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Concealing, Tolerating, and Adjusting to Emotions in Obsessive-Compulsive and Anxiety Disorders: A Cross-Sectional Study

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Concealing, Tolerating, and Adjusting to Emotions in Obsessive-Compulsive and Anxiety Disorders: A Cross-Sectional Study

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Abstract

Background: Although research has shown that mood and anxiety disorders manifest disturbed emotion regulation, it is unclear whether anxiety disorders differ between each other in terms of their emotion regulation strategies. In the present study, we investigated whether patients with anxiety disorders present different affective styles.

Methods: We assessed affective styles of 32 obsessive-compulsive disorder (OCD) patients, 29 social anxiety disorder (SAD) patients, 29 panic disorder (PD) patients, and 20 healthy controls through the Affective Style Questionnaire (ASQ). A multivariate analysis of covariance (MANCOVA) was performed to compare the affective styles across groups (OCD, SAD, PD and control), while controlling for depression, anxiety symptoms and age.

Results: The MANCOVA revealed a significant, small-medium, main effect of diagnostic group on affective styles. The planned contrasts revealed that OCD and SAD patients

reported significantly lower scores for “tolerance” (ASQ-T) compared to healthy controls group. There were no differences between PD group and healthy controls.

Conclusions: Our findings provide evidence that OCD and SAD have difficulty tolerating strong emotions existing in the present moment in an open and non-defensive way.

Palavras-chave: Estilos afetivos; ASQ; Regulação Emocional; Transtornos de Ansiedade

Keywords: Affective style; ASQ; Emotion Regulation; OCD; Anxiety Disorders.

Introduction

Emotions may be experienced uniquely by different individuals, either in terms of type and intensity, even when facing the same stimulus. Emotional regulation is the human being's ability to, consciously or not, influence their emotional experiences, such as intensity and expression, to respond appropriately to an environmental demand^{1,2}. To modify emotions, especially those with negative valences, individuals use different regulation strategies. These differences regarding affective experiences and the preference for certain strategies to cope with emotions are called “affective styles”³. To assess different affective styles, Hoffmann and Kashdan¹ developed the Affective Styles Questionnaire (ASQ), which consists of a 20-item Likert scale with three subscales: concealing (ASQ-C), adjustment (ASQ-A), and tolerance (ASQ-T).

According to Hoffman and Kashdan¹, concealing encompasses the suppression of an emotion along with other strategies aiming to hide or avoid such emotions once they are fully activated (e.g., item 1- "People usually can't tell how I'm feeling inside"). Adjustment includes the modulation of negative emotions according to contextual demands, effectively balancing and adapting emotional experiences and expressions as needed (e.g. item 4- "I can

avoid getting upset by trying to see things from another perspective."). The third style, tolerance, refers to strategies focused on experiencing emotions that exist in the present moment in a non-defensive and open way. This style, which includes acceptance and mindfulness strategies, allow us to tolerate strong emotions without attempting to modify or reduce emotional experiences (e.g. item 11- "It's okay to sometimes have negative emotions").

The validation studies of the ASQ have pointed to a possible association between affective styles and mental disorders⁴⁻⁶. The "adjustment" affective style, for instance, seems to be negatively associated with symptoms of depression, stress and anxiety within a clinical sample⁴⁻⁶. This suggests that individuals suffering from mood and anxiety disorders would tend to have greater difficulty in adjusting negative affect according to situational demands. The "concealing" affective style, in turn, showed a positive association with anxiety, depression, and stress^{5,6}, suggesting that emotion suppression is a detrimental strategy for alleviating subjective distress in people with anxiety and mood disorders⁷. The "tolerance" affective style showed a negative relationship with stress and anxiety^{5,6}.

Since previous studies focused on multiple but mixed categories of anxiety and depressive disorders, it remains unclear whether anxiety disorders differ between each other in terms of affective style. There is some evidence that affective styles may differ between patients suffering from mood and anxiety disorders, as tolerance showed a negative association with anxiety symptoms in patients with mood but not anxiety disorders⁵. In the present study, we hypothesized that patients with anxiety disorders have different affective styles. More specifically, we predicted that (a) social anxiety disorder (SAD) patients would be more likely to conceal their emotions, (b) panic disorder (PD) patients would be less tolerant to strong affects, and (c) obsessive-compulsive disorder (OCD) patients would be less likely to adjust their emotions to different contexts (rigidity).

Methods

Participants

Participants consisted of OCD ($n = 32$), SAD ($n = 29$), or PD ($n = 29$) patients or individuals showing no diagnosis ($n = 20$), according to the Mini International Neuropsychiatric Interview (MINI). Patients were recruited from those seeking treatment in the Obsessive, Compulsive, and Anxiety Research Program and the Laboratory of Panic and Respiration at the Institute of Psychiatry of Federal University of Rio de Janeiro. Participants were included if they had a) a primary diagnosis of either DSM-IV OCD, SAD or PD, or do not fit criteria for any diagnosis based on the MINI, b) between 18 and 70 years of age, and c) sufficient ability to read and write. **Participants exhibiting comorbidity between OCD, SAD or PD were assigned to the group associated with the most clinically significant disorder.**

Patients with OCD, SAD or PD were excluded if they displayed severe psychiatric illnesses such as dementia, an intellectual disability, or current manic or psychotic episodes. **Most patients ($N_{\text{OCD}} = 28$, $N_{\text{SAD}} = 26$ and $N_{\text{PD}} = 29$) were using serotonin reuptake inhibitors, tricyclics, or venlafaxine, among others. A smaller subset of patients was undergoing concomitant psychotherapy ($N_{\text{OCD}} = 12$, $N_{\text{SAD}} = 6$ and $N_{\text{PD}} = 3$).** Participants were first informed about the nature and aim of the study and subsequently provided written consent to participate. Then, they completed a range of self-report questionnaires in the presence of a psychologist. The research protocol was approved by the ethics committee of the Institute of Psychiatry of Federal University of Rio de Janeiro (CAAE 50308015.1.0000.5263).

Assessment

To measure symptom severity, self-report responses were obtained from participants after initial diagnosis by the MINI interview⁸. The following self-report measures were used in their Brazilian Portuguese versions.

The Dimensional Obsessive-Compulsive Disorder Scale (DOCS)⁹.

The DOCS is a 20-item self-report measure, that measures the severity of four empirically supported dimensions of OCD; contamination, responsibility for harm, symmetry/incompleteness, and unacceptable thoughts. For each dimension, 5 items are rated from 0-4, assessing a) time occupied by the obsession/compulsion, b) avoidance, c) distress, d) interference, and e) ability to refrain from or disregard obsessions/compulsions. Total scores range from 0-80, with higher scores indicating greater severity of obsessive-compulsive symptoms. The DOCS shows good factor structure, internal consistency, convergent and divergent validity in clinical and non-clinical samples ⁹.

The Panic and Agoraphobia Scale (PAS)¹⁰

The PAS is a 13-item self-report questionnaire that assesses the severity of panic disorder and agoraphobia. Each item is measured on a 5-point Likert scale from 0-4. Based on the criteria from the DSM-IV, the scale includes 5 subscales (panic attacks, agoraphobia and avoidance behaviours, anticipatory anxiety, disability, and worries about health). Total scores are obtained by summing all item scores (range: 0-52) with higher scores indicating more severe panic disorder or agoraphobia. The PAS has shown high internal consistency ($\alpha = .88$), high construct validity¹⁰, and good discriminant validity from measures of generalised anxiety and agoraphobia¹⁰.

2.2.3 *The Social Phobia Inventory (SPIN)* ¹¹

The SPIN is a 17-item self-report scale that assesses the presence and severity of social anxiety. The scale has items from each dimension of social anxiety, including fear, avoidance, and physiological arousal. Items are rated on a 5-point Likert scale from 0 (“not at all”) to 4 (“extremely”), adding to a total score between 0 and 68. The Portuguese SPIN has

shown acceptable internal consistency ($\alpha = .63-.90$), and concurrent validity with other social phobia scales ¹².

The Beck Anxiety Inventory (BAI) ¹³

The BAI is a widely used 21-item self-report that measures anxiety severity. Each item represents a common symptom of anxiety, and respondents are asked to rate which symptom was experienced in the past month from 0 (“not at all”) to 3 (“severely – it bothered me a lot”). Total scores are calculated by summing all responses (range: 0-63). The Portuguese BAI has shown adequate internal reliability and good convergent validity with other anxiety measures ¹⁴.

Beck Depression Inventory (BDI) ¹⁵

The BDI is a 21-item measure of depressive symptom severity based on the key DSM-IV criteria for major depression. Each item receives a rating from 0 to 3 to reflect the intensity of the symptom the respondent has experienced during the past week. Items are summed to obtain a total score between 0 and 63. The Portuguese version of the BDI has demonstrated high internal consistency ($\alpha = .81-.88$) and convergent validity¹⁶.

The Affective Style Questionnaire (ASQ) ¹

The ASQ is a 20-item self-report questionnaire that measures individual differences in the sensitivity to and regulation of emotions. The questionnaire is made up of 3 subscales representing different affective styles; Concealing (attempts to conceal or suppress affect [8 items]), Adjusting (ability to adjust, manage, and work with emotions when needed [7 items]), and Tolerating (an accepting and tolerant attitude towards emotions [5 items]). Items are rated from 1 (“not true of me at all”) to 5 (“extremely true of me”) and scores are summed

for each subscale. The scale shows acceptable internal consistency ($\alpha = .65-.89$) and inter-correlations with other measures of emotions regulation, personality, and psychological flexibility support appropriate convergent and discriminant validity¹.

Statistical analyses

One-way analysis of variance tests and chi-square tests were used to examine differences in sociodemographic characteristics across diagnostic groups. Normality of residuals and homoscedasticity was confirmed in all ASQ subscales upon inspection of the Shapiro-Wilk test of normality, relevant histograms, and scatterplots. No collinearity was identified as indicated by the variance inflation factor $<.10$.

To test our hypothesis, a MANCOVA was performed comparing the affective styles across the diagnostic groups, while controlling for depression and anxiety differences. Simple comparisons between the control group and the diagnostic groups were planned if the multivariate and between-subjects analyses revealed that one or more ASQ subscale had a significant main effect. Given the exploratory nature of this study, the level of statistical significance was set at .05 for all analyses.

Results

Descriptive analyses

After removal of two particularly influential outliers, the total sample comprised of 110 participants. Sociodemographic characteristics are presented in Table 1. The only statistically significant difference between diagnostic groups was age. Therefore, age was added as a covariate to all analyses.

Table 1. Sociodemographic characteristics of the sample and across diagnostic subgroups

	OCD (N = 32)	SAD (N = 29)	PD (N = 29)	HC (N = 20)	Statistics
Age, mean (SD)	38.28 (12.40)	42.07 (14.99)	44.41 (12.05)	29.9 (5.77)	$F(3,109) = 6.21; p < 0.001^*$
Gender, N (%)	15 (46.9)	13 (44.8)	18 (62.1)	15 (75)	$X^2(3) = 5.88.27; p = 0.12$
Female					
Marital status, N (%)					$X^2(12) = 16.62; p = 0.16$
Single	21 (65.6)	19 (65.5)	12 (41.4)	13 (65)	
Married	9 (28.1)	7 (24.1)	9 (31)	7 (35)	
Separated	1 (3.1)	2 (6.9)	6 (20.7)	0	
Widowed	0	1 (3.4)	2 (6.9)	0	
Other	1 (3.1)	0	0	0	
Education, N (%)					$X^2(12) = 9.48; p = 0.66$
Less than primary	1(3.1)	1(3.4)	4(13.8)	1(5)	
Primary	2(6.3)	1(3.4)	4(13.8)	0	
High school	15(46.9)	14(48.3)	11(37.9)	8(16.7)	
Tertiary	10(31.3)	10(34.5)	7(24.1)	8(40)	
Post-graduate	4(12.5)	3(10.3)	3(10.3)	3(15)	
Ethnicity, N (%)					$X^2(9) = 9.059; p = 0.043^*$
White	19 (59.4)	14 (48.3)	17 (58.6)	14 (70)	
Black	4 (12.5)	3 (10.3)	3 (10.3)	1 (5)	
East Asian	0	0	2 (6.9)	0	
Mixed	9 (28.1)	12 (41.4)	7 (24.1)	5 (25)	
Currently seen by a Psychologist, N (%)	12 (37.5)	6 (20.6)	3 (10.3)	-	$X^2(2) = 6.28; p = 0.043^*$
Psychotropics use, N (%)	28 (87.5)	26 (89.6)	29 (100)	-	$X^2(2) = 2.78; p = 0.249$

Footnote: HC = healthy controls; OCD = obsessive-compulsive disorder; PD = panic disorder; SAD = social anxiety disorder; * = $p < 0.05$

Of participants, 17.3% reported a family history of PD, 11.8% of a family history of SAD, 6.4% of a family history of OCD, and 41.8% of a family history of another psychiatric disorder. All other clinical characteristics are presented in Table 2. As shown, the sample exhibited “mild to moderate” depression¹⁵ and “mild” anxiety¹³. As expected in a mostly clinical sample, the concealing affective style was the most common affective style¹⁷.

Regarding affective styles, a statistically significant difference was observed between the groups of diagnoses, specifically on ASQ-A [$F(3,106)=3.05, p=.03$] and ASQ-T [$F(3,104)=4.54, p=.005$] scores. Turkey post hoc demonstrated that there was no difference between groups for ASQ-A. OCD and SAD diagnostic group showed lower scores compared to healthy controls for ASQ-T as shown in Table 2.

Table 2. *Clinical features of final sample, including means and standard deviations for the whole sample and across diagnostic subgroups*

	OCD (N = 32)	SAD (N = 29)	PD (N = 29)	HC(N = 20)	Statistics	Pos-hoc
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
BDI	13.91(8.76)	12.86 (11.52)	15.14 (11.68)	5.6 (5.1)	$F(3,106) = 4.14; p = 0.008^*$	OCD = SAD = PD > HC
BAI	13.16 (12.22)	13.66 (11.79)	25.10 (16.30)	5.25 (6.11)	$F(3,106) = 10.64; p < 0.001^*$	OCD = SAD = HC < PD
PAS	4.59 (8.30)	7.28 (11.30)	13.97 (12.22)	0.85 (2.34)	$F(3,106) = 0.8.30; p < 0001^*$	OCD = SAD = HC < PD
DOCS	22.09 (14.97)	11.21 (11.36)	20.55 (15.32)	5.65 (6.55)	$F(3,106) = 9.04; p < 0.001^*$	OCD = PD > SAD = HC
SPIN	17.59 (17.03)	29.52 (20.33)	21.10 (16.74)	7.55 (8.12)	$F(3,106) = 7.01; p < 0.001^*$	OCD = HC < SAD
ASQ-C	19.28 (5.58)	21.48 (7.42)	21.18 (7.05)	17.95 (5.50)	$F(3,105) = 1.60; p = 0.195$	OCD = SAD = PD = HC
ASQ-A	17.84 (4.89)	17.21 (3.76)	20.10 (5.54)	20.50 (4.77)	$F(3,106) = 3.05; p = 0.03^*$	OCD = SAD = PD = HC
ASQ-T	13.50 (3.08)	13.29 (3.81)	14.86 (3.64)	16.65 (3.52)	$F(3,104) = 4.54; p = 0.005^*$	OCD = SAD < HC

Footnote: BDI = Beck Depression Inventory; BAI = Beck Anxiety Inventory; DOCS = Dimensional Obsessive-Compulsive Scale; SPIN = Social Phobia Inventory; PAS = Panic and Agoraphobia Scale; ASQ-C = Affective Styles Questionnaire Concealed subscale; ASQ-A = Affective Styles Questionnaire Adjustment subscale; ASQ-T = Affective Styles Questionnaire Tolerance subscale. * = $p < 0.05$

Mancova

The MANCOVA ($n = 109$) revealed a significant, small-medium, main effect of diagnostic group on affective styles, after controlling for age, depression, anxiety and undergoing psychotherapy [$F(9,288.9) = 2.29, P = .017, \Lambda = .81, \eta_p^2 = .068$]. Between subjects effects showed that only ASQ-T differed between diagnostic groups [$F(3, 44.5) = 3.84, p = .012, \eta_p^2 = .107$]. Planned contrasts revealed that OCD ($p = .014, 95\% \text{ CI} [-4.96, -.58]$) and SAD ($p = .011, 95\% \text{ CI} [-5.00, -.659]$) diagnostic groups reported significantly lower scores for ASQ-T compared to healthy controls.

Discussion

The purpose of this study was to investigate if the Hofmann & Kashdan's ¹ affective styles - concealing, adjusting, and tolerating – differ between OCD, SAD, PD and healthy controls. We predicted that SAD patients would be more likely to conceal their emotions, that PD patients would be more intolerant to their emotions, and that OCD patients would be less likely to adjust to new emotions. Although we were unable to confirm these initial hypotheses, we found that both OCD and SAD diagnostic groups were less tolerant to emotions than healthy controls, but also that they did not differ significantly from each other.

Despite reporting findings that were at odds with our initial predictions, our paper adds to the previously literature suggesting “experiential avoidance” ^{18,19}, or lack of tolerance, to be present both in OCD and in SAD ^{20,21}. Our results expand the findings linking decreased tolerance to severity of anxiety ⁶, showing it to be particularly relevant in anxiety disorders that, according to the model by Gray and

McNaughton ²², are more clearly characterized by avoidable (i.e. OCD and SAD), rather than unavoidable (i.e. PD) threats.

Gray & McNaughton ²² propose a taxonomy that classifies anxiety disorders according to two types of threatening stimuli: the avoidable and the unavoidable. According to their model, unavoidable threat stimuli in individuals with PD leads to inhibition of active coping strategies and conservation of resources. We suggest that, for lacking active coping strategies during a panic attack, patients with PD would be expected to experience symptoms less defensively. In contrast, in OCD and SAD, which are characterized by avoidable threats, active risk assessment would lead to decreased tolerance and more experiential avoidance behaviors.

Our negative finding regarding differences between the samples in terms of concealing is at odds to previous studies that found a negative association between concealing and anxiety ^{5,6}. We suggest that cultural factors may play a role here by increasing concealing across Brazilian clinical samples and healthy controls. Arguably, suppression of emotions, as assessed by the concealing scale of the ASQ, has been associated with less negative consequences for individuals hailing from a collectivist than individualist cultural background ²³⁻²⁵.

These findings may have therapeutic implications. For instance, by leading to increased acceptance and the ability to tolerate difficult emotions, Acceptance and Commitment Therapy ²⁶ and mindfulness-based therapies may increase the willingness to participate in distressing yet highly effective tasks, such as exposure and response prevention²⁷. Therefore, therapists could work with OCD and SAD patients with the intention of increasing openness to experiences which could be redirected towards living a more meaningful life.

Our study has some significant limitations. Firstly, the sample, particularly the health controls group, was relatively small. A larger sample could have resulted in a greater ability to detect smaller differences in other affective styles. Future research should be conducted with larger sample sizes to investigate the effect of gender, other potential covariates, and affective styles other than tolerance. **Additionally, it would be important to detail characteristics of the psychotherapies received, including whether they were strictly defined CBT and mindfulness, as these are known to have an impact on affective style^{28,29}.** This would be particularly important for adjustment, which showed only a general effect, but no statistically significant differences between the groups.

Another limitation is the lack of measure to assess transdiagnostic severity or impairment, such as Clinical Global Impression (CGI) or Global Assessment of Functioning (GAF), to observe if the diagnostic groups have participants with the same level of severity; the only scales used to observe severity were specific for each disorder, such as DOCS, PAS, and SPIN, which does not allow comparison between groups. This may be a bias of the research, since some groups may have participants with lower severity matching the control group. **Additionally, the fact the assignment of participants showing more than one diagnosis of interest was based on the most clinically significant diagnosis may be considered somewhat arbitrary and a potential source of bias.**

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Conflicts of interest? No

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