



Intrusive thoughts of infant harm in postpartum women: The impact of psychoeducation on disclosure and help-seeking attitudes and behaviors

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Intrusive thoughts of infant harm in postpartum women: The impact of psychoeducation on
disclosure and help-seeking attitudes and behaviors

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Abstract

This study examined the occurrence of repetitive, intrusive thoughts about infant harm in postpartum women and the role psychoeducation plays in encouraging disclosure and promoting help-seeking attitudes and behaviors. Postpartum women (n=57) completed an online survey about their experiences with intrusive thoughts, compulsions, and help-seeking attitudes and intentions toward mental health support. Participants in the treatment condition (n=27) viewed a 2.5-minute psychoeducation video before completing a survey, while those in the control condition (n=30) completed the survey first, followed by the same psychoeducation video. Independent t-tests were conducted to compare intrusive thoughts and compulsions, as well as responses to three measures of help-seeking attitudes and intentions across the two conditions. No significant differences were found between the treatment and control conditions on rates of thoughts and compulsions, and help-seeking attitudes and behaviors. The psychoeducation video did not appear to increase disclosure and help-seeking attitudes in this sample of postpartum women. However, our findings add to the limited research that suggests intrusive thoughts are extremely common in postpartum women. All women in our sample reported experiencing at least one infant harm related intrusive thought. More research is needed to determine ways to reduce barriers to help-seeking, and to increase public awareness and comfort discussing this common experience, that in some cases, requires professional treatment.

Frontispiece



Dedication

This thesis is dedicated to moms who have scary thoughts. I would also like to dedicate this thesis to my toddler, Alex, who spent a great deal of time waiting for me to finish “school with Lisa” and to my family and husband in appreciation for their support.

Acknowledgments

I am extremely grateful to my thesis advisor, Dr. Lisa Coyne, who dedicated so much time and support throughout this project. Your expertise, patience, and enthusiasm kept this Covid-era working-mom and student afloat. Thank you, Becky Browne, for sharing your mastery of research methods and SPSS. You are a wonderful teacher. I would also like to thank my research advisor, Dr. Dante Spetter for providing support and the foundation for this fascinating project.

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Chapter I

Introduction

Intrusive thoughts are images or impulses that are unwanted and hard to control (Rachman, 1997). They are common in the general population, cause varying levels of distress, and involve a variety of themes, such as jumping from a high place or pushing someone (Rachman, 1997; Rachman & DeSilva, 1978). When new parents experience intrusive thoughts, themes often involve scenarios that threaten the infant (Abramowitz et al., 2003; Fairbrother & Woody, 2008). In general, these thoughts are perceived as meaningless and cause little distress but for some, thoughts can become bothersome enough to lead to thought suppressing strategies or avoidance, and in extreme cases obsessive-compulsive disorder (Fairbrother & Woody, 2008).

Postpartum Intrusive Thoughts

In the postpartum period, intrusive thoughts may contain images and urges that are quite disturbing for new parents. Examples of aggressive thoughts described in research involve scenarios of stabbing the baby with a knife, drowning the baby in a bathtub, or putting the baby in a microwave (Maina et al., 1999). While thoughts of accidental harm can involve scenarios of harm outside of the one's control, like suffocation in the crib (Maina et al., 1999). Thoughts of harm to the infant can be very disturbing, particularly aggressive thoughts of intentionally harming the child, which are often perceived as more upsetting than accidental infant harm thoughts (Abramowitz et

al., 2003). Intrusive thoughts have been described as “almost soul-destroying” in qualitative research (Boyd & Gannon, 2021). One mother reported feeling “nuts” and like she “didn’t feel like a good, normal person anymore” (Boyd & Gannon, 2021).

However, the majority of parents will experience intrusive thoughts as only mildly distressing and within their control (Abramowitz et al., 2003). Recurrent thoughts of infant harm are actually quite common in postpartum mothers and postpartum fathers. Abramowitz et al. (2003) found up to 68.8% of new mothers and 57.7% of new fathers experienced unwanted intrusive thoughts of infant harm (n = 117). Intrusive thoughts of aggressive, intentional harm to the infant were reported by 21.1% of new mothers and 22.6% of new fathers in the sample. Research that focuses on new mothers suggests they are particularly vulnerable with rates of intrusive thoughts ranging between 63 and 100% in both clinical (Abramowitz et al., 2010; Arnold, 1999) and non-clinical samples (Abramowitz et al., 2003; Abramowitz et al., 2006; Fairbrother & Woody, 2008; Zambaldi et al., 2009). In Fairbrother & Woody’s (2008) study of 100 first-time mothers, all women experienced intrusive thoughts relating to accidental harm at 4 weeks postpartum, while almost half experienced thoughts of intentionally harming their newborn. This study also found accidental harm intrusions occurred with greater frequency than thoughts related to intentional harm, with almost 30% reporting intrusions of accidental harm several times per day, 27.5% every day, and 36.3% once or twice per week. Women experiencing worries related to intentional harm reported intrusions that occurred once or twice per week (51.1%) or less than once per week (42.2%).

Most new mothers report minimal distress and little interference in functioning from their intrusive thoughts (Abramowitz et al., 2003). In Abramowitz et al.’s (2003)

study of intrusive thoughts, of the 53 postpartum mothers and 23 postpartum fathers who reported intrusive thoughts, distress was self-reported on a scale of 0 to 4, with 0 representing no distress and 4, severe. Mean scores were 1.28. Self-reported scores of interference in functioning were also very low with a mean score of .30, measured on a scale of 0 to 4, where 0 was no interference is 4 was severe. Similarly, Fairbrother and Woody's (2008) study on postpartum mothers measured distress and found the majority of new mothers reported minimal or no distress measured on a 5-point Likert scale administered in an interview format. Although, intrusive thoughts of intentional harm were reported as more distressing than accidental intrusive thoughts (Fairbrother & Woody, 2008).

Unfortunately, in a small percentage of postpartum mothers, intrusive thoughts are distressing, time consuming, and interfere with functioning. A recent study by Challacombe et al. (2017) surveyed 37 new mothers with Postpartum Obsessive-Compulsive Disorder (ppOCD) and 37 healthy controls within in the first 6 months postpartum. There were 5 women whose scores indicated severe Obsessive Compulsive-Disorder (OCD) according to the *Yale-Brown Obsessive Compulsive Scale* (YBOCS, Goodman et al., 1989) who were bothered by their symptoms upwards of 9.61 hours per day. They also reported significantly more deliberate thoughts of harm. These findings are consistent with results found in Fairbrother and Woody's (2008) study, where a small percentage of participants reported almost constant thought frequency (5.5%) and described thoughts as severely or extremely upsetting (12.1% for accidental thoughts and 33.3% for intentional) at 4 weeks postpartum.

Researchers have investigated why intrusive thoughts become bothersome obsessions in some people (Rachman, 1995, 1997; Salkovskis, 1985). Nearly everyone experiences intrusive thoughts and there are similarities in content and form among clinical and non-clinical adults' obsessions (Rachman & DeSilva, 1978). In research conducted by Rachman & DeSilva (1978), experts (5 psychologists and 1 psychiatric nurse) struggled to distinguish between clinical obsessions presented by non-clinical participants and clinical participants who sought treatment for their obsessional thoughts and urges. Obsessions relating to harming others, for example, were common themes in both samples. However, the obsessions of clinical participants tended to last longer and were reported as more frequent, more intense, and produced more discomfort than those of participants in the non-clinical sample (Rachman & DeSilva, 1978). Rachman (1997) later theorized that intrusive thoughts can become problematic when they are perceived as meaningful, or when exaggerated significance is attached to thoughts leading to dysfunctional beliefs about their importance. Earlier studies by the same researcher found correlations between OCD and an individual's belief that their thoughts and actions are morally equivalent, or thought-action fusion, granting an inflated importance to their thoughts (Rachman 1993; Rachman et al., 1995).

Abramowitz et al., (2006) investigated these theories in postpartum parents and found that parents who experienced greater obsessive-compulsive symptoms were more likely to believe their thoughts were significant and threatening. They surveyed 85 new mothers and fathers on dysfunctional beliefs, defined as "overestimates of threat and responsibility of harm, importance and control of intrusive thoughts, and perfectionism and the need for certainty." Researchers administered the Obsessive Beliefs

Questionnaire (OBQ; OCCWG, 2005), a 44-item self-report questionnaire to assess these dysfunctional beliefs, and found higher scores on the OBQ were associated with greater obsessive-compulsive symptoms as measured by the YBOCS.

Postpartum Obsessive-Compulsive Disorder

While intrusive thoughts are extremely common in new mothers, only a small proportion will develop obsessive-compulsive disorder. This disorder is characterized by obsessions or intrusive, recurrent thoughts, urges, or images, and by compulsions which are behaviors or mental acts applied in response to those obsessions (American Psychiatric Association, 2013). The obsessions provoke anxiety when they are perceived as unpleasant and not in line with one's world view. Subsequent compulsions attempt to relieve this anxiety or avoid disastrous outcomes relating to the obsessions. However, relief is often short-lived. The obsessions and compulsions are time consuming, defined as more than 1 hour per day, and impair functioning, causing social or occupational interference (American Psychiatric Association, 2013).

Obsessions and compulsions often follow common themes. For example, the obsession of contamination accompanied by the compulsion of cleaning is the most frequently observed theme in women (American Psychiatric Association, 2013). Other examples of themes include obsessions of symmetry with compulsions of counting, and obsessions of harm or aggression with compulsions of avoidance. In the postpartum period, themes of harm befalling the child are common in women diagnosed with OCD. Thoughts may consist of accidental harm or intentional harm to the child, and aggressive obsessions are more common in mothers diagnosed with OCD postpartum than women without a postpartum OCD diagnosis (Zambaldi et al., 2009). Maina et al.'s (1999) study

of 68 women diagnosed with OCD found all women diagnosed during the postpartum period reported experiencing aggressive obsessions involving their child.

The compulsions that often accompany thoughts of infant harm can involve avoidance of the child or hypervigilance (Arnold, 1999). Arnold (1999) found dysfunctional mother-child behavior reported by all 7 women in their study. All had aggressive intrusions, and 5 reported behaviors such as avoidance, restricting the child's activities, or refusing to allow others to care for the child. Fairbrother & Woody (2008) reported similar compulsion responses in their study of 100 postpartum mothers. Avoidance, distractions, and excessively checking on the infant were most common.

In the postpartum period, obsessive-compulsive disorder receives far less attention than postpartum depression and postpartum psychosis, despite research that suggests rates of OCD are higher in postpartum women than in the general population (Brok et al., 2017; Russell et al., 2013; Uguz et al., 2007; Zambaldi et al., 2009). The 12-month prevalence rate of U.S. adult women is 1.8% (National Institute of Mental Health; Ruscio et al., 2010). However, the 12-month prevalence rate in women following the birth of a child is higher at 2.43% (Russell et al., 2013). Russell et al. (2013) claims this estimate is conservative and comes from a meta-analysis analyzing 17 studies that took place between 2002 and 2012 to synthesize prevalence rates that ranged between 0.7% and 9% in postpartum women. Discrepancies between studies were attributed to differences in regions, sample populations, and diagnostic measures. Zambaldi et al. (2009), found rates as high as 9% in postpartum women and suggest the measurement instrument used (Mini International Neuropsychiatric Interview for OCD) might have led to an overestimated prevalence rate. Outliers such as this were excluded, resulting in

prevalence rates ranging between 0.7 and 3.9% leading to their estimate of 2.43% (Russell et al., 2013). A longitudinal study published in 2021 found rates as high as 7% in the earliest stages of postpartum recovery, suggesting OCD may peak, then gradually decline in postpartum women (Fairbrother et al., 2021).

Age of onset differs, with males more likely to first experience OCD during childhood and adolescence, while females experience first onset occurs during adolescence and late twenties (Labad et al., 2005, Ruscio et al., 2010). Labad et al. (2005) suggests age of onset in women coincides with reproductive events. They interviewed 46 women diagnosed with OCD within a two-year period and found the highest rates of onset coincided with menarche (22%) and the postpartum period (7%) (Labad et al., 2005). Maina et al. (1999) studied patients diagnosed with OCD over a 2-year period and found “birth of a child” was the only significant precipitating factor, affecting 8 out of 68 participants. A larger study of 302 postpartum women found an incidence rate of 4% within the first 6 weeks postpartum (Uguz et al., 2007).

Some women with pre-existing OCD report an exacerbation of symptoms during the postpartum period (Labad et al., 2005). Of 46 women interviewed by Labad et al. (2005), 12 of whom were mothers with pre-existing OCD, 6 experienced worsening symptoms postpartum. This was a significant finding, but the small sample size was a limitation. In a larger study, Guglielmi et al. (2014) surveyed 542 women and similarly found 46.6% of women with pre-existing OCD experienced exacerbation during the postpartum period. They also found that women who experienced an exacerbation of symptoms in their first pregnancy were 5-7 times more likely to experience an

exacerbation of symptoms again in the second pregnancy compared to women who did not experience an exacerbation of symptoms in their first pregnancy.

The etiology of OCD is unknown but a number of theories have been investigated. Studies have found that increased stress has been linked to the onset of OCD and the severity of obsessions or intrusive thoughts (Rosso et al., 2012). Rosso et al. (2012) interviewed 329 patients with OCD and found 60% experienced a stressful life event the 12 months prior to diagnoses, and 24% cited a severe stressful life event. Life events were from the 61-item scale of life events developed by Paykel et al. (1971) which included items like death of a close family member or personal illness.

Studies have also researched hormone fluctuations and abnormalities in postpartum women. Levels of adrenocorticotrophic hormone (ACTH), which regulates cortisol, have been found to be higher in women with intrusive thoughts of harming the child postpartum than postpartum women who do not experience intrusive thoughts (Labad et al., 2011). In this study, ACTH levels of 132 women were measured 2-3 days postpartum, then women were interviewed at 8 weeks postpartum about intrusive thoughts of harm to their infant. Women who had experienced intrusive thoughts of harm were more likely to have had significantly higher ACTH levels soon after birth. The researchers suggest that their findings demonstrate possible dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. Another study, by Lord et al. (2011), researched the stress response in postpartum women with and without ppOCD and found higher variability of cortisol levels and higher reported experiences of stress in the ppOCD participants. Eight women with ppOCD and 10 healthy postpartum women control participants were exposed to a physical stress test, the Cold Pressor Test (CPT),

where hands were submerged in near freezing water until painful. Women's perceptions of the experience were recorded along with eight saliva samples taken before during and after the CPT. Women with ppOCD rated the experience as more stressful, had higher cortisol levels in general, and more variability in cortisol levels after exposure to CPT, with some very high or delayed. Lord et al. (2011) suggests this demonstrates possible regulation issues in the HPA axis of women with ppOCD compared to postpartum women without the disorder.

Oxytocin surges have been cited in research on OCD as well. Leckman et al. (1994) looked at levels of oxytocin in 83 participants, comparing 29 participants with OCD to 23 with Tourette's syndrome and 31 healthy controls and found higher levels of oxytocin in the participants with OCD. Higher levels of oxytocin have also been linked to infant-parent bonding and increased maternal behavior like gaze, touch, vocalization and frequent checking on the infant (Feldman et al., 2007).

Some maternal behaviors, like frequent checking, are quite common and theorized to be an adaptive response to protect the infant from harm (Leckman, et al., 1999). In a study of 82 parents consisting of 41 mothers at 3-months postpartum, 87.8% of mothers reported checking on the infant unnecessarily, and 17% reported checking frequently or very frequently of which only 3% reported they felt "frequently disturbed" (Leckman, et al., 1999). They suggest worrisome thoughts postpartum are normal and it is the abnormal interpretations of those thoughts that lead to OCD.

The cognitive-behavioral model attributes ppOCD to dramatic increases in responsibility and overestimations of threat (Fairbrother & Abramowitz, 2007). This theory stems from the finding that fathers also experience increases in intrusive thoughts

postpartum, which they say supports the theory that obsessive-compulsive symptoms postpartum cannot be due to physiological changes alone (Abramowitz et al., 2003). New parents find themselves responsible for the care of vulnerable infants and are bombarded with information about threats to their safety. Fairbrother and Abramowitz (2007) claim those who are more likely to misinterpret or overestimate threats and responsibility are more vulnerable to ppOCD.

Studies have found links between sleep deprivation and obsessive symptoms as well. In a study by Timpano et al. (2014) greater obsession scores on the YBOCS were associated with insomnia and poor sleep. A recent meta-analysis found an association between OCD and disturbances in sleep, especially with severe symptoms of OCD (Paterson et al., 2012). Sleep deprivation is common during the postpartum period, but whether this triggers ppOCD or a product of it is unclear.

New parents face numerous challenges and changes in the postpartum period. Regardless of the cause of ppOCD, the impact can negatively affect the quality of life for new mothers. A study of 50 postpartum mothers found quality of life scores as measured by the World Health Organization Quality of Life instrument (WHOQOL; World Health Organization, 1997) were lower in women with higher YBOCS scores (Gezginc et al., 2008). These women had poorer physical health, psychological health, and social relationships compared to non-OCD controls. Another study by Challacombe et al. (2017) found mothers with PPOCD had lower levels of warmth, parental self-efficacy ratings, social support, marital satisfaction, enjoyment of parenting, and vocalization than compared to healthy controls. For new mothers, support is vital for mitigating these outcomes, but many women face barriers to treatment.

Treatment Challenges

In the United States, most obstetrician-gynecologists screen new mothers for mental health disorders shortly after labor and again at a postpartum physical exam visit, while pediatricians will often survey mothers as part of infant care (Byatt et al., 2013; Cheng et al., 2006). However, this varies by state and country (Cheng et al., 2006). The American College of Obstetricians and Gynecologists (ACOG) recommends screening for mood and emotional well-being after giving birth, but the assessment instruments recommended focus mainly on depression. The screening methods used to assess women's mental health postpartum may not accurately capture women experiencing PPOCD.

Additionally, a recent study of health practitioners found that postpartum obsessive-compulsive symptoms often under-recognized. Mulcahy et al. (2019) presented 94 practitioners with a vignette of a patient experiencing PPOCD symptoms of infant harming thoughts and avoidance. In this study, 69% did not correctly identify these as obsessive-compulsive symptoms. Of these, 30% attributed the intrusive thoughts of harm to psychotic symptoms, 17% to depressive symptoms, and 25% required additional information. The consequences of failing to correctly identify OCD can be serious. An incorrect diagnosis can prevent individuals from receiving the treatment they need and may lead to improper treatment decisions and medications (Glazier et al., 2015). In Glazier et al. (2015), physicians misdiagnosed OCD 50.5% of the time. The physicians who misdiagnosed OCD were significantly less likely to recommend an empirically-supported treatment like cognitive-behavioral therapy, and more likely to endorse antipsychotic medication.

Challacombe and Wroe (2013) provide anecdotal evidence of two women who were misdiagnosed and classified as high-risk to harm their children and subsequently separated from their children. However, there is very little evidence that women with intrusive thoughts or OCD in the postpartum period will harm their children in accordance with their obsessions (Fairbrother & Abramowitz, 2016; Fairbrother & Woody, 2008). In postpartum OCD, these thoughts are perceived as unwanted, unpleasant, and inconsistent with the mother's world view. This awareness is what distinguishes it from postpartum psychosis, where intrusive, aggressive thoughts may be in line with the mother's world view, or delusions, and can thus be very dangerous.

Help-Seeking Attitudes and Barriers

The abundance of literature on postpartum depression tells us that even when women are screened for a mental health disorder, many report a reluctance to disclose information fully due to fear that their child may be taken away, fear that they will be judged or perceived as a "bad mother" or a failure, or worry that treatment would interfere with caregiving or nursing (Byatt et al., 2013). In a recent study by Prevatt & Desmarais (2018), researchers found that out of 211 participants assessed within 3 years postpartum, 107 self-identified as experiencing postpartum mood disorder symptoms, and from this group, 1 in 5 chose not to report these symptoms to their practitioners. The most common barriers cited were stigma, and lack of time and motivation (Prevatt & Desmarais, 2018). A study by Bilsta et al. (2010) found stigma, fear of failure, low awareness, access, and support, and mistrust of health care providers were the most commonly reported barriers to seeking treatment for mental health challenges in the postpartum period.

In the general population among those with OCD, barriers are common as well. In a recent study on barriers to care for treatment for OCD, Marques et al. (2010) found that out of the 175 participants who self-reported OCD, only 60% received treatment. Shame, costs of treatment, and lack of information were the most endorsed barriers to care (Marques, et al., 2010). Goodwin et al., (2002) reported similar findings in their study on help-seeking in adults with OCD. They found 40.4% had not sought treatment and the largest endorsed barrier was ‘lack of information.’

In PPOCD, when intrusive thoughts of harming the child within one’s care are common and often central to symptoms of disorder, it may be even more difficult for women to seek help and receive treatment. Unfortunately, research on help-seeking in PPOCD is very limited. In a recent study by Boyd & Gannon (2021), 8 postpartum women who experienced intrusive thoughts of harming their infants were interviewed on their perceptions and willingness to share their experiences with others. They found women avoided disclosing intrusive thoughts to professionals due to fear of judgement and separation. Women also reported self-censoring around other mothers to maintain an image of a “good mother” (Boyd & Gannon, 2021).

Psychoeducation

In OCD, a lack of understanding of obsessive-compulsive symptoms contributes to stigmatizing beliefs and fear, particularly when aggressive or taboo themes are involved (McCarty et al., 2016; Snethen & Warman, 2018; Warman et al., 2015). However, when symptoms are recognized and correctly identified, lower levels of fear and stigma associated with OCD and individuals experiencing obsessive-compulsive symptoms (OCS) have been reported (Homonoff & Sciutto, 2019; McCarty et al., 2016;

Picco et al., 2016). McCarty et al. (2016) surveyed 738 U.S. adults and found participants were far less likely to identify and associate harm and taboo obsessions with OCD than compared to symmetry/incompleteness and contamination themes. They also found those taboo and harm obsessions were associated with a greater desire for social distance and higher ratings of fear/dangerousness. This was particularly true among those who misidentified OCD. Those who recognized the condition reported lower fear and desire for social distance. A similar study by Homonoff & Sciutto (2019) found harming obsessions were associated with more stigma, fearfulness, and desire for social distance. When a diagnosis was revealed, these negative associations decreased. Similarly, a recent study of 3006 adults in Singapore found that when participants were able to recognize a mental health disorder, less stigma was reported (Picco et al., 2016). In this study, participants were asked to review a vignette describing an individual with symptoms of either OCD, dementia, depression, alcohol abuse, or schizophrenia. In the OCD condition, those who were able to recognize and identify the disorder expressed lower levels of personal and perceived stigma (Picco et al., 2016). Two recent studies investigated whether providing education about OCD could impact participants' perceptions of individuals with OCD (Snethen & Warman, 2018; Warman et al., 2015). These studies surveyed participants on perceptions of dangerousness, unpredictability, and desire for social distance after viewing vignettes of individuals experiencing violent or pedophilic intrusive thoughts. Then they provided education about OCD, and repeated their surveys (Snethen & Warman, 2018; Warman et al., 2015). Both found that the brief education resulted in significant decreases in survey responses measuring desired social distance, perceptions of dangerousness, and perceptions of unpredictability. Researchers

believed participants did not know violent or pedophilic intrusive thoughts could be related to OCD before learning more about the condition.

The link between psychoeducation, stigma, and help-seeking was investigated in a study by Taylor-Rodgers & Batterham (2014). Their research in young adults ($n = 67$) found an increase in help-seeking intention and decreased stigma when mental health psychoeducation was provided (Taylor-Rodgers & Batterham, 2014). Participants in a treatment group who received online webpages with mental health-related psychoeducation showed more positive intentions toward help-seeking, in two measures, one of which was the General Help-Seeking Questionnaire (Wilson et al., 2005) also used in the present study. They also witnessed a reduction in stigma toward depression. In Picco et al. (2016), in addition to finding reduced stigma toward individuals with OCD among participants who could correctly identify the disorder, they also found an association between those who were able to correctly identify a mental illness and their endorsement of professional mental health support. They discussed the importance of recognizing the symptoms of mental health disorders or mental health literacy and the positive impact on attitudes toward help-seeking.

Study Goals and Hypotheses

Given the promising research on psychoeducation's role in reducing help-seeking barriers of stigma and lack of information, this study seeks to extend those findings to postpartum women and OCD or OCS. Thus, the goal of the present study is to examine whether psychoeducation impacts the reporting of intrusive thoughts and help-seeking attitudes and intentions in a sample of women who gave birth within the previous 6 months. Research on postpartum OCD suggests that intrusive thoughts are nearly

universal and that OCD, while less common, occurs more frequently in the postpartum period than at any other time (Brok et al., 2017; Russell et al., 2013; Uguz et al., 2007; Zambaldi et al., 2009) Many mothers report discomfort sharing intrusive thoughts and multiple treatment barriers exist, including stigma and lack of understanding of aggressive intrusive thoughts (Abramowitz et al., 2003; Marques et al., 2010). This study will explore the relationship between receiving psychoeducation, and disclosure of intrusive thoughts and compulsions, as well as help-seeking attitudes and intentions. In this study, we expect to see higher rates of intrusive thoughts reported by those who view the psychoeducation video before sharing their experiences, and expect overall rates will be high, consistent with other studies using similar methods of data collection through confidential surveys. We also expect that women who view the psychoeducation video before taking the survey will be more likely to express favorable attitudes toward help-seeking and disclosure of intrusive thoughts compared to women who view the educational video after taking the survey.

Chapter II

Method

We aimed to recruit a minimum of 120 participants to detect a medium effect size, determined by an a priori power analysis using G*Power.

Participants

Of the one hundred thirty-eight women who were recruited, only 78 participants signed the consent form and completed the demographic section of our survey. Of these 78 participants, 19 participants did not continue further to complete the full study, and 2 participants were removed for not meeting the criteria of having an infant under the age of 6 months. Thus, participants were 57 English-literate women over the age of 18 who gave birth within the past six months. The sample consisted largely of white, educated, married women (see Table 1). When asked to describe their racial identity, 73.7% identified as White, non-Hispanic (n = 42), 12.3% identified as Asian or Asian American (n = 7), 7% as Multi-racial (n = 4), 3.5% as African American or Black (n = 2), and 3.5% as Hispanic or Latinx (n = 2). This was a highly educated sample, with 35.1% holding master's degrees (n = 20), 26.3% with doctorates (n = 15), 21.1% with bachelor's degrees (n = 12), 10.5% with professional degrees (n = 6), 3.5% with some college (n = 2), and 1.8% (n = 1) for both Associate degree and high school equivalency. The majority of our sample were married (94.7%, n = 54). More than half of the sample reported household incomes over \$150,000 (59.6% or n = 34) and more than half received professional

treatment for a mental health related disorder in the past (50.9% or n = 29). Close to half (43.9%) were first-time mothers (n = 25).

Table 1:
Participant Demographics

Variable	Frequency	Percent
	(n = 57)	
Primipara		
Yes	25	43.9
No	32	56.1
Marital Status		
Single	2	3.5
In partnership	1	1.8
Married	54	94.7
Racial Identity		
African American or Black	2	3.5
Asian or Asian American	7	12.3
Hispanic or Latinx	2	3.5
White, non-Hispanic	42	73.7
Multi-racial	4	7
Annual Household Income		
Less than \$20,000	1	1.8
\$20,000 - \$49,999	1	1.8
\$50,000 - \$99,999	9	15.8
\$100,000 - \$150,000	11	19.3
Over \$150,000	34	59.6
Education		
High School or equivalent	1	1.8
Some college	2	3.5
Associate degree	1	1.8
Bachelor's degree	12	21.1
Master's degree	20	35.1
Professional degree	6	10.5
Doctorate	15	26.3

Procedure

Postpartum mothers were invited to participate in an online research study on repetitive thoughts and help-seeking beliefs and intentions.

Data Collection

Data collection took place between February and June of 2021. Recruitment took place entirely online. Links to participate were posted in numerous Facebook Groups including a group for new mothers in the Greater Boston area, a group for mothers in a Greater Boston city, a group for new parents in Greater Boston, a group for new mothers in academia, and a parent group with a focus on OCD. Recruitment text was also shared in the International OCD Foundation newsletter, website, and Facebook page, and the New England Center for OCD and Anxiety Facebook page. Multiple U.S. based organizations that support parents of young children were targeted, but only one confirmed their intention to share. Word of mouth recruitment was utilized as well.

The recruitment text distributed was approved by the Harvard University Area IRB and included a brief description, inclusion criteria, raffle incentive, and the link to participate. A flier with this information and a QR code was shared as well. All data were collected and stored in Qualtrics. The survey consisted of three separate, but linked, Qualtrics surveys constructed in parts to add an additional layer of data protection and privacy. The “Consent Form,” the “Research Study,” and the “Raffle Contest,” surveys are described in more detail below.

Study Protocol

The study took place entirely online and consisted of a 96-question, multi-measure survey and a 2.5-minute video providing psychoeducation on postpartum intrusive thoughts and OCD, administered through Qualtrics. This was a randomized controlled study, using Qualtrics' randomizing function to randomize participants to either the treatment or control condition. In the treatment condition, participants were presented with the 2.5-minute psychoeducation video recording before completing the survey questions. In the control condition, participants completed the survey questions before viewing the same psychoeducation video. Both groups were presented with the same questions and psychoeducation content. Only the order in which they were presented differed. This study was approved by the Harvard University Area Institutional Review Board.

Participants entered the study by clicking a link or scanning a QR code which led them to the study landing page where they reviewed a summary of the researcher's information and the project. If they were interested in participating, they could proceed to the next page of the survey for the Consent Form. Here, women were provided with extensive information about the study. They were informed that the topics were potentially disturbing and were reminded of their ability to skip questions or withdraw from the study at any time. They were assured all information they provided was confidential and the measures taken to protect their privacy and secure their data were described in detail. They were also told that information they provided in the study would not result in contact or follow up from the research team.

To continue to the Research Study survey, participants were required to sign the consent form, acknowledging they read the information provided, understood who to reach out to for information, and that they could withdraw at any time. Those who agreed and provided a signature could click to proceed to the separate Research Study survey, which was linked only by a unique user ID assigned by Qualtrics and only accessible to the project's principal investigator.

The Research Study survey took less than 20 minutes to complete and included a questionnaire comprised of multiple measures and one video providing psychoeducation information on postpartum intrusive thoughts and OCD. The video was 2.5 minutes long and featured a presentation by one of the investigators, Dr. Lisa Coyne. Participants were given the option to view the transcript as well. The psychoeducation content was as follows:

Being a new mother can be both wonderful and hard, and has emotional and physical effects on women postpartum. While there is a great deal of information available for postpartum depression, there is less information about recurrent intrusive thoughts that can occur post-birth. During the postpartum period, between 70 – 100% of women experience unwanted recurrent intrusive thoughts of harm to their infant, and nearly half of whom will experience thoughts of harming their infant on purpose. These thoughts can involve suffocation, sudden infant death syndrome, accidents, contamination or intentional harm. These thoughts arise unexpectedly, and are senseless and meaningless, although many mothers worry about what they mean. These thoughts tend to peak during the first few weeks postpartum. They can be very distressing to women, especially when

they involve intrusive thoughts of deliberate harm to one's baby. It is important to note that unwanted intrusive thoughts like these *do not* predict harm to one's infant, and in fact, are similar to unwanted intrusive thoughts in 80-99% of the general population. In general, intrusive thoughts reflect the current goings on in one's life, so it makes sense that women who have recently had babies might experience thoughts of harm to their newborns. However, in a small percentage of women who make catastrophically negative appraisals about why these thoughts might occur, or about their content, this type of thinking can develop into clinically meaningful symptoms of obsessive-compulsive disorder (OCD). OCD is a clinical disorder characterized by significant distress and/or functional impairment related to the persistent experience of disturbing recurrent intrusive thoughts and engagement in compulsions, or rituals, to get rid of or gain relief from, these thoughts. Approximately 3 in 100 adults suffer from OCD.

Once the demographic section of the Research Study survey was completed, participants were randomly assigned to either the research or control condition where they viewed both a psychoeducation video and the survey assessments, the order of which was determined by their group placement. The treatment group viewed the video before completing the assessments, while the control group viewed the video after completing the assessments.

Upon completion, participants were debriefed with a short summary of the study's purpose, contact information for the principal investigators, and resources for mental health support including emergency hotlines, mental health specialists, and additional readings on postpartum intrusive thoughts and obsessive-compulsive disorder. The

debriefing form also provided participants with the link to participate in a raffle to win one of two \$50 gift cards to Target or Amazon. All participants were informed of their eligibility to participate in the consent form and were presented with the debrief form even if they withdrew from the study before completion. Emails were the only identifying information requested in the raffle survey and two winners were selected using the random number assignment feature in Excel, which was resorted, to identify a top one and two email address. Gift cards were sent directly to the emails provided.

Protection of Data

Given the sensitive nature of the questions, participants were assured their data would be protected and securely managed. All protocols were administered using the online survey software Qualtrics. Qualtrics utilizes Transport Layer Security (TLS) encryption to safeguard individual privacy (<https://www.qualtrics.com/security-statement/>). Three Qualtrics surveys were created to separate data collected in the Consent Form, the Research Study, and the Raffle Contest. In the Consent Form survey, women were asked to complete and sign their names to provide consent. Qualtrics was configured to randomly generate and assign a 7-digit random ID code to the Consent Form survey as well. The Consent Form dataset file with signed participant names and the associated randomly generated ID assigned by Qualtrics was saved on an encrypted USB key and stored in a locked safe, only accessible to the principal investigator.

Upon submission of the Consent Form, a redirect link sent women to the second study or the Research Study survey. This is where women watched the psychoeducation video and completed the survey measures. No identifying information was collected to add an additional layer of protection for participant privacy. The default IP tracking

feature in Qualtrics was disabled. The only link between this Research Study survey and the Consent Form was the randomly generated ID number assigned by Qualtrics. This ID number was not displayed to participants and was only visible to the principal investigator who had access to both the Consent Form and Research Study datasets. When data collection was complete, the data was de-identified and stored in a secure online University network folder.

Upon submission of the Research Study survey, participants were directed to a document containing debrief information as well as the option to click a link to a third survey in Qualtrics where they could enter a raffle to win a \$50 gift card. The debrief information page and raffle survey link were displayed to all participants at the end of the Research Study survey and to those who withdrew early. The Raffle survey requested an email address but women were assured there was no way to link the email address provided in the Raffle Survey to the responses. Researchers could not connect the email addresses provided to the responses, the random ID number, or the name provided in the initial survey that contained the consent form. Only the principal investigator had access to the email addresses provided in the Qualtrics raffle survey and this information was destroyed from the file and sent email folder once the raffle winners were randomly selected and notified.

Measures

Psychoeducation Video: All participants viewed a 2-minute and 26-second video recording of the co-principal investigator, Dr. Lisa Coyne, describing postpartum intrusive thoughts. Dr. Coyne discussed the frequency of postpartum intrusive thoughts,

content often experienced by new mothers, the similarity of intrusive thoughts postpartum and general intrusive thoughts, and the relation to Postpartum Obsessive-Compulsive Disorder (PPOCD). A transcript was also available (See Appendix). The purpose of this informational video was to deliver psychoeducation to postpartum mothers and to explore whether women's responses differed depending on when they received psychoeducation. Women in the Treatment Group viewed this video before completing the survey measures listed below. Women in the Control group completed the survey measures first, then viewed the same video at the end of the survey. All participants received psychoeducation on intrusive thoughts and OCD including those who withdrew from the study before completion. The video link was included in the Debrief Page presented at the end of the survey and upon early withdrawal.

Postpartum Obsessions and Compulsions: The Parental Thoughts and Behaviors

Checklist (PTBC) was used to assess postpartum thoughts and behaviors. The PTBC is a validated self-report version of the interview created by Abramowitz et al. (2006), which was modeled after the Yale-Brown Obsessive Compulsive Scale and modified for use with postpartum women. It begins with a section that explains and normalizes unwanted, intrusive baby-related thoughts, then assesses the occurrence of 33 obsessions and 13 related compulsions on a scale of "yes," "no," or "past." This self-report version of the measure was tested on a sample of 488 postpartum women and Cronbach's alphas were $\alpha = 0.83$ for obsessions, $\alpha = 0.86$ for compulsions, and $\alpha = 0.91$ combined (Thiseus et al., 2019). In the current sample, Cronbach's alphas were acceptable at $\alpha = 0.79$ for obsessions, $\alpha = 0.62$ for compulsions, and $\alpha = 0.81$ combined.

Attitudes Toward Help-Seeking: The Mental Help-Seeking Attitudes Scale (Hammer et al., 2018) consists of nine self-report items to assess attitudes toward seeking treatment for “mental health concerns” from “mental health professionals.” Participants were asked to choose a rating score from -3 to +3 that reflected their opinion on opposing terms (e.g., useless vs. useful, good vs. bad). Scores were recoded to a scale of 1 - 7, with reverse scoring on items 2, 5, 6, 8, and 9 to allow favorable attitudes to align with higher scores, and a mean score was tallied across all items. The test showed good reliability and validity with an adult community-based U.S. sample (Hammer et al., 2018). Cronbach’s alpha was $\alpha = 0.93$. In the current sample, $\alpha = 0.80$.

Help-Seeking Intentions: The Mental Help-Seeking Intension Scale (Hammer & Spiker, 2018) consists of 3 items and asks whether participants would intend, try, and plan to seek help for a “mental health concern” from a “mental health professional.” Participants were asked to rate responses on a 7-point Likert scale (1 = extremely unlikely to 7 = extremely likely). A mean score across all three items was calculated. Hammer & Spiker (2018) found good reliability and validity in a community sample. In the current sample, internal consistency was strong, with Cronbach’s alpha of $\alpha = 0.89$.

Help-Seeking Sources: The General Help Seeking Questionnaire (Wilson et al., 2005) is a 20-item measure used to assess how likely participants would be to seek help from a variety of sources. The measure is split into two subscales where the first 10-items measure the likelihood of seeking help for a “personal or emotional problem.” While the next 10-items measure the likelihood of seeking help for “bothersome intrusive thoughts,” which was adapted from the original of “suicidal thoughts” for use in this study. Items on each subscale include the following support sources: an intimate partner,

a friend, a parent, other family member, mental health professional, phone helpline, doctor, religious leader, “no one,” or other. Participants are asked to rank likelihood on a 7-point scale for each item (1 – extremely unlikely to 7 – extremely likely). A mean score was calculated, with reverse scoring for question 9 (“no one”). The scale was analyzed as two separate subscales with separate scores for “personal or emotional problems” and “bothersome intrusive thoughts.” This test showed good reliability in Wilson et al. (2005) for both the “personal or emotional problem” scale ($\alpha = 0.70$) and the “suicidal thoughts” scale ($\alpha = 0.83$). In the present study, Cronbach’s alpha was similar, but less robust for the first subscale, “personal or emotional problem” ($\alpha = 0.65$) and $\alpha = .0.81$ for the “bothersome intrusive thoughts” scale.

Data Analyses

IBM SPSS Statistics Version 27 (IBM Corp., 2020) was used to analyze the data.

Data Cleaning

All responses were evaluated for normality using several methods, including skew and kurtosis, to ensure variables fell within normal distribution limits. Chi-square tests were used to evaluate the baseline equivalence of the treatment ($n = 27$) and control groups ($n = 30$). No significant differences were detected in any demographic variables including racial identity, household income, education level, marital status, and past professional treatment for a mental health disorder.

Statistical Analyses

To test the hypothesis that postpartum women in the treatment condition would be more likely to disclose intrusive thoughts and compulsions than control group participants, independent sample t-tests were used to evaluate the PTCC obsessions subscale, the compulsions subscale, and the intrusive thoughts individually. To evaluate whether help-seeking behaviors and intentions were influenced by the psychoeducation video, t-tests were used to investigate help seeking attitudes using the Mental Help-Seeking Attitudes scale, help seeking intentions using the Mental Help-Seeking Intentions Scale, and intention to seek help from a variety of sources in the General Help-Seeking Questionnaire personal-emotional problem subscale and the General Help-Seeking Questionnaire intrusive thought subscale. All scale scores were calculated to only include participants who completed a minimum of 75% of the measure.

Chapter III

Results

The sample reported intrusive thoughts ($M = 14.65$, $SD = 6.3$) and associated behaviors or compulsions ($M = 6.98$, $SD = 2.65$) in the self-report Parental Thoughts and Behaviors Checklist (PTBC). All participants indicated they were experiencing, or had experienced, at least one intrusive thought and at least one compulsion (see Figure 1). Favorable help-seeking attitudes and intentions were reported as well in the Mental Help-Seeking Attitudes Scale ($M = 5.97$, $SD = .90$), Mental Help-Seeking Intention Scale ($M = 5.78$, $SD = 1.19$), and the General Help-Seeking Questionnaire personal-emotional ($M = 4.15$, $SD = .74$) and intrusive thoughts ($M = 3.63$, $SD = .97$) subscales. Descriptive data are reported in Table 2, Table 3 and Table 4.

Reporting of Obsessions and Compulsions

Contrary to our hypothesis that women in the treatment condition would be more likely to disclose intrusive thoughts, we found no significant difference between the treatment group ($M = 13.30$, $SD = 5.95$) and control group ($M = 15.87$, $SD = 6.45$) condition, $t(55) = 1.56$, $p = .125$. For compulsions or neutralizing behaviors, no differences were observed between treatment ($M = 6.28$, $SD = 2.42$) and control ($M = 7.59$, $SD = 2.73$) groups, although this test approached significance but fell short, $t(52) = 1.845$, $p = .07$. For both intrusions and compulsions, there was a non-significant trend for the control group to report more intrusive thoughts and compulsions or neutralizing behaviors.

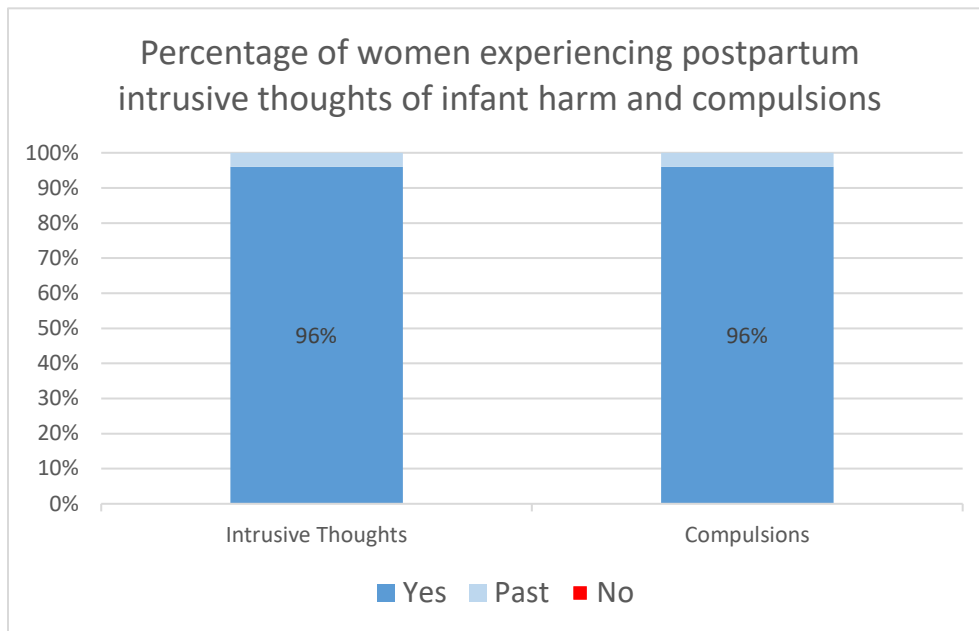


Figure 1. Percentage of Women Experiencing Intrusive Thoughts

This figure displays the responses to the obsessions (n = 57) and compulsions (n = 54) subscales of the Parental Thoughts and Behaviors Checklist. All women reported experiencing intrusive thoughts of infant related harm and compulsions currently indicated by a yes response, or in the past.

Table 3:
Descriptive Data

	Treatment			Control			Total		
	M	(SD)	n	M	(SD)	n	M	(SD)	n
PTBC Obsessions	13.30	5.95	27	15.87	(6.45)	30	14.65	(6.3)	57
PTBC Compulsions	6.28	(2.42)	25	7.59	2.73	29	6.98	(2.65)	54
GHSQ Personal-Emotional	4.12	(.67)	24	4.18	(.81)	29	4.15	(.74)	53
GHSQ Intrusive Thoughts	3.52	(1.04)	25	3.71	(0.92)	27	3.63	(.97)	52
MHSAS Attitudes	6.08	(.87)	26	5.88	(.93)	29	5.97	0.9	55
MHSIS Intention	5.69	(1.26)	26	5.86	(1.1)	29	5.78	(1.17)	55

Note. PTBC Obsessions: Parental Thoughts and Behaviors Obsessions Subscale; PTBC Compulsions: Parental Thoughts and Behaviors Obsessions Subscale; GHSQ Personal-Emotional: General Help-Seeking Questionnaire Personal-Emotional Problem Subscale; GHSQ Intrusive Thoughts: General Help-Seeking Questionnaire Intrusive Thoughts Subscale; MHSAS Attitudes: Mental Help-Seeking Attitudes Scale; MHSIS Intentions: Mental Help-Seeking Intentions Scale

Table 4:
Correlations Among Study Measures

	1	2	3	4	5	6
1. PTBC Obsessions	-					
2. PTBC Compulsions	.500**	-				
3. GHSQ Personal-Emotional	.309*	0.229	-			
4. GHSQ Intrusive Thoughts	0.143	.283*	.664**	-		
5. MHSAS Attitudes	-0.036	0.001	.532**	.513**	-	
6. MHSIS Intention	-0.025	0.039	.472**	.509**	.430**	-

Note. PTBC Obsessions: Parental Thoughts and Behaviors Obsessions Subscale; PTBC Compulsions: Parental Thoughts and Behaviors Obsessions Subscale; GHSQ Personal-Emotional: General Help-Seeking Questionnaire Personal-Emotional Problem Subscale; GHSQ Intrusive Thoughts: General Help-Seeking Questionnaire Intrusive Thoughts Subscale; MHSAS Attitudes: Mental Help-Seeking Attitudes Scale; MHSIS Intentions: Mental Help-Seeking Intentions Scale

When individual items in the intrusive thought subscale were reviewed, three significant differences were detected between groups. The control group was more likely to report intrusive thoughts involving purposely drowning the baby in a bathtub (Q7; $t(55) = 2.164, p = .035$), and concern that they or someone else would contaminate the baby (Q28; $t(55) = 2.37, p = .02$). Once again, this was contrary to our hypothesis that the treatment group would report more intrusive thoughts. The control group also reported more compulsive behaviors involving districting oneself with other activities (Q4; $t(51) = 2.47, p = 0.02$.)

Attitudes Toward Help-seeking

Our hypothesis that attitudes toward help-seeking would be higher in the treatment group than control was not confirmed. Participants in our treatment group who viewed the psychoeducation video did not report more favorable attitudes toward help-seeking as measured by the Mental Help-Seeking Attitudes Scale, $t(53) = -.826, p = .41$. No detectable difference was found between the treatment ($M = 6.08, SD = .87$) and control ($M = 5.88, SD = .93$) groups (see Table 5).

Table 5:
Attitudes Toward Seeking Professional Treatment from MHSAS

	Treatment			Control		
	M	(SD)	n	M	(SD)	n
1. Useless:Useful	6.60	(.65)	25	6.31	(.93)	29
2. Unimportant:Important	5.44	(2.27)	25	5.28	(2.20)	29
3. Unhealthy:Healthy	6.73	(.83)	26	6.66	(.81)	29
4. Ineffective:Effective	6.00	(1.47)	26	5.50	(1.48)	28
5. Bad:Good	5.44	(2.27)	25	5.28	(2.20)	29
6. Hurting: Healing	6.31	(.84)	26	6.00	(1.25)	28
7. Disempowering:Empowering	6.08	(1.09)	26	6.14	(1.03)	29
8. Unstatisfying:Satisfying	5.85	(1.22)	26	5.76	(1.48)	29
9. Undesirable:Desirable	6.20	(1.00)	25	5.96	(1.48)	28

Note. MHSAS Mental Help-Seeking Attitudes Scale uses a 7-point rating scale. Items 2, 5, 6, 8, 9 were reverse scored.

Help-Seeking Intentions

There was no support for our hypothesis that help-seeking intentions would be higher in the treatment condition. No detectable difference was found in responses between our control and treatment groups on intention to seek help as measured by the three question Mental Help-Seeking Intention Scale, $t(52) = .544$, $p = .59$. The treatment group ($M = 5.69$, $SD = 1.26$) and control group ($M = 5.87$, $SD = 1.12$) responded similarly when asked about the likelihood that they would seek help for mental health concerns from mental health professionals (see Table 6).

Table 6:
Intentions to Seek Mental Help from Professionals

	Treatment			Control		
	M	(SD)	n	M	(SD)	n
1. Would intent to seek help	5.26	(1.88)	26	6.00	(1.13)	29
2. Would try to seek help	5.73	(1.22)	26	5.72	(1.19)	29
3. Would plan to seek help	5.73	(1.22)	26	5.86	(1.09)	29

Note. Mental Help-Seeking Intentions Scale uses a 7-point rating scale..

Help-Seeking Sources

Our hypothesis that women in the treatment group would report higher intentions to seek help from a variety of sources was not confirmed. The General Help-Seeking Questionnaire subscales asked about the likelihood of seeking help from a variety of

sources for either personal-emotional concerns, or bothersome intrusive thoughts. The psychoeducation video had no effect on responses to either subscale. No differences were detected between the treatment ($M = 3.54$, $SD = 1.04$) and control ($M = 3.71$, $SD = 0.92$) group responses to the Intrusive thoughts subscale, $t(50) = .61$, $p = .54$. Nor were differences detected between the treatment ($M = 4.11$, $SD = .67$) and control group ($M = 4.18$, $SD = .81$) of the personal-emotional scale, $t(51) = .30$, $p = .77$ (see Figure 2)

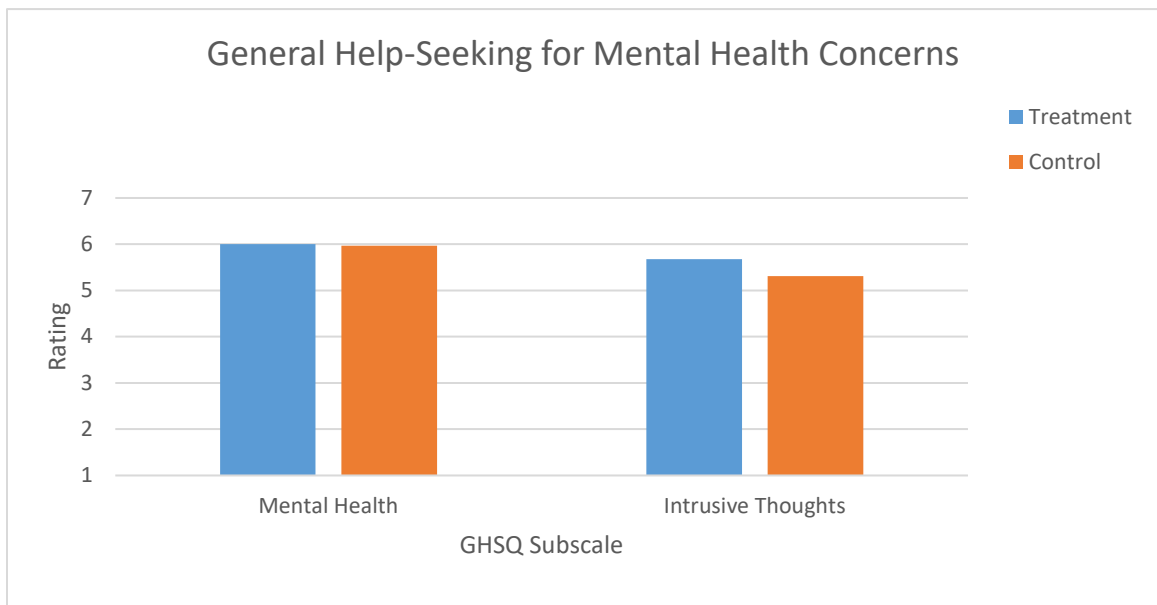


Figure 2. General Help-Seeking for Mental Health and Intrusive Thoughts

This figure displays responses from the General Help-Seeking Questionnaire where participants were asked to rate the likelihood of seeking help for either mental health concerns or intrusive thoughts from a variety of social and professional supports.

In general, women reported a greater likelihood to seek support for both mental health concerns and intrusive thoughts from an intimate partner, friend, or mental health professional. They reported a lower likelihood that they would seek support from a religious leader or a phone helpline. Seeking help from “no one” was highly endorsed as well. The only significant finding between treatment and control groups when considering individual sources was the category of doctor. Women in the control group reported a greater likelihood of seeking treatment from a doctor than women in the treatment group in both the mental health concern subscale, $t(52) = 2.15, p = .037$, and intrusive thoughts subscale, $t(51) = 2.73, p = .009$. (see Table 7, Table 8, Figure 3, Figure 4). .

Table 7:
Sources of Help-Seeking for Mental Health Concerns

	Treatment			Control		
	M	(SD)	n	M	(SD)	n
Intimate partner	6.00	(1.56)	25	5.97	(1.45)	29
Friend	5.68	(1.68)	25	5.31	(1.44)	29
Parent	4.20	(2.02)	25	3.59	(1.99)	.37
Other relative or family	3.76	(1.90)	25	3.45	(2.08)	.39
Mental health professional	5.44	(1.08)	25	5.31	(1.67)	.31
Phone helpline	1.76	(1.27)	25	2.52	(1.70)	29
Doctor	3.72*	(1.46)	25	4.72*	(1.91)	29
Religious Leader (Rabbi, Priest, etc.)	1.46	(1.35)	24	2.21	(1.92)	29
No one ^a	6.33	1.46	24	5.96	(1.40)	27
Other (work colleague, etc.)	1.23	.60	13	1.73	(1.39)	15

Note. ^a"No one" was reverse scored. * $p < .05$

Table 8:
Sources of Help-Seeking for Intrusive Thoughts

	Treatment			Control		
	M	(SD)	n	M	(SD)	n
Intimate partner	5.12	(2.14)	26	5.07	(1.88)	27
Friend	4.54	(2.25)	26	4.41	(1.87)	27
Parent	3.27	(2.05)	26	3.07	(2.11)	27
Other relative or family	2.65	(1.70)	26	2.67	(1.90)	27
Mental health professional	5.19	(1.88)	26	5.37	(1.64)	27
Phone helpline	1.54	(1.21)	26	2.33	(1.84)	27
Doctor	2.85*	(1.67)	26	4.26*	(2.07)	27
Religious Leader (Rabbi, Priest, etc.)	1.40	(1.26)	25	1.89	(1.74)	27
No one ^a	5.88	(2.09)	25	5.35	(1.85)	26
Other (work colleague, etc.)	1.00	0	11	1.93	(1.44)	14

Note. ^a“No one” was reverse scored. * $p < .005$

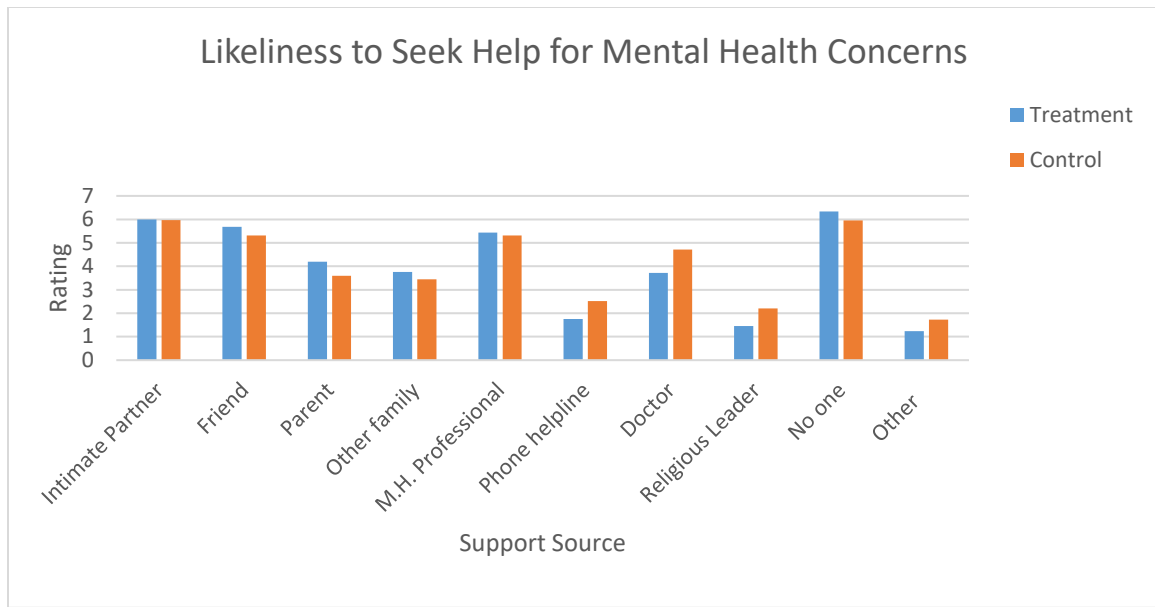


Figure 3. General Help-Seeking for Mental Health Concerns by Source

This figure displays responses from the Mental Health Concern subscale of the General Help-Seeking Questionnaire where participants were asked to rate the likelihood of seeking help from a variety of social and professional supports.

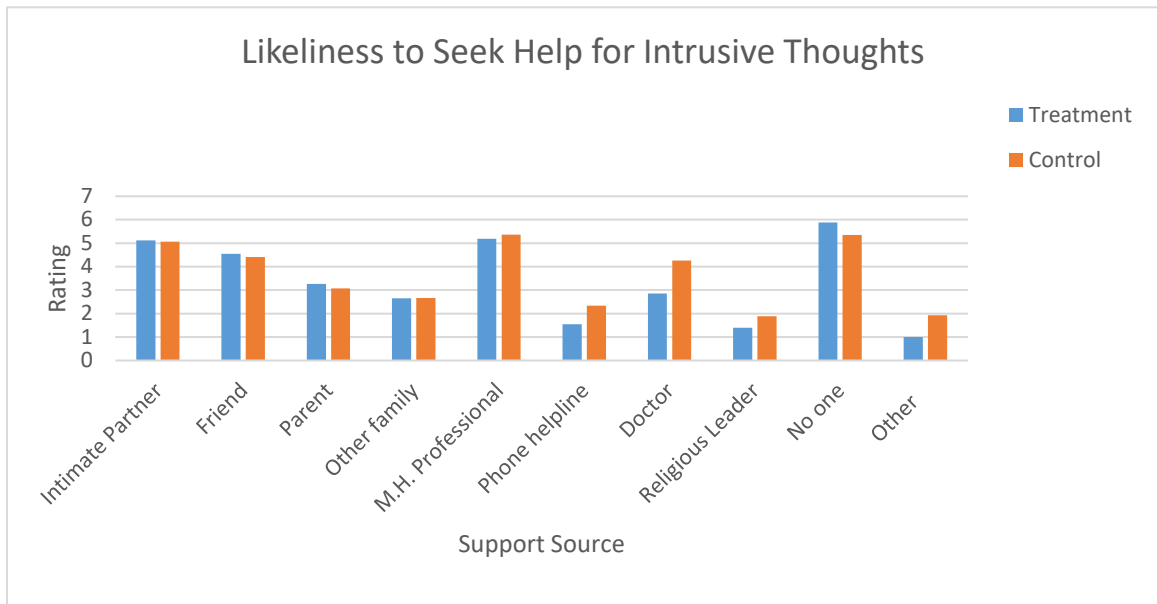


Figure 4. General Help-Seeking for Intrusive Thoughts by Source

This figure displays responses from the Intrusive Thoughts subscale of the General Help-Seeking Questionnaire which asks participants to rate the likelihood of seeking help from a variety of social and professional supports

Chapter IV

Discussion

This study examined the impact of OCD-related psychoeducation on help-seeking attitudes and disclosure of intrusive thoughts among postpartum women. Intrusive thoughts are very common in postpartum women, occurring in up to 68% - 100% of women (Abramowitz et al., 2010; Arnold, 1999; Abramowitz et al., 2003; Abramowitz et al., 2006; Fairbrother & Woody, 2008; Zambaldi et al., 2009). In extreme cases, women may develop obsessive-compulsive disorder (Abramowitz et al., 2003; Fairbrother & Woody, 2008). Often these intrusive thoughts involve themes of infant harm and mother's report reluctance to disclose their thoughts with professionals and each other (Abramowitz et al., 2003; Boyd & Gannon, 2021). Research on psychoeducation and OCD have been promising and suggest mental health literacy can reduce stigma and increase help-seeking behavior (Homonoff & Sciutto, 2019; McCarty et al., 2016; Picco et al., 2016; Taylor-Rodgers & Batterham, 2014). In this study, we investigated whether providing psychoeducation to postpartum women would increase the likelihood of their reporting of intrusive thoughts, as well as improve their willingness to seek help from others.

We expected women who received psychoeducation would disclose more intrusive thoughts in survey responses compared to women who were asked to complete the survey without receiving psychoeducation first. We found no evidence to support that hypothesis. The results trended in the opposite direction, although these findings were

non-significant. The few significant values detected found higher rates of intrusive thoughts reported in the control group. One possible explanation may be that our video had the opposite effect expected. Women in the treatment condition who viewed the video and were told of the association between intrusive thoughts and OCD, might have downplayed their experiences or assessed their thoughts differently when a connection to OCD was suggested. It is possible their frame of reference changed when they were presented with the most extreme possibility. It is also possible women's fear of being diagnosed with OCD made them reluctant to respond in a way that could lead to this conclusion.

In this study, we also expected women in the treatment group would report more favorable help-seeking attitudes and intentions than those in the control group, especially when asked directly about reporting intrusive thoughts in the GHSQ intrusive thoughts subscale. Once again, we found no evidence to support that hypothesis. Both treatment and control groups reported similarly favorable attitudes and intentions and there were no significant differences between groups. It is possible our sample size was too small to detect noticeable differences. Also, most of our sample had received mental health treatment in the past (50.9%). It is possible this sample had experience seeking help for mental health disorders and was less impacted by information intended to encourage them to do so. This was true for both groups as participants were well distributed across groups, $t(55) = -1.195$, $p = .237$.

When reviewing the GHSQ scales by individual item, one significant finding emerged. Women in the control group were more likely to endorse support from a doctor than women in the treatment group. These findings were significant in both the mental

health concern and intrusive thoughts subscales (see Tables 7 and 8). The finding was stronger in the intrusive thoughts subscale where $p < 0.005$. Once again, this may be due to the link presented to the treatment group connecting normal intrusive thoughts with obsessive-compulsive disorder. It is possible women would be reluctant to disclose a symptom that could lead to the diagnosis of a disorder. There were no significant differences found for mental health professionals and women from both groups reported a greater likelihood of disclosure to mental health professionals than doctors. Since women are more likely to see doctors during the postpartum period, and doctors are often charged with recognizing postpartum mental health care concerns, this reluctance, particularly in the case of intrusive thoughts, may lead to further gaps in care for postpartum OCD.

Overall, women reported high rates of intrusive thoughts and behaviors. In our sample, 100% of women experienced at least one thought ($n = 57$) and an associated neutralizing behavior ($n = 54$). This finding is consistent with rates of postpartum intrusive thoughts observed in past studies that ranged from 68 to 100% (Abramowitz et al., 2003; Abramowitz et al., 2006; Abramowitz et al., 2010; Arnold, 1999; Fairbrother & Woody, 2008; Thiseus et al., 2019). These studies were either interview-based, or questionnaire-based, surveying a greater number of participants than used in the present study and conducted by numerous researchers and experts in the field. This demonstrates the potential usefulness and effectiveness of using a fairly simple questionnaire to gather sensitive information about information about intrusive thoughts and compulsions postpartum. In healthcare settings, where resources and finances may be limited, short questionnaires that can be easily administered without expertise may be an efficient way

to assess the presence of distressful intrusive thoughts in postpartum health visits. Similar questionnaires are already used to assess depression. However, the present study gathered information confidentially, unlike what women might experience during postpartum care. Future studies might assess and compare the willingness of women to participate in studies on intrusive thoughts of infant harm when their identity is known. Reluctance to disclose intrusive thoughts, stigma, shame, and lack of information are common barriers to care reported postpartum (Boyd & Gannon, 2021; Marques, et al., 2010). When combined with research on untreated postpartum mental illness, it is reasonable to suspect there may be women with clinical levels of obsessions and compulsions who never receive treatment (Prevatt & Desmarais, 2018).

This is unfortunate because empirically supported treatments for OCD are available. Cognitive-behavioral therapy (CBT) and SSRI medications are the most common treatments for obsessive compulsive disorder (Brandes et al., 2004). Two recent studies have evaluated the use of CBT in ppOCD with promising results (Challacombe & Salkovskis, 2011; Challacombe et al., 2017). Challacombe & Salkovskis (2011) found a reduction in OCD symptoms following CBT where sessions focused on identifying beliefs and appraisals and incorporated exposure to fears. They also found that new mothers believed their treatment improved their parenting. SSRIs, like Fluoxetine are often prescribed to reduce OCD symptoms. It can transfer to breastmilk, which deters some new mothers from treatment, but research has found low excretion rates, below the 10% threshold of concern, and evidence of adverse effects is limited (Kristensen et al., 2009).

Psychoeducation alone has also been found to help women manage obsessive-compulsive symptoms. Timpano et al., (2011) conducted a longitudinal study of 71 pregnant women attending childbirth education classes, assigning women to either an OCS psychoeducation group or a group that provided information on general anxiety. Women who received OCS psychoeducation reported that they were less bothered by intrusive thoughts and felt more control over their symptoms compared to women who received general anxiety psychoeducation. With numerous options available to support women with postpartum OCD, it is unfortunate that so many barriers to care exist.

Limitations and Future Directions

This study took place during the Covid-19 global pandemic. During our recruitment period in the winter and spring of 2021, new cases of Covid-19 were at their highest in the United States and globally, and the vaccine rollout had just begun. We struggled to recruit participants and it is possible that Covid-19 was a factor. We were unable to recruit from locations that typically allow for diverse data collection, such as hospital waiting rooms as access to these spaces was limited and appointments were timed to facilitate quick visits. Similarly, we could not recruit or share fliers at in-person support groups because these did not take place during the pandemic. All recruitment for this study took place online. Some of these online sources included Facebook groups and mailing lists of organizations that support women and all had a moderator or “gate-keeper” who controls the membership and content posted. Many were reluctant to share the study. This could be due to concerns about the topic, confidentiality concerns, or due to rules about solicitation or recruitment within private groups. Private conversations that took place in-person, behind closed doors, moved to online spaces. Thus, the recruitment

text that highlighted the importance of research and normalized intrusive thoughts was an important component of this study.

It is also possible, but unclear, whether the pandemic itself impacted participants' responses. Pandemic-related stress, isolation, and lack of social support might have affected our results. This was a study on postpartum mental health and social support during a historic and complicated time when general anxiety was high and social support options were low. The results may not be generalizable to new mothers and their experiences once the pandemic ends.

One weakness of this study was the small sample size. This was smaller than our desired size of 120 to allow 60 participants in each group to detect a medium effect. Our final sample of 57 women only allowed for 27 in the treatment condition and 30 in the control. Thus, our study may have been less likely to detect real differences between the groups. Future studies should over-recruit to allow for attrition. They might also consider including a brief exit interview to understand why participants refused to continue.

It is unclear why so many women seemed interested in our study, as indicated by their progression to page 2 of our consent form but decided not to continue. We do not know if they decided they were not interested, did not have the time, or if they were uncomfortable moving forward. Of the 138 individuals who reviewed multiple pages of our consent form, 78 continued to sign the consent form and complete the demographic section, and only 59 continued on beyond the initial measure presented. This initial measure contained vivid descriptions of intrusive thoughts and asked whether women had thoughts of "stabbing the baby" or that "the baby could die of SIDS." It is possible this measure deterred some participants. We cannot determine why they withdrew and only

know they withdrew on the page that presented that measure. An exit survey would have been useful but was not conducted.

Another weakness was the lack of diversity in our sample. Respondents were largely white, educated, married women. Importantly, half of our sample had received professional mental health support in the past. There were no significant differences in how these participants were distributed across groups. Our recruitment sources likely impacted our data. Groups that were most willing to post recruitment information were groups for new mothers in the Boston area, a group for mothers in academia, and groups with an interest in maternal mental health and OCD. These populations are likely to have access and experience with mental health care and could perhaps be less impacted by the presentation of educational material on OCD. Future research should recruit more widely and in ways that reach more diverse or marginalized populations. Recruitment by flier in OBGYN or pediatricians' waiting rooms would be ideal.

It was surprising to see so many higher mean responses in the control group than treatment in reporting obsessions, compulsions, and help-seeking intentions. One possible limitation that should be explored is the content of psychoeducation and whether providing too much clinical information impacts responses. It is possible that presenting the link between common intrusive thoughts and OCD inhibited women's responses. Participants in the treatment group immediately received psychoeducation that normalized intrusive thoughts but linked them with OCD. Participants in the control group were presented with the obsessions and compulsions scales of the Parental Thoughts and Behaviors Checklist (Abramowitz et al., 2006) which provided introductory information explaining and normalizing intrusive thoughts. For women in

this group, the link between psychoeducation and OCD was made at the end of the study. It is possible our treatment condition video, which in addition to explaining and normalizing intrusive thoughts also linked them to OCD, made respondents think more carefully and hesitantly about responses that might indicate a mental health condition. Where the introductory paragraph of the PTBC normalized intrusive thoughts, it is possible our video pathologized them in a way that impacted responses.

Future research should continue to examine the links between postpartum psychoeducation and disclosure. There is limited research on these topics particularly in areas other than postpartum depression. Future research should also assess postpartum mental health literacy and how that impacts women's willingness to utilize support. Recent research has uncovered challenges in mental health literacy and professionals' ability to diagnose postpartum OCD. In the future, research should investigate how women seek help and how mental health literacy informs and supports their interactions.

The various sources of support through which women seek help should be investigated more closely as well. We found women were more likely to discuss mental health concerns with friends, partners, and mental health professionals and less likely to disclose concerns about mental health, particularly intrusive thoughts, with doctors. Since doctors play a large role in postpartum care and identifying distress in postpartum parents, this reluctance is problematic for women who need help for intrusive thoughts or ppOCD. Ways to increase women's willingness to seek help from doctors should be explored. Evaluating willingness or reluctance in relation to intrusive thought severity would be an interesting direction as well. We do not know if women in our sample were reluctant to discuss intrusive thoughts with doctors because they consider intrusive

thoughts to be manageable or if they feared disclosure and diagnosis. Additionally, the GHSQ had an item for phone hotline but no internet-related sources of support. Measures that include more modern sources of support like online chat rooms, Facebook groups, or text hotlines should be explored.

Overall, this study failed to support our main hypotheses that OCD psychoeducation would impact disclosure and help-seeking. It is possible this small, well-educated, pandemic-era sample with experience seeking-help for mental illness was not a representative sample and this impacted our data. We did, however, gather more data that highlights the common experience of obsessions and compulsions postpartum, and we successfully provided a sample of women with education on an important postpartum mental health topic.

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