Short communication

Emotion regulation and obsessive–compulsive symptoms: A further examination of associations

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ABSTRACT

Despite the potential transdiagnostic importance of emotion regulation, there has been a lack of research examining emotion regulation in the context of obsessive–compulsive disorder (OCD). We examined associations between facets of emotion regulation corresponding to two contemporary models of emotion regulation and obsessive–compulsive symptoms in a community sample of adults ($N = 372$). The targeted facets of emotion regulation included cognitive reappraisal, expressive suppression, nonacceptance of emotional responses, difficulty engaging in goal-directed behavior, impulse control difficulties, lack of awareness of emotions, limited access to strategies for emotion regulation, and lack of emotional clarity. Results from hierarchical regressions showed that expressive suppression, impulse control difficulties, and emotional clarity were the only facets of emotion regulation that shared unique associations with each obsessive–compulsive symptom dimension. These associations were not better accounted for by general distress. Conceptual and clinical implications are discussed.

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1. Introduction

Studies consistently find robust associations between emotion regulation and psychological symptoms (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Although emotion regulation is broadly related to various symptoms, it is a multidimensional construct (Gratz & Roemer, 2004). One implication of its multidimensionality is that specific facets of emotion regulation might share especially strong relations with certain symptom types (Bardeen & Fergus, 2014; Rusch, Westermann, & Lincoln, 2012; Tull, Rodman, & Roemer, 2008). To date, there has been a lack of research examining emotion regulation in the context of obsessive–compulsive disorder (OCD). In one of the few studies to address this gap in the literature, Stern, Nota, Heimberg, Holaway, and Coles (2014) found that obsessive–compulsive symptoms were related to a poor understanding of, and negative reactivity to, emotions. Stern et al. speculated that a motivation to avoid emotions might underlie OCD, in that compulsions may be used to reduce emotional distress engendered by intrusive thoughts that are perceived as uncontrollable.

According to Gross's (1998) process model, "emotion regulation refers to the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (p. 275; emphasis in original). Gross and John (2003) developed the Emotion Regulation Questionnaire (ERQ) to assess for the emotion regulation strategies of cognitive reappraisal and expressive suppression. Cognitive reappraisal refers to altering the emotional impact of an emotion-eliciting event via reinterpreting the event and expressive suppression refers to inhibiting emotion-expressive behavior (Gross & John, 2003).

Another model of emotion regulation that has received substantial empirical attention was developed by Gratz and Roemer (2004). Gratz and Roemer asserted that effective emotion regulation involves the identification and understanding of emotions, acceptance of emotions, perceived access to effective emotion regulation strategies, and the ability to continue to purse goal-directed behavior and inhibit impulsive behaviors when experiencing negative emotions. Gratz and Roemer developed the Difficulties in Emotion Regulation Scale (DERS) to assess these six facets of emotion regulation. In the only known study to target relations between the DERS and OCD, de la Cruz et al. (2013) found that impulse control difficulties, limited access to strategies for emotion regulation, and a lack of emotional clarity were the only DERS scales related to two indices of obsessive–compulsive symptoms.

In the present study, we sought to extend Stern et al.'s (2014) and de la Cruz et al.'s (2013) studies in the following ways. First, we assessed emotion regulation using both the ERQ and DERS. Stern et al. raised the possibility that emotional avoidance, perhaps

through the use of suppression, could be especially relevant to OCD. The ERQ, with its expressive suppression scale, can help clarify relations between suppression and obsessive–compulsive symptoms. Stern et al. and de la Cruz et al. did not include the ERQ in their studies. Interestingly, Gratz and Roemer (2004) asserted that the subjective appraisal of one's ability to effectively regulate emotional distress may be more relevant to symptoms than the use of specific emotion regulation strategies. As noted, de la Cruz et al. found that the limited access to strategies scale of the DERS, a measure of one's perception of their ability to effectively regulate emotions, shared a robust relation with obsessive–compulsive symptoms. It is thus possible that the perceived ability to effectively regulate emotions is more relevant to obsessive–compulsive symptoms than is expressive suppression.

Second, we sought to improve upon the noted studies by providing a more comprehensive assessment of obsessive–compulsive symptoms. For example, de la Cruz et al. (2013) assessed obsessive–compulsive symptoms using a total score. However, because OCD is heterogeneous, it is important to understand potentially distinct correlates of its symptom dimensions (Mataix-Cols, Rosario-Campos, & Leckman, 2005). Stern et al. (2014) partially addressed this limitation by examining obsessive–compulsive symptom dimensions but their findings were limited by the particular measure that was used (i.e., Obsessive–Compulsive Inventory; Foa, Kozak, Salkovskis, Coles, & Amir, 1998). The measure used by Stern et al. is not based on current structural findings and does not account for the idiosyncratic nature of obsessive–compulsive symptoms (Abramowitz et al., 2010). Abramowitz et al. developed the Dimensional Obsessive Compulsive Scale (DOCS) to address such limitations of prior measures and the DOCS assesses for the empirically-supported obsessive–compulsive symptom dimensions of contamination, responsibility for harm, unacceptable thoughts, and symmetry.

In the present study, we expected that the expressive suppression scale of the ERQ and all the DERS scales would significantly positively correlate with obsessive–compulsive symptoms. We further expected that cognitive reappraisal would significantly negatively correlate with obsessive–compulsive symptoms. Significant correlations between all the DERS scales and obsessive–compulsive symptoms were expected in this study because our sample was substantially larger than the sample of 60 respondents used by de la Cruz et al. (2013). We thus anticipated having the statistical power necessary to find significant small to moderate sized correlations between the DERS and obsessive–compulsive symptoms.

We also examined the incremental contribution of the ERQ and DERS scales to obsessive–compulsive symptoms. We predicted that the DERS scales pertaining to difficulties inhibiting impulsive behaviors when experiencing negative emotions and a lack of emotional clarity would share unique variance with obsessive–compulsive symptoms. These two DERS scales were found to share robust associations with obsessive–compulsive symptoms by de la Cruz et al. (2013). Stern et al. (2014) speculation that suppression is especially relevant to OCD is suggestive that the expressive suppression scale of the ERQ would share unique variance with obsessive–compulsive symptoms. Alternatively, Gratz and Roemer's (2004) assertion that the perceived access to emotion regulation strategies may be important for understanding psychological outcomes suggests that the ERQ scales may not share unique variance with obsessive–compulsive symptoms when accounting for the DERS scale assessing this facet of emotion regulation. Negative affect was included as a covariate to address Stern et al.'s noted limitation of not accounting for the contribution of general distress.

The above predictions were based on treating obsessive–compulsive symptoms as a unidimensional construct. Our third aim was to examine whether the same facets of emotion regulation were relevant to each obsessive–compulsive symptom dimension or whether there existed differential relations with contamination, responsibility for harm, unacceptable thoughts, and symmetry. These symptom dimension analyses were considered exploratory.

2. Method

2.1. Participants

The sample consisted of 372 community adults recruited via the Internet. The sample was 58.6% female and had an average age of 32.9 years ($SD=10.9$; range from 18 to 71). With regard to racial/ethnic identification, 78.0% of the sample self-identified as White, 7.0% as Black or African–American, 6.7% as Asian, 4.0% as multi-racial, 3.5% as Hispanic or Latino, and .8% as Native American.

2.2. Measures

2.2.1. Emotion Regulation Questionnaire (ERQ)

The ERQ (Gross & John, 2003) is a 10-item self-report measure that consists of six items assessing cognitive reappraisal and four items assessing expressive suppression. Items are rated on a 7-point scale (ranging from 1 to 7). The cognitive reappraisal and expressive suppression items saliently load on two separate factors (Gross & John, 2003). The cognitive reappraisal (Cronbach's αs ranging from .75 to .82) and expressive suppression (αs ranging from .68 to.76) scales have tended to show adequate internal consistency (Gross & John, 2003). The cognitive reappraisal (rs ranging from $-.25$ to $-.50$) and expressive suppression (rs ranging from .28 to .46) scales share small to moderate correlations with the DERS scales (Ehring & Quack, 2010). These correlations are larger in magnitude than those between either the cognitive reappraisal ($r=.11$) or expressive suppression ($r=-.09$) scale and a divergent construct (e.g., social desirability; Gross & John, 2003).

2.2.2. Difficulties in Emotion Regulation Scale (DERS)

The Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004) is a 36-item self-report measure that assesses the nonacceptance of emotional responses (nonacceptance), difficulty engaging in goal-directed behavior (goals), impulse control difficulties (impulse), lack of awareness of emotions (awareness), limited access to strategies for effective emotion regulation (strategies), and lack of emotional clarity (clarity). Items are rated on a 5-point scale (ranging from 1 to 5). The items comprising each of the DERS scales saliently load on a separate factor from the items comprising the other five DERS scales (Bardeen, Fergus, & Orcutt, 2012; Gratz & Roemer, 2004). Bardeen et al. recommend not including the awareness items in the calculation of a total scale score due to psychometric limitations of these items. However, given that we did not use a total score in this study and others have expressed interest in relations between the awareness scale and obsessive–compulsive symptoms (de la Cruz et al., 2013), we included the awareness scale in this study. The DERS scales (αs ranging from .80 to .89) have been found to show adequate internal consistency and share moderate to strong correlations (rs ranging from .32 to .69 in magnitude) with measures assessing variables related to emotion regulation (Gratz & Roemer, 2004). These correlations are larger in magnitude than those between the DERS scales and a divergent construct (e.g., delinquency, rs ranging from $-.01$ to .22; Neumann, van Lier, Gratz, & Koot, 2010).

2.2.3. The Dimensional Obsessive–Compulsive Scale (DOCS)

The DOCS (Abramowitz et al., 2010) is a 20-item measure that assesses the severity of obsessive–compulsive symptoms using a 5-point scale (ranging from 0 to 4). The four DOCS scales are contamination, responsibility for harm, unacceptable thoughts, and symmetry. Each DOCS scale assesses for five aspects of each symptom dimension. These aspects are the amount of time occupied by intrusive thoughts and neutralizing behavior, engagement in avoidance behavior, associated distress, interference in daily living, and attempts to control intrusive thoughts and refrain from engaging in neutralizing behavior. The items comprising each DOCS scale saliently load on a separate factor from the items comprising the other three DOCS scales (Abramowitz et al., 2010). The DOCS scales (αs ranging from to .83 to .96) have been found to show adequate internal consistency and share moderate to strong (rs ranging from .39 to .88) correlations with other measures assessing the corresponding obsessive–compulsive symptom dimension (Abramowitz et al., 2010). These correlations are larger in magnitude than those between the DOCS scales and other symptoms (e.g., social anxiety, rs ranging from .06 to .34; Abramowitz et al., 2010).

2.2.4. Positive and Negative Affect Schedule (PANAS)

The PANAS (Watson, Clark, & Tellegen, 1988) is a 20-item measure that asks respondents to indicate to what extent single word descriptors capture how they feel on a 5-point scale (ranging from 1 to 5). The negative affect (NA) scale of the PANAS consists of 10 items. The NA items have been found to saliently load on a single factor, the NA scale has shown adequate internal consistency (α=.87), and the NA scale shares stronger correlations with measures assessing general distress (rs ranging from .51 to .74) than with positive affect ($r = -.17$; Watson et al., 1988).

2.3. Procedure

Participants were recruited using Amazon's Mechanical Turk (MTurk), an internet-based platform that allows individuals to complete surveys and other computer tasks for monetary compensation. Respondents completing surveys through MTurk have been found to produce high quality data and are more demographically diverse than both standard Internet samples and American undergraduate samples (Buhrmester, Kwang, & Gosling, 2011; Shapiro, Chandler, & Mueller, 2013). The present research was approved by the local institutional review board. Recruitment was limited to MTurk workers over 18 years of age who were located in the United States. In addition, participation was restricted to MTurk workers with approval ratings above 95%. Peer, Vosgerau, and Acquisti (2014) found that an approval rating above 95% was sufficient to obtain high quality data on MTurk. Participants were required to provide electronic consent and there was no penalty for withdrawing from the study. Upon completion of the study, participants were debriefed and paid in full. Compensation was $1.00, an amount consistent with the compensation given to MTurk workers completing prior studies of similar length (Buhrmester et al., 2011).

3. Results

3.1. Preliminary analyses

There existed a small amount of missing data ($< 5\%$ of participants for each study variable had missing data). Following the recommendations of Enders (2010), multiple imputation (MI) was used to impute values for missing data. Five data sets with imputed values were created, all reported analyses were performed five times,

and the estimates were combined across data sets. Standard errors incorporated both within- and between-imputation variance (Enders, 2010).

Descriptive statistics of the study variables are presented in Table 1. All the measures demonstrated adequate internal consistency in this study (Cronbach's $\alpha > .80$). Skew and kurtosis statistics were within a conventional range (-1 to 1; Morgan, Griego, & Gloeckner, 2001) for nearly each study variable. The skew and kurtosis statistics for the contamination and responsibility scales of the DOCS were above this noted range (with values between 1 and 2.5). Results using a square root transformation of scores on these two variables were identical to the results obtained using non-transformed scores. For ease of interpretation, only the results using non-transformed scores are presented below.

Abramowitz et al.'s (2010) empirically-based cutoff score of 18 on the DOCS total scale for identifying obsessive–compulsive symptoms of clinical severity was used to examine the variability in obsessive–compulsive symptoms. Approximately 27.9% ($n=106$) of respondents in the present study scored at or above this cutoff score. Such scores are not a proxy for meeting formal diagnostic criteria, but do suggest that respondents experienced clinically relevant levels of obsessive–compulsive symptomatology. Of note, this value is nearly identical to the average percentage of respondents (26%) scoring above the cutoff score on the Obsessive Compulsive Inventory-Revised (Foa et al., 2002) identified by Abramowitz et al. (2014).

3.2. Zero-order correlations

Zero-order correlations among the study variables are presented in Table 2. As predicted, the expressive suppression scale of the ERQ and the DERS scales (with the exception of awareness) were positively correlated with each obsessive–compulsive symptom dimension. Moreover, the cognitive reappraisal scale of the ERQ was negatively correlated with some of the obsessive–compulsive symptom dimensions. The correlations between the emotion regulation variables and obsessive–compulsive symptom dimensions were generally small to moderate in size. The cognitive reappraisal scale of the ERQ and the awareness scale of the DERS were the only two emotion regulation variables that did not correlate with each obsessive–compulsive symptom dimension.

3.3. Unique associations

Multiple linear regression analyses were used to examine whether each emotion regulation variable shared unique variance with obsessive–compulsive symptoms after accounting for general

Table 1
Descriptive statistics.

Variable	Mean	SD	α
DOCS-total	12.95	11.63	.93
DOCS-contamination	2.77	3.22	.86
DOCS-responsibility	3.42	3.82	.91
DOCS-unacceptable thoughts	3.06	4.06	.91
DOCS-symmetry	3.15	3.85	.93
ERQ-reappraisal	29.98	6.87	.90
ERQ-suppression	15.59	5.61	.83
DERS-nonacceptance	13.88	6.30	.91
DERS-goals	14.18	5.26	.90
DERS-impulse	11.69	4.96	.87
DERS-awareness	15.06	5.12	.83
DERS-strategies	18.86	7.96	.92
DERS-clarity	10.12	3.84	.86
PANAS-negative affect	19.86	8.54	.93

Note: $N=372$.

Table 2
Zero-order correlations among study variables.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. DOCS-total	–												
2. DOCS-contamination	**.74**	–											
3. DOCS-responsibility	**.83**	**.53**	–										
4. DOCS-unacceptable thoughts	**.76**	**.39**	**.50**	–									
5. DOCS-symmetry	**.78**	**.46**	**.53**	**.42**	–								
6. ERQ-reappraisal	−**.15**	−.02	−.10	−**.20**	−**.14**	–							
7. ERQ-suppression	**.26**	**.20**	**.22**	**.19**	**.21**	.03	–						
8. DERS-nonacceptance	**.40**	**.16**	**.37**	**.39**	**.28**	−**.22**	**.29**	–					
9. DERS-goals	**.34**	**.18**	**.32**	**.32**	**.22**	−**.18**	<u>.13</u>	**.57**	–				
10. DERS-impulse	**.45**	**.27**	**.39**	**.41**	**.31**	−**.32**	.08	**.53**	**.62**	–			
11. DERS-awareness	<u>.12</u>	.04	<u>.12</u>	<u>.13</u>	.06	−**.36**	**.40**	**.24**	**.14**	**.25**	–		
12. DERS-strategies	**.42**	**.21**	**.37**	**.42**	**.27**	−**.30**	**.22**	**.70**	**.70**	**.68**	**.18**	–	
13. DERS-clarity	**.38**	**.20**	**.34**	**.37**	**.25**	−**.32**	**.31**	**.51**	**.34**	**.45**	**.61**	**.46**	–
14. PANAS-negative affect	**.46**	**.21**	**.44**	**.41**	**.34**	−**.23**	**.18**	**.52**	**.46**	**.50**	**.14**	**.60**	**.41**

Note: N=372. **Bolded** rs significant at p < .01; <u>Underlined</u> rs significant at p < .05 (two-tailed). DOCS=Dimensional Obsessive Compulsive Scale; ERQ=Emotion Regulation Questionnaire; DERS=Difficulties in Emotion Regulation Scale; PANAS=Positive and Negative Affect Schedule.

Table 3
Regression results examining unique associations between emotion regulation and obsessive–compulsive symptoms.

Variable	Dimensional Obsessive Compulsive Scale									
	Total		Contamination		Responsibility		Unacceptable Thoughts		Symmetry	
	β	t-value	β	t-value	β	t-value	β	t-value	β	t-value
PANAS-negative affect	.23	4.06**	.07	1.11	.26	4.40**	.16	2.81**	.19	3.15**
ERQ-reappraisal	−.04	−.75	.03	.45	.03	.59	−.07	−1.42	−.09	−1.59
ERQ-suppression	.22	4.38**	.22	3.84**	.14	2.70**	.12	2.31*	.21	3.76**
DERS-nonacceptance	.05	.79	−.09	−1.18	.08	1.23	.08	1.18	.06	.84
DERS-goals	−.01	−.10	−.01	−.09	.02	.33	−.02	−.34	−.01	−.15
DERS-impulse	.29	4.53**	.27	3.69**	.22	3.28**	.20	2.93**	.22	3.18**
DERS-awareness	−.22	−3.62**	−.19	−2.73**	−.12	−1.92	−.16	−2.55*	−.21	−3.15**
DERS-strategies	−.07	−.86	−.03	−.37	−.08	−.96	.03	.37	−.13	−1.48
DERS-clarity	.22	3.44**	.16	2.25*	.16	2.38*	.21	3.17**	.14	2.01*

Note: N=372.
ERQ=Emotion Regulation Questionnaire; DERS=Difficulties in Emotion Regulation Scale; PANAS=Positive and Negative Affect Schedule.

  ** p < .01.
 * p < .05 (two-tailed).

distress and the other emotion regulation variables. In these regression analyses, PANAS-NA was entered into Step 1 and both the ERQ scales and the DERS scales were entered into Step 2 of a regression model with one of the scales of the DOCS serving as the criterion variable. The variance inflation factor (VIF) for each predictor ranged from 1.34 to 3.45 in the regression models. These values were well below conventional guidelines (< 10; Cohen, Cohen, West, & Aiken, 2003), indicating no robust problems with multicollinearity. Moreover, none of the cases were identified as being influential (defined as > 1 Cook's D_i; Cohen et al., 2003) on the overall regression estimates for any of the models.

Regression results from Step 2 of each model are presented in Table 3. In each model, the expressive suppression scale of the ERQ and multiple DERS scales accounted for significant unique variance in scores on the DOCS scales after controlling for PANAS-NA (ΔR^2 values ranged from .08 to .13, ps < .01). A nearly identical pattern of results emerged across each of the obsessive–compulsive symptom dimensions. More precisely, the expressive suppression scale of the ERQ and both the impulse and clarity scales of the DERS shared unique associations with each scale of the DOCS.

3.4. Suppression effect

Interestingly, a third variable (a suppressor) appeared to increase the strength of association between the awareness scale of the DERS and most of the scales of the DOCS, as evidenced by a change from a positive zero-order correlation to a significant negative association in the regression analyses. To identify the suppressor, a series of partial correlations was conducted in which each predictor variable from regression analyses was controlled for, one at a time, while examining the correlation between the awareness scale of the DERS and the scales of the DOCS. The clarity scale of the DERS was identified as the suppressor, as it was the only control variable which made the association between the awareness scale of the DERS and the scales of the DOCS significant and negative (partial rs ranged from −.11 to −.16, ps < .05).

4. Discussion

In the present study, expressive suppression, difficulties inhibiting impulsive behaviors when experiencing negative emotions, and a lack of clarity of emotions were the three emotion regulation variables that shared unique associations with obsessive–compulsive symptoms. A nearly identical pattern of results was found for each obsessive–compulsive symptom dimension. Given the heterogeneity of OCD, as well as the only moderate correlations among the symptom dimensions, finding each obsessive–compulsive symptom dimension to be marked by a nearly identical set of emotion regulation difficulties is notable.

An important consideration is how emotion regulation helps account for the psychopathology of OCD. Cognitive-behavioral models of OCD suggest that dysfunctional beliefs lead individuals to negatively appraise intrusive thoughts, which leads to increased perceptions of threat and distress. Neutralization efforts are used by individuals to reduce perceived threat and mitigate distress (Clark, 2004). Cisler and Olatunji (2012) suggested it is possible that emotion regulation potentiates emotional reactivity within anxiety and related disorders. Based on this suggestion, in the context of OCD, emotion regulation could affect the degree to which intrusive thoughts give rise to prolonged negative affective states.

Moreover, a poorer understanding of their emotions, reflecting in a lack of emotional clarity, may exacerbate emotional distress to such a high degree that immediate relief is sought through maladaptive avoidance behaviors (e.g., use of neutralizing behaviors). This line of reasoning is supported by Stern et al.'s (2014) speculation that a motivation to avoid emotions might underlie OCD, in that compulsions may be used to reduce emotional distress engendered by an intrusive thought. Consistent with this rationale, obsessive–compulsive symptoms shared a unique association with difficulties remaining in control of behavior when experiencing negative emotions. The tendency to act impulsively in response to negative emotions, described by some as negative urgency, has been shown to be associated with maladaptive behaviors conceptualized as attempts to reduce, or avoid, negative emotional experiences (Cyders & Smith, 2008).

In addition, expressive suppression, often conceptualized as an emotion regulation avoidance strategy, shared a unique association with obsessive–compulsive symptoms. As noted by Cisler Olatunji, Feldner, and Forsyth (2010), the chronic and inflexible use of suppression precludes individuals from learning that feared stimuli are not a source of threat. Suppression also maintains, and potentially exacerbates, distress associated with feared stimuli. Within OCD, expressive suppression could thus lead to a greater preoccupation with a feared intrusive thought, while maintaining, and even increasing, the distress associated with such a thought.

One therapeutic implication of finding obsessive–compulsive symptoms to be marked by emotion regulation difficulties is that emotion regulation abilities might be improved *prior* to individuals with OCD undergoing exposure-based therapies (de la Cruz et al., 2013), as it is standard in such treatments for individuals to be exposed to feared intrusive thoughts. Indeed, research indicates that emotional acceptance decreases emotional discomfort and increases willingness to participate in distressing tasks (Levitt, Brown, Orsillo, & Barlow, 2004). As such, improving emotion regulation abilities before completing exposure-and-response prevention may increase engagement in exposures and facilitate symptom reduction for individuals with OCD.

Interestingly, nearly all the obsessive–compulsive symptom dimensions were uniquely associated with a tendency to attend to and acknowledge emotions. However, this association appears to be the result of a suppression effect. This suppression effect may indicate that the combination of high emotional awareness with low emotional clarity may be associated with greater obsessive–compulsive symptoms, which is consistent with research suggesting that inordinate attention to and analysis of emotions may actually reduce emotional understanding and potentiate emotion regulation difficulties (Bardeen, Stevens, Murdock, & Lovejoy, 2013). At the same time, researchers have identified psychometric limitations of the awareness scale of the DERS (Bardeen et al., 2012). As such, relations between awareness and obsessive–compulsive symptoms warrant replication with an alternative measure of this facet of emotion regulation before firm conclusions are drawn.

Study limitations must be acknowledged. Although research suggests that obsessive–compulsive symptoms are continuous, thus supporting the use of unselected samples (Olatunji, Williams, Haslam, Abramowitz, & Tolin, 2008), it is important in future research to ensure the present results generalize to patients with OCD. However, it bears repeating that a sizable number of participants endorsed experiencing relatively severe obsessive–compulsive symptoms in this study. In addition, given the dimensional nature of obsessive–compulsive symptoms, and the likewise dimensional analyses, we believe that the present results meaningfully contribute to the literature. Our cross-sectional study design precludes conclusions regarding temporal relations between emotion regulation and obsessive–compulsive symptoms. It will be important to extend the present results using a longitudinal study design. Such research will be important for determining whether emotion regulation constitutes a risk factor for, or consequence of, OCD.

An additional limitation of the present research was our sole use of self-report measures, which might have inflated observed associations. However, one advantage of the present methodology was that it allowed us to simultaneously address relations between obsessive–compulsive symptoms and several emotion regulation variables, which we deemed to be an important examination given the current state of the literature. Although our focus was on obsessive–compulsive symptoms, we did not include a measure of another symptom type to directly examine whether the identified emotion regulation difficulties were relatively specific to OCD. At the same time, the facets of emotion regulation identified as sharing unique associations with obsessive–compulsive symptoms in this study diverged from those facets of emotion regulation found to share the most robust associations with other symptom types in prior studies (Bardeen & Fergus, 2014; Rusch et al., 2012; Tull et al., 2008). Finally, we acknowledge that the quality of data obtained via remote collection efforts remains an issue yet to be fully vetted in the psychopathology literature. We did, however, employ known methods shown to increase the quality of remotely collected data (following Peer et al., 2014).

The present results extend our knowledge regarding associations between emotion regulation and obsessive–compulsive symptoms. All major obsessive–compulsive symptom dimensions share robust associations with expressive suppression, the tendency to act impulsively in response to negative emotions, and a lack of clarity of emotions. Future research which continues to find robust associations between these facets of emotion regulation and obsessive–compulsive symptoms will be important in speaking to the relative merits of targeting specific facets of emotion regulation as part of standard interventions for OCD.

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