

# Obsessional thoughts and compulsive behaviors in a sample of women with postpartum mood symptoms

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Received: 28 December 2009 / Accepted: 14 June 2010  
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**Abstract** Postpartum psychiatric disorders are widely recognized by clinicians and researchers, yet while much attention has been paid to perinatal mood disorders, considerably less has been given to anxiety and obsessive–compulsive symptoms in this population. The present study examined anxiety and obsessive–compulsive symptoms among postpartum women with mood complaints, with the aim of delineating the relationship between these symptoms. Sixty postpartum women seeking treatment in a perinatal mood disorders clinic completed measures of depression, anxiety, and obsessive–compulsive symptoms. Obsession-like thoughts and compulsive-like (“neutralizing”) strategies were present among the majority of the sample, yet the severity of these symptoms ranged widely. Depressive and anxiety symptoms were associated with obsessive and neutralizing compulsive symptoms. It may be helpful to consider anxiety and depressive symptoms as part of a broad spectrum of perinatal psychiatric illness. Clinicians should assess for anxiety and obsessive–compulsive symptoms as routinely as they assess for depressive symptoms in the perinatal period.

**Keywords** Postpartum · Obsessive–compulsive · Anxiety · Depression

## Introduction

Psychiatric disorders during pregnancy and following childbirth are widely recognized by clinicians and researchers.

While a good deal of attention has been paid to the course and treatment of mood disorders in the perinatal period (Cohen and Altshuler 2006; Nunacs and Cohen 1998; Viguera et al. 2007; Wisner et al. 2002), considerably less has been given to characterizing *anxiety* symptoms during this period. Identifying women who are vulnerable to anxiety symptoms in the perinatal period, however, is of great clinical importance. Untreated maternal anxiety, for example, may adversely impact fetal development, postnatal maternal/infant bonding, and child growth and development. Indeed, babies of anxious mothers tend to be born prematurely and have a significantly lower than average birth weight for their gestational age (Perkin et al. 1993; Wadwa et al. 1993). Moreover, anxiety disorders in pregnancy constitute an independent risk factor for the development of postpartum depression (Lee et al. 2007; Rambelli et al. 2010). Following delivery, depressed and anxious mothers, relative to healthy mothers, tend to be less engaged with their infants and less able to regulate their emotional responsiveness, and their infants show compromised social and emotional functioning (Weinberg and Tronick 1998). Anxious mothers also struggle with breast feeding their infants (Britton 2007).

Given that symptoms of depression and anxiety frequently overlap, including in the perinatal period, it is not surprising that the term “postpartum depression” is often used as a catch-all phrase to describe a myriad of perinatal emotional symptoms. In fact, the Edinburgh Postnatal Depression Scale (EPDS), a well-validated screening tool used to monitor depression in pregnancy and postpartum, includes several items that quantify levels of anxiety, worry, fear, and panic in peripartum women (Cox et al. 1987). More recent work comparing depression in postpartum women versus depression in women outside

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the postpartum period has found that high levels of restlessness and agitation distinguished the former group from the latter (Bernstein et al. 2008).

Obsessional thoughts about the well-being of the fetus/baby are one manifestation of perinatal anxiety that is frequently observed in clinical settings and has been described in the literature, largely in case reports, case series, and retrospective reviews (Labad et al. 2005; Sichel et al. 1993; Maina et al. 1999; Williams and Koran 1997). In obsessive-compulsive disorder (OCD), the individual experiences persistent unwanted obsessional thoughts and resorts to compulsive rituals, excessive behavioral avoidance, and covert neutralizing strategies (e.g., mental rituals) to resist or manage the thoughts and reduce the associated anxiety and distress (American Psychiatric Association 2000). Recent prospective studies have found a higher than expected incidence of OCD in postpartum women. Uguz et al. (2007) found that 4% of postpartum women interviewed within the first 6 weeks after delivery reported a new onset of OCD symptoms, with contamination obsessions and cleaning compulsions described by nearly three-quarters of the women affected. Zambaldi et al. (2009) reported a 9% prevalence rate of OCD among a group of 400 postpartum women followed up to 26 weeks after birth. This study, consistent with older reports in the literature (Brandes et al. 2004; Sichel et al. 1993), found that aggressive obsessive thoughts about harm befalling the newborn were quite common. In the only study to compare such thoughts among healthy postpartum women and those with postpartum depression, the depressed women were found to experience thoughts concerning harm to the infant significantly more frequently and with more distress relative to the non-depressed women (Jennings et al. 1999).

The pathophysiology of perinatal OCD symptoms is not known. Some authors have speculated that fluctuations in estradiol and progesterone occurring around delivery may alter serotonin and dopamine transmission, and this in turn may lead to obsessions and rituals (Vulink et al. 2006). Others have correlated OCD symptom severity to levels of oxytocin in the cerebrospinal fluid (Leckman et al. 1994). Oxytocin levels rise proximate to delivery and play a critical role in uterine contractions and lactation; thus, one possibility is that this neuropeptide influences the onset of OCD symptoms in the puerperium. Fairbrother and Abramowitz (2007) postulated a cognitive behavioral model of postpartum OCD, based on findings that most new parents (fathers and mothers alike) experience distressing thoughts and fears about harm to their newborn (e.g., Abramowitz et al. 2006a, b). The misinterpretation of these senseless and benign thoughts as very significant and threatening, however, leads to obsessive preoccupation and urges to perform anxiety-reducing rituals (e.g., Abramowitz et al. 2006a, b, 2007).

Regardless of the ultimate (and likely complex) etiology of postpartum OCD and anxiety symptoms, it is important that clinicians screen for and identify anxiety and obsessional symptoms, apart from (or comorbid with) maternal depression. This differentiation has implications for treatment: Although serotonergic medications may be helpful for both anxiety and depression, the appropriate psychological treatments—which perinatal women often prefer over psychotropic medications—differ substantially (e.g., Hendricks 2006), with anxiety symptoms specifically responding to exposure-based cognitive behavioral therapy, and depression, to interpersonal therapy, behavioral activation, and verbal cognitive techniques. The present study therefore builds on the recent work of Uguz and Zambaldi by examining symptoms of depression, anxiousness, and OCD in pregnant and postpartum women who presented for treatment at a perinatal mood disorders clinic. Its aim was to further delineate the relationship between depressive symptoms and anxiety symptoms, with a particular focus on obsessional thinking and associated neutralizing (ritualistic) behaviors.

## Method

### Study sample and procedure

We collected data from 60 postpartum women who were seeking evaluation and treatment in the Perinatal Mood Disorders Clinic at the University of North Carolina from March 2007 to April 2009. These patients represent a subgroup of a larger ongoing survey of psychiatric comorbidity during the perinatal period. Participants in the present study were consecutively referred English-speaking women presenting in the postpartum period and thus eligible to complete the study measures described below. Approximately three-quarters of the women completed the study measures within the first 6 months postpartum. Specifically, 55% completed the measures during postpartum months 0–3, 21% during postpartum months 3–6, 14% during postpartum months 6–9, and the remainder completed the survey between postpartum months 9–12.

Before completing these measures, all women were screened to document that they had given birth within the past 12 months or less. The study measures were completed in a private area in the clinic. The parent psychiatric comorbidity survey study had an 80% response rate of those eligible. Of the 20% that did not turn in a survey, about half refused participation in the study, and the other half did not turn in their survey after signing the consent form. The study was approved by the University Committee for the Protection of Human Subjects. Patients who

agreed to participate gave informed consent and signed the HIPAA release.

## Measures

In addition to questionnaires to assess demographic information, medical history, and obstetrical history (including an assessment of infant feeding practices), the following instruments were included in the postpartum patient survey and used in the present study:

**EPDS** The EPDS was developed specifically for assessing postpartum depression and relies much less than standard depression screens on questions about somatic, or physical, symptoms (Cox et al. 1987). It also has multiple questions that specifically assess for anxiety symptoms (Brouwers et al. 2001). The EPDS is a widely validated instrument commonly used internationally. In its most common form, it is a 10-item self-report screening scale, and the response format is frequency-based. A cutoff score of  $\geq 12$  on the EPDS has been consistently shown to be correlated with a clinical diagnosis of major depressive disorder, when compared to a structured clinical interview (Cox et al. 1987). EPDS scores of 10–12 have been associated with an accurate diagnosis of minor depressive disorder. Multiple studies have documented that the EPDS is a very helpful tool to identify women suffering from symptoms of perinatal depression (Gaynes et al. 2005). In our analysis, we used a cutoff score of  $\geq 11$  as a positive screen.

**Postpartum Thoughts and Behaviors Checklist** The Postpartum Thoughts and Behaviors Checklist (PTBC) is a semi-structured interview that evaluates the content of postpartum intrusive thoughts and neutralizing (ritualistic) strategies (Abramowitz et al. 2006a). It includes three sections. The first section defines and normalizes the experience of intrusive distressing thoughts following childbirth (examples of intrusions are provided and respondents are informed that they should do their best to answer in an honest and straightforward manner). The second section contains a checklist of 10 types of intrusive postpartum thoughts (e.g., thoughts that the infant could stop breathing while sleeping; thoughts about puncturing the baby's fontanel (soft spot)). The third section contains a checklist of 14 neutralizing (ritualistic) strategies that new parents sometimes use for managing their unwanted infant-related thoughts (e.g., frequently checking on the baby, praying to make the thoughts go away).

**Yale–Brown Obsessive Compulsive Scale** The severity of postpartum obsessional intrusions and neutralizing strategies as identified by the PTBC was assessed using the

Yale–Brown Obsessive Compulsive Scale (Y-BOCS), a 10-item scale that measures the following five parameters of obsessional thoughts (items 1–5) and compulsive rituals (neutralizing) (items 6–10; Goodman et al. 1989): (a) time occupied/frequency, (b) interference, (c) distress, (d) resistance, and (e) perceived control. Each item is rated on a five-point scale from 0 (no symptoms) to 4 (severe symptoms), and the five obsessions and compulsions items are summed separately to produce corresponding subscale scores ranging from 0 to 20. A total score is computed by summing the two subscale scores (range=0 to 40). The Y-BOCS is widely used to assess clinical and subclinical obsessive–compulsive symptoms in research where scores of 0 to 7 represent subclinical symptoms, scores of 8–15 indicate mild OCD symptoms, those of 16–25 suggest moderate symptoms, scores of 26–32 represent severe symptoms, and scores in the 33–40 range suggest extremely severe symptoms. The self-administered version used in the present study has been shown to be a reliable and valid measure of OC symptoms (Steketee et al. 1995)

**Spielberger State–Trait Anxiety Inventory** The State–Trait Anxiety Inventory (STAI) is a commonly used instrument for measuring anxiety in adults (Spielberger 1970). The STAI differentiates between the temporary condition of "state anxiety" and the more general and long-standing quality of "trait anxiety." The essential qualities evaluated by the STAI-State Anxiety scale are feelings of apprehension, tension, nervousness, and worry. It has been widely used for over 40 years and has validated norms in the general population and a variety of patient populations. Mean scores for the general population range from 34.79 (standard deviation (SD)=9.22) to 35.72 (SD=10.40)

**Patient Health Questionnaire (Brief)** The original Patient Health Questionnaire (PHQ) was developed as a fully self-administered version of a DSM-IV based clinician evaluation guide to common psychiatric disorders. The Brief version of the PHQ covers mood and anxiety disorders (Martin et al. 2006). It has been validated in many types of settings, including primary care, obstetrics and gynecology, and the general population.

## Statistical analyses

SAS statistical software was used for all analyses. First, we computed descriptive statistics (percentages, means, SD) for all measures. Next, Pearson's correlations were computed to examine the relationships between obsessive–compulsive, depressive, and anxiety symptoms. Nonparametric correlations (Spearman rank) were checked to

insure that outliers did not account for the relationships observed. We also performed *t* tests to examine differences in obsessive–compulsive symptoms between highly depressed and non-depressed (based on EPDS scores) individuals. All data analyses used two-tailed tests and controlled for background variables of age, race (white/nonwhite), and education.

## Results

### Demographic characteristics

Demographic characteristics for the study patients are presented in Table 1. As can be seen, on average, respondents were about 30 years of age and fairly well-educated. The majority were married and Caucasian. The mean EPDS score for all participants who completed the survey was 14.6. Of the 60 women who completed the survey, 52 (87%) reported the presence of at least one of the 10 types of intrusive, obsession-like thoughts from the PTBC. The EPDS score for those who endorsed intrusive thoughts was 14.3, and there was not a significant difference between groups ( $p=0.39$ ). Of those reporting intrusive thoughts, 74.5% had an EPDS score of  $>11$ . For those women who did not report intrusive thoughts, 87% of had an EPDS score  $>11$ , and there was no significant difference between groups ( $p=0.42$ ).

We also examined whether obsessive–compulsive or depression symptom severity was associated with how long after giving birth the participant completed the study. Correlation analysis, however, revealed no significant relationships between the postpartum time interval and symptom severity ( $r=0.02$  and  $p=0.90$  for EPDS score;  $r=0.13$  and  $p=0.36$  for Y-BOCS obsessions, and  $r=0.14$  and  $p=0.34$  for Y-BOCS compulsions). *t* tests comparing early postpartum presentation and completion of survey (0–3 months postpartum) versus later presentation ( $>3$  months postpartum) also revealed no significant differences on any measures of depressive or obsessive–compulsive symptoms ( $p=0.41$  for EPDS score;  $p=0.84$  for Y-BOCS obsessions;  $p=0.53$  for Y-BOCS compulsions).

**Table 1** Sample demographic and clinical characteristics ( $N=60$ )

Variable	<i>M</i> (SD) or percent (%)
Age (years)	30.08 (5.28)
Education (years of schooling)	15.44 (3.10)
Ethnicity (% Caucasian)	65.3
% Married	79.6

### Intrusive thoughts and neutralizing behaviors

Table 2 shows the number and percent of women who reported experiencing these types of unwanted thoughts either currently or at some point during the postpartum period. As can be seen, the most prevalent unwanted thoughts concerned the baby dying of sudden infant death syndrome (SIDS) and suffocating. These types of thoughts were reported in two-thirds to three-quarters of the respondents at some point during the postpartum period. Intrusions concerning accidents (e.g., dropping the baby, choking) and germs or poisoning were present in just under half of the respondents. Intrusions about deliberately engaging in violent acts toward the infant, and thoughts concerning medical illnesses, were present in over 10% of the respondents. Sexual thoughts were the least common category of intrusive thoughts.

All women reporting one or more types of intrusive thoughts also reported using one or more ritualistic or neutralizing strategies in response to their intrusions. The bottom portion of Table 2 shows the number of respondents currently using each of the 14 types of strategies listed on the PTBC. As can be seen, trying to reassure oneself, checking on the infant, and trying to think of something else as a form of distraction were the most widely used strategies, as reported by over two-thirds of the respondents. Strategies such as prayer, thought suppression, trying to rationalize the thought, obtaining social support, and prayer were also quite common. It is interesting to note that one quarter to one half of respondents confessed their intrusions to others, asked others if their intrusions were “normal,” and distracted themselves with other activities. Avoidance of the infant (and avoidance of other activities) was relatively rare. Some respondents reported avoiding high places, sharp objects, and holding the infant near stairs.

### Severity of postpartum obsessive–compulsive and related symptoms

Scores on measures of obsessive–compulsive, depressive, and anxiety symptoms for the 52 women reporting one or more postpartum intrusions are presented in Table 3. Mean scores on the Y-BOCS total and subscales indicated clinically significant, yet mild, obsessive–compulsive symptoms. Inspection of the distribution of Y-BOCS total scores (Fig. 1) indicated that whereas roughly half of the sample experienced relatively little distress or impairment as a result of their intrusions (i.e., scores  $\leq 7$ ), the other half ranged in severity from mild to moderate in terms of obsessive–compulsive symptoms. As can be seen in Table 3, the group’s mean EPDS score indicated clinically significant levels of depressive symptoms, and scores on the STAI-T indicated moderate anxiety.

**Table 2** Number (percent) of women reporting different types of intrusive thoughts and neutralizing strategies in the postpartum ( $N=52$ )

Variable	Current $N$ (%)	Past only $N$ (%)
<b>Intrusive thoughts</b>		
Thought that he/she might stop breathing or suffocate	31 (52)	9 (15)
Thought that the infant could die of SIDS	34 (57)	12 (20)
Unwanted thoughts of screaming, shaking, or slapping the infant	9 (15)	2 (3)
Unwanted thoughts of harming the infant	7 (12)	3 (5)
Thoughts about the baby dying because of an accident	23 (38)	4 (7)
Fears of dropping the infant while holding him/her	22 (37)	4 (7)
Fears that the infant will choke on something (e.g., toy, food)	23 (38)	2 (3)
Worries about the baby getting very sick from germs or poisons	19 (32)	3 (5)
Unwanted sexual thoughts about the baby	3 (5)	0 (0)
Unrealistic thoughts that the baby has a serious medical illness	8 (13)	4 (7)
<b>Neutralizing strategies/rituals</b>		
Give yourself reassurance that things are OK?	43 (72)	2 (3)
Spend time trying to rationalize or make sense of the thought?	28 (47)	4 (7)
Check on the baby more frequently?	41 (68)	2 (3)
Distract yourself with other activities?	22 (37)	4 (7)
Distract yourself with other thoughts?	37 (62)	3 (5)
Try to suppress or stop the unwanted intrusive thoughts as quickly as possible?	33 (55)	4 (7)
Avoid situations in which the thought comes up?	14 (23)	2 (3)
Avoid your infant?	6 (10)	1 (2)
Get social support (such as by talking to your spouse or parent)?	33 (55)	2 (3)
Ask other people if the thoughts are “OK” or “normal”?	16 (27)	5 (8)
Confess to others that you’ve had the thoughts?	24 (40)	2 (3)
Pray about the thoughts?	28 (47)	3 (5)
Other strategies used to respond to the thoughts?	9 (15)	2 (3)

### Relationships among postpartum obsessive–compulsive symptoms and study variables

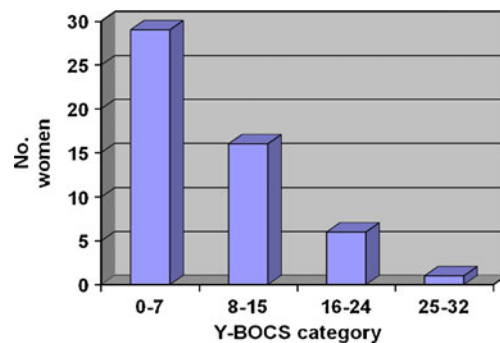
A  $t$  test revealed that patients meeting diagnostic criteria for postpartum depression as defined by a positive screen on the EPDS (cutoff score of  $\geq 11$ ) had significantly higher Y-BOCS compulsions scores ( $M=5.25$ ;  $SD=3.01$ ) than did those who did not meet criteria ( $M=2.57$ ;  $SD=1.56$ ),  $t(40)=3.75$ ,  $p<0.001$ . Group differences on the obsessions

subscale (depressed  $M=4.98$ ,  $SD=3.82$ ; non-depressed  $M=3.40$ ,  $SD=2.12$ ), however, were only nonsignificant trends,  $t(40)=1.74$ ,  $p=0.09$ .

Correlations between the Y-BOCS obsessions and compulsions subscales and depressive and anxiety symptoms are presented in Table 4. As can be seen, weak to moderate relationships were detected between the Y-BOCS subscales and the EPDS and STAI-T.

**Table 3** Scores on measures of obsessive–compulsive, depressive, and anxiety symptom severity among women reporting postpartum intrusive thoughts ( $N=52$ )

Measure	$M$ ( $SD$ )	Range
Y-BOCS obsessions	4.66 (3.58)	0–15
Y-BOCS compulsions	4.64 (2.96)	0–12
Y-BOCS total	8.70 (6.11)	0–25
EPDS	13.79 (6.39)	1–28
PHQ-depression	10.11 (6.65)	0–27
STAI-T	49.49 (11.47)	22–76

**Fig. 1** Distribution of Y-BOCS total scores

## Discussion

A great deal of research has focused on the impact of postpartum depressive symptoms on mothers and infants, but much less attention has been paid to postpartum anxiety symptoms either independently or in relation to depression. Thus, the aim of the present study was to clarify the relationship between postpartum symptoms of anxiety and depression, particularly with respect to obsessional thinking and associated neutralizing (ritualistic) behaviors. An extremely high percentage of the women in this sample reported experiencing intrusive thoughts related to their newborn baby. This finding is consistent with previous research (Abramowitz et al. 2003, 2006a; Uguz et al. 2007) and not surprising given that intrusive thoughts are a normally occurring phenomenon in the general population (Rachman and de Silva 1978). Moreover, the postpartum period is considered to be a high risk time for the development of obsessional thinking because the new mother is exposed to the heightened responsibility of caring for a new and fragile infant (Fairbrother and Abramowitz 2007; Salkovskis et al. 1999). These findings extend previous research by addressing the specific types of intrusive obsession-like thoughts reported by women evaluated in a postpartum mood disorders clinic.

Thoughts about SIDS/suffocation were the most commonly endorsed category of intrusive thoughts among the women in our sample; and thoughts about engaging in sexual acts with the baby were the least commonly endorsed. Two previous studies of non-clinical postpartum women found similar patterns, with the exception that thoughts about illnesses were slightly less common than in the present sample (Abramowitz et al. 2003, 2006a). Intrusive thoughts about SIDS/suffocation may be relatively frequent in new parents because of the recent media attention that Sudden Infant Death Syndrome had received. Additionally, the low perceived controllability of SIDS may provoke uncertainty and doubt, contributing to the high frequency of these types of intrusive thoughts. Indeed, distressing intrusive thoughts tends to relate to areas of life in which uncertainty and doubt are most difficult to tolerate (Abramowitz et al. 2003; Obsessive Compulsive Cognitions Working Group 1997).

**Table 4** Correlations between OC symptom severity and depressive and anxiety symptoms ( $N=52$ )

Variables	Y-BOCS obsessions	Y-BOCS compulsions
EPDS	0.25*	0.38*
PHQ-D	0.18	0.12
STAI-T	0.31*	0.37*

\* $p<0.05$

Neutralizing strategies, which function to reduce anxiety and distress associated with intrusive thoughts, were also common in the present sample. Self-reassurance, checking, and attempts at distraction were the most commonly endorsed strategies. The high frequency of checking behaviors (e.g., checking to see that the baby is still breathing) in this sample is not surprising given the prevalence of intrusions related to SIDS. Concerns about SIDS in particular might be expected to elicit checking behaviors, and in fact, parents are sometimes encouraged by doctors to check that their baby is still breathing. When checking fails to reduce anxiety levels or is inconvenient (e.g., the mother and child are in different places), mothers might turn to alternative strategies such as self-reassurance and distraction, which we also observed in the present sample.

Although on average, the women in this study experienced obsessive–compulsive symptoms of generally mild severity, the distribution of Y-BOCS scores indicated that as many as 23 women had scores of  $\geq 8$ , which are suggestive of clinically significant levels of OC symptoms. Moreover, our analyses indicated that overall, obsessive–compulsive symptom severity was moderately related to both depressive and anxious symptoms. This finding is consistent with previous research showing relationships between obsessive–compulsive, depressive, and anxious symptoms (e.g., Abramowitz et al. 2006a; Jennings et al. 1999). Prospective studies, however, are needed to more carefully examine the longitudinal course of depression, anxiety, and obsessive–compulsive symptoms to determine the nature of the interaction between these symptoms and depression across the life span. For some postpartum women, depression might occur as a result of the distress and anxiety triggered by unwanted intrusive thoughts. On the other hand, research suggests that depressive symptoms can give rise to intrusive distressing thoughts (Wenzlaff 2005).

Our results have a number of implications for the assessment and treatment of mood and anxiety disorders in perinatal women. First, clinicians should assess for *both* depressive and anxiety/obsessional symptoms in perinatal populations. Traditionally, both patients and perinatal caregivers are more familiar with the classic symptoms of depression, such as low mood, decreased energy, or changes in appetite or sleep, but not with the heightened anxiety and/or intrusive distressing thoughts that may commonly be present in the postpartum period. Anxiety is a hallmark symptom of perinatal psychiatric illness and is commonly a primary complaint in what is routinely called postpartum depression. Therefore, psychoeducation and training for perinatal caregivers regarding the distinguishing features of perinatal depression is critically important.

Perinatal anxiety and obsessive–compulsive symptoms also require differentiated treatment from postpartum

depression. Specifically, although serotonergic antidepressant medication may be effective in reducing both anxiety (including OCD) and depressive symptoms, recommended doses are higher in OCD than for other anxiety disorders or depression (e.g., Stein and Hollander 2002). Moreover, because of the possible health risks posed by medications, many perinatal women opt for psychological treatment, and the empirically supported interventions for anxiety and OCD symptoms (i.e., variations of exposure-based therapy) are quite distinct from those with empirical support for reducing depression (i.e., cognitive therapy and behavioral activation, interpersonal psychotherapy; e.g., Barlow 2002). These approaches would likely be most beneficial in postpartum women as well (Abramowitz et al. 2006a).

The present study, coupled with previous findings suggests that it is just as necessary to assess for anxiety and OC symptoms as it is to assess for classic depressive symptoms. Second, given that distressing intrusive thoughts are present with regularity in the postpartum period, it may be beneficial to educate women about, and normalize, the experience of intrusive thoughts around this time of life, perhaps as part of perinatal education courses. Third, as depressed women are likely to use maladaptive neutralizing strategies to manage their distressing intrusive thoughts, treatment for postpartum depression should include teaching patients more healthy strategies for coping with normally occurring intrusive thoughts (e.g., exposure and response prevention and cognitive therapy; Abramowitz et al. 2006b). Lastly, it may be most helpful to consider both anxiety and depressive symptoms as being part of a broad spectrum that encompasses perinatal psychiatric illness. A more inclusive approach to the diagnosis and treatment of perinatal psychiatric illness, as opposed to attempting to separate out discrete anxiety disorders from depressive disorders may be a more prudent approach.

The present study has a number of limitations that should be considered. First, the sample was drawn from a referral-based perinatal psychiatry specialty clinic and, therefore, might include women at higher than average risk of perinatal psychiatric symptoms. Second, the study used a cross-sectional and correlational design, and as such, we cannot make inferences regarding the directionality of the associations between postpartum depression and anxiety (OC) symptoms. A third limitation is the absence of a structured diagnostic interview or measure of functional impairment. A fourth limitation is that the interval between giving birth and completing the study measures varied among participants. That is, women were referred to our clinic at various points during their first 12 months postpartum. However, participants were referred because they were symptomatic and completed the measures based on their current symptoms (i.e., not retrospectively). Finally, the study is limited by the lack of data on

prepartum psychiatric functioning. Future prospective studies will be required to better understand what is likely a complicated relationship between obsessive–compulsive, anxious, and depressive symptoms in the postpartum period. Given that research consistently indicates that the puerperium is a sensitive period for the development of mood and anxiety problems, the next generation of studies should focus on identifying the predictors and course of these types of symptoms.

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