely). The internal consistency is satisfactory for shame (.81) and guilt proneness (.78). As pride, externalization and detachment were not relevant for the current study, only guilt and shame results will be presented.

2.3. Personal Feelings Questionnaire-2 (PFQ-2) (Harder and Zalma, 1990; Nugier et al., 2012)

This test is a self-report 16-item list of adjectives related to guilt and shame. Participants are instructed to rate the frequency at which they experience guilt (e.g., regret) and shame (e.g., humiliated) (0 = never to 4 = continuously or almost continuously). The internal consistency is satisfactory for shame (.91) and guilt (.91).

Participants' levels of depression, anxiety and alcohol-use disorders were also measured with the 21-item Beck Depression Inventory (BDI; Beck, 1978), the State and Trait Anxiety Inventory (STAI-B; Spielberger et al., 1983), and the Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 2001).

2.4. Procedure

Participants were provided with full details regarding the aims of the study and the procedure to be followed, and then gave their written informed consent and completed the questionnaires and the task without compensation. The study was approved by the Local Ethics Committees and carried out according to the Declaration of Helsinki.

2.5. Data analysis

Statistical analyses were performed using the SPSS software package. Group comparisons were based on ANOVA and ANCOVA analyses. Pearson correlations investigated the association between guilt and shame proneness and other variables (i.e., BDI, STAI-B, age, education, alcohol measures).

3. Results

3.1. Correlations (Table 1)

Pearson's correlations were computed in the whole sample between all variables revealing that PFQ-2 guilt-proneness is correlated with BDI ($r = .72; p < .001$) and STAI-B scores ($r = .49; p < .01$) and that PFQ-2 shame-proneness is correlated with BDI scores ($r = .35; p < .01$). In ADI, there was no influence of alcohol measures on shame and guilt-proneness ($ps > .06$) except between alcohol consumption and TOSCA-3 shame-proneness ($r = -.43; p < .05$).

3.2. Control measures (Table 1)

Groups did not differ for age ($F(1,49) = 0.00; p = 1.00$), gender ($Chi^2 = 0.33; p = .56$), and education ($F(1,49) = 2.11; p = .15$). ADI showed higher scores than CI for depression ($F(1,49) = 42.22; p < .001$) and anxiety ($F(1,35) = 6.19; p = .018$).

3.3. Experimental measures (Fig. 1)

Compared to CI, ADI presented increased TOSCA-3 guilt-proneness ($F(1,48) = 13.10; p = .001; \eta^2 = .22$) but did not differ for TOSCA-3 Shame-proneness ($F(1,48) = 0.42; p = .52; \eta^2 = .01$). When adding BDI