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Kathryn Garrett Breazeale April 17th, 2013

# Analysis of Participants' Experiences of Mindfulness Based Cognitive Therapy for Perinatal Depression

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a thesis submitted to the Faculty of Emory College of Arts and Sciences
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Abstract
Analysis of Participants' Experiences of Mindfulness Based Cognitive Therapy for Perinatal Depression

By Kathryn Garrett Breazeale

This study examined the exit interviews of women who participated in Mindfulness-Based Cognitive Therapy for Perinatal Depression (MBCT-PD), a modification of Mindfulness-Based Cognitive Therapy (MBCT) designed to prevent the recurrence of depression in perinatal women with histories of major depression. This study had three aims related to furthering understanding of mechanisms associated with MBCT in the prevention of depression recurrence: 1) to compare the extent to which themes identified in qualitative studies of exit interviews of MBCT participants were identified in the exit interviews of women who participated in MBCT-PD; 2) to describe the extent to which themes specific to the alterations made to MBCT-PD were present in the exit interviews of MBCT-PD participants; and 3) to test for corroboration between the themes from the interview data and data from psychometrically sound questionnaire measures of theorized mechanisms of MBCT (decentering, mindfulness, and experiental avoidance). The study found few significant differences between the themes identified in MBCT participants and those found in interviews of MBCT-PD participants. Themes consistent with the alterations made to MBCT-PD were also identified in MBCT participants' exit interviews. Contrary to hypotheses, data generated from exit interviews were generally not significantly associated with women's scores from the questionnaire measures of theorized mechanisms. Findings were considered to be supportive of the adaptation of MBCT to MBCT-PD. We generally replicated the reported experiences of participants in MBCT in the MBCT-PD participants. The failure to find corroboration between two approaches to measure theory-based mechanisms suggests that both sources of information on potential mechanisms are needed to more fully capture women's experiences relative to either one alone.

# Qualitative Analysis of Participants' Experiences of Mindfulness Based Cognitive Therapy-Perinatal Depression

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Mindfulness-Based Cognitive Therapy (MBCT) is an eight-week program designed to prevent recurrent depression. Recently, this course was adapted to meet the needs of pregnant women with lifetime histories of major depression, who are at risk for perinatal depression. Like MBCT, Mindfulness-Based Cognitive Therapy for Perinatal Depression (MBCT-PD) is designed to prevent the recurrence of depression in individuals who have been depressed in the past. The purpose of the current study is to extend the literature examining the experiences of participants in MBCT by examining women's narrative reports of their experiences with MBCT-PD.

**Recurrent Perinatal Depression and Its Prevention**

Depression during the perinatal period is a serious and pervasive health concern for women and their children, with significantly increased risks for various negative outcomes for children (as reviewed by Goodman & Brand, 2008). General population rates of depression during the perinatal period are estimated at between 12% and 15% (Evans, Heron, Francomb, Oke, & Golding, 2001; O'Hara & Swain, 1996). Women with a prior history of depression are at a much higher risk of having a depressive episode during pregnancy, with rates estimated at 42.6% (Marcus, Flynn, Blow, & Barry, 2003). Therefore, these women are a clear target group for selective intervention to prevent the recurrence of depression during the perinatal period.

Yet despite having such a well-identified and easily measured risk factor, empirically supported approaches to the prevention of perinatal depression recurrence are limited. Although use of antidepressant medications (ADM) is generally effective for preventing relapse, perinatal women often discontinue use of ADM, given concerns about exposing the fetus or later, the nursing infant, to the medications. In one sample, 59% of women discontinued their use of ADM during pregnancy and had a five fold increased risk of relapse during their pregnancy (Cohen et al., 2006). Several non-pharmalogical interventions have been found to reduce and prevent

depression symptoms in perinatal women, including interpersonal therapy, cognitive behavioral therapy, and supportive counseling (as reviewed by Dimidjian & Goodman, 2009). However, much of this research has focused on post-partum women (Dimidjian & Goodman, 2009). Since antenatal and postpartum depression rates are similar and both have negative effects on the infant, it is important that more research be focused on the prevention of depression recurrence in the antenatal period.

Because a history of major depression is the strongest risk factor for depression during pregnancy, an approach to preventing prenatal depression needs to take into account that depression during pregnancy is often recurrent. MBCT was developed to prevent recurrent depression and has been found to be effective in general population samples (as reviewed by Piet & Hougaard, 2011). However, it has not been tested among pregnant women at risk for perinatal depression. Dimidjian and Goodman developed MBCT-PD for this purpose and are currently investigating preliminary evidence for its effectiveness. This paper is part of that larger study.

**Theoretical Model of Recurrent Depression and Its Prevention**

MBCT was developed to prevent the further recurrence of depression in adults who had been depressed multiple times in the past. The rational for MBCT lies in the theoretical model of recurrent depression developed by Teasdale, Williams, and Segal. The base of the theory lies in the Interacting Cognitive Subsystems (ICS) framework (Teasdale, Segal, & Williams, 1995), which proposes a cognitive framework that becomes activated by negative thoughts and maintains depressive episodes. MBCT is aimed at disrupting the reinstation of the cognitive loop of depression (Teasdale et al., 1995).

MBCT integrates cognitive therapy and mindfulness components from Mindfulness Based Stress Reduction (MBSR) into an eight week program aimed to prevent depression

recurrence by targeting the depressogenic cognitive loop (Segal, Williams, & Teasdale, 2002). The core skill that MBCT aims to teach is the ability to recognize and disengage from the depressive, self-perpetuating thought patterns of rumination at times of potential relapse. This change is facilitated by learning how to focus on the processes of the mind and thoughts, rather than the content of thoughts. The main tool used to achieve this is attentional awareness (Segal et al., 2002). During the course, many different techniques to sustain recovery are presented. Specific formal practices are taught, including meditation, mindful breathing, and the body scan. Participants are also taught different ways of viewing their thoughts (e.g., "thoughts are not facts"), as well as strategies to accept and manage difficult emotions.

**Evidence from Randomized Controlled Trials**

Researchers have conducted a number of randomized controlled trials (RCTs) to test the effectiveness of MBCT as preventive intervention for the recurrence of depression. A meta-analytic review of six RCTs found that with individuals who had three or more past depressive episodes, MBCT reduced the risk of relapse by 43% relative to treatment as usual (TAU) (Piet & Hougaard, 2011). However, the first RCT not conducted by the original authors did not find that MBCT significantly reduced relapse rates, though time to relapse was significantly longer with MBCT compared to TAU (Bondolfi et al., 2010). Because the study was conducted in Switzerland (with a very high quality mental health care system), TAU relapse rates were lower than either Ma and Teasdale (2004) or Teasdale et al. (2000), both of which took place in the United Kingdom. This factor likely decreased the power to detect significant differences in relapse rates in Bondolfi et al. (2010). MBCT has also been found to be as effective in preventing depressive relapse as maintenance anti-depressant medications (ADM) (Bieling et al., 2012; Kuyken et al., 2008; Segal et al., 2010).

Thus, MBCT has strong support as an effective intervention to prevent recurrent depression in adults with multiple past episodes. Important next steps in this line of research are to understand how MBCT may prevent depressive relapse. Researchers have begun to address questions about mechanisms of MBCT in general population samples, with both qualitative and quantitative research designs. The next sections briefly review the qualitative and quantitative literatures on the potential mechanisms of MBCT, after which we return to the question of how these mechanisms may operate in the prevention of perinatal depression.

**Qualitative Analysis of Narrative Reports of Experiences with MBCT**

Because the theoretical model of recurrent depression (Teasdale et al., 1995) is based on an individual's changes in relation to his or her thoughts, examining individuals' narrative reports of their experiences may provide valuable data to confirm or suggest the need to refine the theoretical framework (Mason & Hargreaves, 2001). Semi-structured interviews are valuable in this regard because they yield narratives, participants' reports of their experiences in their own words. Because the course is based on individual cognitive change and teaches a variety of formal practices that may be helpful, individual variation is expected in how participants might stay well (Mason & Hargreaves, 2001). In particular, given MBCT's aim to change individuals' relationships to their own thoughts and that the course offers a variety of approaches to doing so, different aspects of the course are expected to work for different people.

Exit interviews are a particular form of semi-structured interview, designed to evoke participants' recall of their experiences during and after the course. Exit interviews for MBCT participants ask about their experiences with sustained recovery or relapse, whether and how they have used techniques from the course, and how it has impacted different areas of their lives. This approach contrasts with standardized questionnaires, which impose a set of response

options in order to capture the same information from each participant. Exit interviews of MBCT participants measure individuals' experiences in a way that allows participants freedom in responding with their personal story of working to stay well after the course, creating a narrative account of the experience.

Researchers have used qualitative methods to study participants' narrative reports of their experiences with MBCT as reported in exit interviews conducted after participants completed MBCT. The most common such approach to these narratives has been to use thematic analysis, a method that allows for both an inductive data-driven approach and integration of prior research and theory (Braun & Clarke, 2006). Five published studies and one doctoral thesis have reported findings from MBCT participants' exit interviews. These studies sampled general populations drawn from primary care patients (Allen, Bromley, Kuyken, & Sonnenberg, 2009; Finucane & Mercer, 2006; Ma, 2002; Marti & Barrachina, 2009; Mason & Hargreaves, 2001), parents (Bailie, Kuyken, & Sonnenberg, 2012), and older adults (Smith, Graham, & Senthinathan, 2007). Finucane and Mercer (2006), Smith et al. (2007), and Marti and Barrachina (2009) conducted their interviews three months after the end of the course; the others conducted their interviews one year after the end of the course.

This study focused on the themes reported in two of these publications: Allen et al. (2009) and Bailie et al. (2012). We focused on Allen et al. (2009), given that their qualitative study was conducted in the context of an RCT and that their published definitions provided sufficient detail to be able to be converted to a coding scheme. Allen et al. (2009) interviewed participants from the Kuyken et al. (2008) RCT study. Using thematic analysis, the study found four over-arching themes: 1) control, 2) acceptance, 3) relationships, and 4) struggle. Table 1 shows the detailed themes within these over-arching themes and their definitions.

We focused on Bailie et al. (2012) given that they studied parents. Following up on Allen et al. (2009), Bailie et al. (2012) conducted qualitative analysis on exit interviews with 16 parents with children living at home, all of whom participated in MBCT. After hearing parents spontaneously describe how they used mindfulness techniques with their parenting during the course, the researchers decided to add questions to their exit interview that specifically focused on parenting. Using thematic analysis, they found five over-arching themes: 1) emotional reactivity and regulation, 2) empathy and acceptance, 3) involvement, 4) emotional availability, and 5) recognition of own needs. The detailed themes are listed in Table 2.

We built on this literature in three significant ways. First, we examined participants' exit interview narratives of their experiences with MBCT-PD, moving beyond the inductive process of thematic analysis (generating themes) to testing for the presence of themes by coding the narratives based on themes. We did so with three sets of themes: (1) those that had been identified in the thematic analysis work just reviewed, focusing on the themes generated by Bailie et al. (2012) and Allen et al. (2009); (2) added themes specific to the alterations made to MBCT-PD.; and (3) themes found in other qualitative literature that were salient to the constructs of theorized mechanisms; awareness-everyday, awareness of negative emotions and thoughts, and relaxation (see Table 3 for definitions). Second, we examined associations between themes emerging from narratives and scores on standardized measures of the theorized mechanisms of change in association with MBCT. By measuring both themes in the exit interview and measures of theorized mechanisms, we can examine whether participants' narrative report of their experiences corroborate their self-report questionnaire data. This mixed-methods approach has the potential to allow a fuller picture of how MBCT-PD might contribute

to participants' avoidance of the depressogenic cognitive loop than might be allowed with either approach alone.

This mixed methodologies approach to analysis can yield results that give insight into the mechanisms of treatment (Mingers & Brocklesby, 1997). When working with mixed methods, there are four possible results: corroboration, elaboration, complementarity, and contradiction (Brannen, 2005). Using this approach, we examined data from participants' narrative experiences of MBCT-PD along with data from self-report measures of mechanisms of MBCT. The next section outlines the self-report measures, constructs, and evidence for mechanisms.

**Theorized Mechanisms of MBCT**

Several possible mechanisms of the effectiveness of MBCT have been studied, with a particular focus on the core skill taught by MBCT, which is the ability to recognize and disengage from the depressogenic loop. Decentering, mindfulness, and experiental avoidance each capture aspects of this process.

Decentering, has been defined by Safran and Segal (1990) as "The ability to observe one's thoughts and feelings as temporary, objective events in the mind, as opposed to reflections of the self that are necessarily true." (p. 117). The Experiences Questionnaire (EQ; Fresco et al., 2007) measures three facets of decentering: separation of self and thoughts, ability to not habitually react to negative experiences, and the capacity for self-compassion. Lower decentering ability is considered vulnerability for psychological distress, with depressed individuals representing a bias to attend to their own experiences. MBCT participants' decentering levels increased pre- to post-treatment more so than those receiving ADM or placebo (Bieling et al., 2012). However, pre- to post-changes in decentering levels did not significantly

predict post-treatment depression symptoms. Thus decentering is associated with changes in MBCT, but has not been found to mediate those changes.

Mindfulness, which is defined as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994), has also been proposed as a mediator of change in MBCT. The five-facet mindfulness questionnaire (FFMQ; Baer et al., 2008) was developed from item analysis of five different mindfulness scales. It measures five different statistically derived facets of mindfulness: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. While this scale has not been investigated in conjunction with MBCT and depression, it has been found to mediate the relationship between formal mindfulness practice and positive psychological functioning in the context of an MBSR course (Carmody & Baer, 2008). Because MBCT shares much of its course content with MBSR, it is reasonable to expect that mindfulness measured by the FFMQ will also be a mechanism in the reduction of depression relapse within MBCT.

Acceptance of experience of the present, another skill taught in MBCT and considered to be important in helping participants produce alternative schematic models (Segal et al., 2002; Teasdale et al., 1995), has also been proposed as a mechanism of MBCT. The Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) measures experiential avoidance, defined as "the phenomenon that occurs when a person is unwilling to remain in contact with particular private experiences" (Hayes et al., 2004). Although greater acceptance of experience, as measured by the AAQ, is significantly associated with lower depression, no published studies were found to have tested acceptance as a possible mediator of MBCT, though there is one trial design and protocol of a future MBCT study that will examine data from the AAQ (Williams et al., 2010).

Decentering, mindfulness, and experiental avoidance all measure different theoretical aspects of how MBCT may help prevent the recurrence of depression. Examining associations between quantitative and qualitative measures of these constructs may show corroboration between these sources of data, creating a more detailed picture of the ways in which MBCT helps prevent the recurrence of depression.

**Aims and Hypotheses**

It is particularly important to examine participants' narrative reports of their experiences in MBCT because the nature of the therapy involves a change in an individual's relations to their cognitions, a very personal change. In addition to findings from standardized questionnaire measures, qualitative data looking at participants' narratives of their subjective experiences is also important to examine in order to gain a full understanding of how MBCT is helping participants. Participants' narrative reports of their own experience provide an additional dimension to the understanding of how MBCT is working. The convergence of these two sources of data would create strong support for the theory of the mechanisms of MBCT.

Our first aim was to test the extent to which the themes identified by Kuyken and colleagues (Allen et al., 2009; Bailie et al., 2012) would be replicated in the narratives of women at risk of recurrence of depression during the perinatal period who participated in MBCT-PD. We examined this aim by testing comparisons of proportions of MBCT-PD individuals mentioning these themes with the proportion of (Allen et al., 2009) and Bailie et al. (2012) participants mentioning the same themes.

The second aim of the study was to examine the exit interviews with two sets of additional themes. First, we expanded on themes from Allen et al. (2009) or Bailie et al. (2012) by adding three themes found in other qualitative literature that were salient to the constructs of

the measures of theorized mechanisms: awareness-everyday, awareness of negative emotions and thoughts, and relaxation (see Table 3 for definitions). Second, we added new themes that capture course elements specific to MBCT-PD.

Our third aim was to test the extent to which coded themes emerging from the narratives would be associated with scores on conceptually related self-report standardized measures of theorized mechanisms. With this aim, we attempted to understand the extent to which women report themes in exit interviews that reflect constructs similar to the theorized mechanisms. The extent of this overlap may indicate that the theorized mechanisms are salient to these women. We predicted that experiental avoidance, mindfulness, and decentering measured at six months postpartum would be associated concurrently with mention of conceptually related themes in the interview. We also predict that changes in experiental avoidance, mindfulness, and decentering from the beginning of the course to six months postpartum will be positively correlated with mention of conceptually related themes in the interview, so that greater increase in the theorized mechanisms will be associated with more mention of the themes during the interview. We defined "conceptually related" as all or some elements of a theme's definition overlapping with all or some of the definition of the theorized mechanisms. Tables 4 and 5 show specific justifications for pairings of individual themes and theorized mechanisms. Specifically, we hypothesized:

1. Concurrent decentering will be positively correlated with mention of themes in the interview related to decentering: depression objectified and self-criticalness of motherhood.

2. Greater increase in decentering from baseline to six months postpartum will be positively correlated with mention of themes related to decentering: depression objectified and self-criticalness of motherhood.
3. Concurrent mindfulness will be positively correlated with mention of themes related to mindfulness.
    a. observing: awareness-everyday, discerning depressive relapse, taking action, mindfully noticing difficulty, awareness of emotional connections, and awareness of negative emotions and thoughts
    b. describing: discerning depressive relapse, depression objectified, mindfully noticing difficulty, awareness of emotional connection, and awareness of negative emotions and thoughts
    c. acting with awareness: awareness every day, awareness of emotions/negative thought, mindfully noticing difficulty, allowing difficulty, and awareness of emotional connection.
    d. non-judgment of inner experience: depression objectified, impact of activities, and self-criticalness of motherhood.
    e. non-reactivity to inner experience: depression objectified, impact of activities, irritability, reactivity/escalation of anger, and allowing difficulty
4. Greater increase in mindfulness from baseline to six months postpartum will be positively correlated with more mention of themes related to mindfulness (the same themes listed in Hypothesis 3).

5. Greater concurrent experiental avoidance will be negatively correlated with mention of themes in the interview related to experiental avoidance: awarenesss-everyday and allowing difficulty.
6. Greater decrease in experiental avoidance from baseline to six months postpartum will be positively correlated with mention of themes related to experiental avoidance: awareness-everyday and allowing difficulty.

## Method

### Study Context

Data for this study were collected as part of a larger study on the development of MBCT for pregnant women at high risk for developing perinatal depression (MBCT-PD), evaluation of its feasibility, rates of adverse events, retention and satisfaction, and preliminary outcomes of change in depressive severity over the course of the 8-week intervention and through a six months postpartum follow-up. The latter was tested with both an open trial and a pilot randomized control trial comparing MBCT-PD with treatment-as-usual (TAU). Participants were recruited from obstetric outpatient settings of Kaiser Permanente at two study sites, Kaiser Permanente Colorado (KP-CO) and Kaiser Permanente Georgia (KP-GA).

### Participants

Participants were recruited at KPCO and KPGA obstetric clinics via recruitment brochures and flyers as well as a brief study information form on which to indicate if they wanted to be contacted by study personnel for additional information. Project staff called women who indicated potential interest through these means and described the study as involving participation in a prevention approach for perinatal depression and repeated assessment. The core components of the MBCT approach also were described. If the potential participant was

interested, project staff conducted a phone screen to assess initial eligibility criteria (e.g., no current depression, weeks gestation, and age) and provide the potential participant with an opportunity to ask questions about the study. Potential participants who were interested and eligible next completed an in-person intake interview to further determine eligibility.

Primary inclusion criteria included: (1) women, (2) pregnant up to 32 weeks gestation, (3) meeting criteria for prior depression and failure to meet criteria for a diagnosis of Major Depressive Disorder (MDD) in the last two months, (4) available for group intervention scheduled meetings, and (5) ages 18 years or older. Exclusion criteria include presence of: a diagnosis of MDD in the last two months; schizophrenia or schizoaffective disorder, bipolar disorder, or current psychosis; organic mental disorder or pervasive developmental delay; current eating disorder; current substance abuse or dependence; antisocial, borderline, or schizotypal personality disorder; imminent suicide or homicide risk; or any other Axis I or II disorders that necessitate priority treatment not provided by the study protocol.

Of the 92 women who were enrolled in the study and assigned to the MBCT-PD course, 23 (25 %) participants withdrew from the study and 13 (14.13%) women took part in the study before the exit interview was part of the protocol. Of the remaining 56 women, 36 (64.29%) completed exit interviews and 28 (50%) women completed both exit interviews and self-report measures at the six-month postpartum collection point. Of the 28 (50%) who did not complete exit interviews, 7 (12.5%) were lost to follow up prior to the six month postpartum assessment and 21 (37.5%) completed some 6 month postpartum measures but not the exit interview. Participants who did and did not complete the exit interview did not differ on age, income, primiparous status, marital status, or race/ethnicity. They did differ on education, $X^2(5, N = 56) = 17.30$, p=.004. The median education of women who did not complete the interview was

"completed four year college". The median level of education of women who completed the interview was "completed graduate school". The average age of the women who completed the exit interview was 31.75 years (*SD* =3.56). Most of the women were married (86.1%). The majority of the women (86.11%) were white; others were African American (8.33%), Hispanic (2.78%), and Asian (2.78%). The median income was $70,000-$79,999. The majority of the women (58.3%) were primiparous.

**Procedure**

The study protocol was approved by the institutional review boards at Kaiser Permanente Colorado, Kaiser Permanente Georgia (KPGA), and Emory University. All participants provided written consent prior to any research activity. Following the informed consent process, women completed baseline measures, including measures of proposed mediators and demographics. At six months postpartum, exit interviews were conducted by phone and measures of theorized mechanisms were collected via an online link. Women were followed up at six months postpartum because by that time point, most women who would experience perinatal depression would have already had an episode (Goodman & Tully, 2009). Following the conventions of five qualitative studies, (Allen et al., 2009; Bailie et al., 2012; Ma, 2002; Mason & Hargreaves, 2001; Smith et al., 2007) we conducted our interview data at the six month postpartum time point to best capture data about the extended effects of MBCT-PD. Other procedures that were not relevant to this study's aims and hypotheses included women's completion of the measures of the proposed mediators at the completion of the course and at one month postpartum.

**Measures**

**Exit interview.** The exit interview (see Appendix A) was adapted from Allen et al. (2009), with added questions about motherhood and experiences with the new infant. Questions

fell into roughly two categories: participants' experiences of MBCT-PD and their experiences of relapse/recovery since the ending of the course. The majority of the questions were open-ended and designed to evoke discussion of relevant experiences. Interviewers were trained to use follow up questions as needed to further elicit participant accounts. Interviews were digitally audio recorded and later transcribed.

Themes used during coding were drawn from three sources: (1) Allen et al. (2009) and Bailie et al. (2012) (see Tables 1 and 2 for details); (2) other studies that had identified themes consistent with the theorized mechanisms: *awareness-everyday, awareness of negative emotions and thoughts,* and *relaxation*; and (3) five additional themes specific to the MBCT-PD course and perinatal women. (see Table 6) that reflected women's descriptions of activities or thought patterns about the pregnancy or infant.

Two research assistants (one of whom is the author of this thesis) were trained to code the transcribed exit interviews. For the primary coding phase, training consisted of reading the relevant qualitative literature and discussions of the themes and their definitions between the two coders and with the principal investigators of the study. Two mock interviews were written and used for practicing coding. Three interviews were randomly selected as practice interviews for training. Interviews were coded for the number of times each of the themes was mentioned in response to each of the questions. A randomly selected subset of 20% of interviews were coded for inter-rater reliability by a second trained research assistant. For every nine interviews coded by the primary coder, two were randomly assigned to the second coder. After completing coding on each such set, the two coders met to discuss the two that were double coded. No codes were changed based on the discussion. Rather, this served to minimize coder drift and maintain reliability.

Two scores were generated for hypothesis testing. One was a sum of the total mention of themes across all interview questions. The other was a dichotomous variable indicating whether or not a theme was mentioned across all interview questions. The data were entered into IBM SPSS Statistics and then visually checked for accuracy. The percent agreement between the coders for total mention of themes was 73%. The percent agreement between the coders for the dichotomous variables measuring whether or not a theme was ever mentioned in an interview was 86%.

**Self report measures of theorized mechanisms.**

***Experiences Questionnaire.*** (EQ; Fresco et al., 2007) We used the decentering scale of the EQ, which consists of 11 Likert-scale items. Decentering is the ability to see one's thoughts as temporary and objective events rather than a true reflection of the self. Scores can range from 11-55, with a higher score indicating greater levels of decentering. Fresco et al. (2007) reported acceptable reliability and convergent and discriminant validity coefficients. Our internal consistency was good, $\alpha = .88$ at intake and $\alpha = .86$ at postpartum 6 months.

***Five Factor Mindfulness Questionnaire.*** (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). The FFMQ consists of 39 Likert scale items measuring five different factors: observing (scores range from 8-40), nonreactivity to inner experience (scores range from 7-35), acting with awareness (scores range from 8-40), describing (scores range from 8-40), and nonjudgment of inner experience (scores range from 8-40). Higher scores indicate greater levels of the construct. Construct validity has been established in both meditating and nonmeditating samples, with each of the five factors showing adequate to good internal consistency (Baer et al., 2006). Reliability for each of the five factor-subscales in the current sample was good to excellent both at baseline ($\alpha$: .85-.90) and at the 6-month follow up time point ($\alpha$: .85-.93).

***Acceptance and Action Questionnaire.*** (AAQ; Hayes et al., 2004): The AAQ consists of 9 Likert items, with a range of scores from 9-63. A higher score indicates more experiental avoidance. Its construct validity was reported in Hayes et al. (2004) and was adequate ($\alpha = .70$). Our internal consistency was somewhat below what is typically considered to be acceptable, $\alpha = 0.68$ at intake and $\alpha = 0.63$ at postpartum 6 months.

## Results

### Preliminary and Descriptive Analyses

Descriptive statistics of the total mention (frequency of mention of each theme summed across all the interview questions) and dichotomous variables (indicating if a theme was mentioned at all during the interview) are presented in Table 7. Some variables had limited range of total mention, defined as between only 3-5 participants having more than one mention of a theme. For hypothesis testing, these variables were treated dichotomously. Of the 20 total themes coded for, participants mentioned between 1 and 17 different themes, with a mean of 11.06 different themes ($SD = 3.88$) and the average length of the interviews was 2215.81 words ($SD = 1515.19$). Appendix B shows the number of participants who mentioned each theme per each question. Notable trends can be seen for the themes of struggle, destigmatization, and improved relationships, where those themes were most often found in response to questions that specifically asked about difficulty, experiences with the group, and change in relationships. The themes that were specific to experiences with children most often occurred in responses to questions about motherhood or difficulty with the child.

### Testing Aims and Hypotheses

**First aim.** To test the first aim of this study, to compare the extent to which the proportions of MBCT-PD participants mentioned any of the themes to those rates for participants

in Bailie et al. (2012), we used t-tests to compare the percentage of MBCT-PD participants who mentioned each theme with the equivalent data from Bailie et al. (2012). As shown in Table 8, for two of the eight themes (*sadness/giving in* and *recognition of own needs*), we were unable to test these comparisons because MBCT-PD participants never mentioned those themes. For two out of the remaining six themes, *irritability* and *empathy and acceptance*, a smaller percentage of MBCT-PD participants mentioned them relative to Bailie et al. (2012) participants.

With one exception, Allen et al. (2009) did not provide the percentages of participants mentioning themes. For that one, *improved relationships*, there were significantly fewer mentions in the MBCT-PD sample relative to Allen et al.'s sample, $t(35), = 4.27$, $p < .01$. The effect size, $r = .59$, was large. For the remaining themes in Allen et al., they described the frequency of mention of themes with words like "most" or "many." In Table 9, these terms are listed along with the proportion of the MBCT participants who mentioned each theme as a rough comparison.

**Second aim.** For the secondary aim, the exit interviews were coded for two sets of additional themes beyond those from Bailie et al. (2012) or (Allen et al., 2009): five themes added to reflect the alterations made for MBCT-PD and three themes added to reflect the theorized mechanisms. The proportion of the sample who mentioned these themes and the mean and standard deviation for the number of times each of these these were mentioned are shown in Table 7.

**Third aim.** The third aim of this study was to investigate to what extent narrative data from exit interviews were associated with self-report scores of theory based mechanisms (decentering, mindfulness, and awareness).

***First hypothesis.*** We predicted that concurrent decentering would be positively correlated with mention of the themes *depression objectified* and *self-criticalness of motherhood*.

Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mention of the theme had higher word counts. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between concurrent decentering and *depression objectified*, $r_{ab.c}(25) = .22$, $p = .28$. The effect size of the correlation was small.

*Self-criticalness of motherhood* was treated dichotomously due to range restrictions. Participants who mentioned *self-criticalness of motherhood* had significantly higher interview word counts ($M = 3391.85$, $SD = 1692.70$) than women who did not ($M = 1551.09$, $SD = 900.20$) mention the theme, $t(34) = -4.28$, $p = .000$. The effect size, $r = .59$, was large. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the decentering levels of participants who did and did not mention *self-criticalness of motherhood*, controlling for participants' word count. The independent variable was concurrent decentering, the dependent variable was *self-criticalness of motherhood*. Participants' word count was used as the covariate in the analysis. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant differences in decentering concurrently between participants who did (unadjusted $M = 40.18$, $SD = 3.28$) and did not mention *self-criticalness of motherhood* (unadjusted $M = 38.29$, $SD = 5.86$), $F(1,25) = 1.19$, $p = .29$, partial eta squared = .04. The effect size of the partial eta squared was small.

***Second Hypothesis.*** We predicted that greater increase in decentering from baseline to six months postpartum will be positively correlated with mention of themes related to decentering: *depression objectified* and *self-criticalness of motherhood*.

Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mentions of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between change from baseline to six months postpartum in decentering and *depression objectified*, $r_{ab.c}(25) = -.13$, $p = .52$. The effect size of the correlation was small.

*Self-criticalness of motherhood* was treated dichotomously due to range restrictions. Participants who mentioned *self-criticalness of motherhood* had significantly higher interview word counts ($M = 3391.85$, $SD = 1692.70$) than women who did not ($M = 1551.09$, $SD = 900.20$) mention the theme, $t(34) = -4.28$, $p = .000$. The effect size, $r = .59$, was large. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the change from baseline to six months postpartum in decentering of participants who did and did not mention *self-criticalness of motherhood*. The independent variable was change in decentering, the dependent variable was *self-criticalness of motherhood*. Participants' word count was used as the covariate in the analysis. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant differences in increase in decentering from baseline to six months postpartum between participants who did (unadjusted M = 2.73, SD = 7.95) and did not mention self-criticalness of motherhood (unadjusted M = 3.47, SD = 6.78), $F(1,25) = 0.25$, $p = .64$, partial eta squared = .01. The effect size of the partial eta squared was small.

***Third Hypothesis.*** We predicted that concurrent mindfulness would be positively correlated with mention of themes conceptually related to each of the five factors of the FFMQ.

*3a. Observing.* We predicted that the concurrent scores on the FFMQ factor observing would be positively correlated with mentions of the themes *awareness-everyday, discerning depressive relapse, taking action, mindfully noticing difficulty, awareness of emotional connections,* and *awareness of negative emotions and thoughts. Awareness-everyday* was treated dichotomously due to range restrictions. Participants who mentioned *awareness-everyday* had significantly higher interview word counts ($M$ = 2851.13, $SD$ = 1593.84) than women who did not mention the theme ($M$ = 1762.00, $SD$ = 1311.67), $t(34) = -2.25$, $p = .03$. The effect size, $r$ = .36, was medium. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the concurrent observing levels of participants who did and did not mention *awareness-everyday*. The independent variable was concurrent observing, the dependent variable was *awareness-everyday*. Participants' word count was used as the covariate in the analyses. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant differences in concurrent observing between participants who did (unadjusted M = 29.58, SD = 5.52) and did not mention *awareness-everyday* (unadjusted M = 26.17, SD = 6.01), $F(1,25) = 0.07$, $p = .79$, partial eta squared = .003.

Total mention of *discerning depressive relapse* was significantly correlated with interview word count, $r(36) = .56$, $p = .000$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between observing and *discerning depressive relapse*, $r_{ab.c}(25) = .03$, $p = .90$.

Total mention of *taking action* was significantly correlated with interview word count, $r(36) = .62$, $p = .000$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between concurrent observing and *taking action*, $r_{ab.c}(25) = -.16$, $p = .42$. The effect size of the correlation was small.

*Mindfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2846.00$, $SD = 1860.79$) and did not ($M = 1938.52$, $SD = 1938.52$) mention *mindfully noticing difficulty*, $t(34) = -1.70$, $p = .10$. The effect size, $r = .27$, was small. As hypothesized, participants who mentioned *mindfully noticing difficulty* ($M = 30.40$, $SD = 3.41$) had significantly higher levels of concurrent observing compared to participants who did not mention the theme ($M = 23.78$, $SD = 5.67$), $t(26) = -3.36$, $p = .002$. The effect size, $r = .55$, was large.

*Awareness of emotional connections* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2562.00$, $SD = 1697.69$) and did not ($M = 2146.57$, $SD = 1498.04$) mention *awareness of emotional connections*, $t(34) = -0.61$, $p = 55$. The effect size, $r = .10$, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connections* ($M = 24.67$, $SD = 5.99$) did not have significantly higher levels of concurrent observing compared to participants who did not mention the theme ($M = 26.55$, $SD = 5.93$), $t(26) = 0.69$, $p = .50$. The effect size, $r = .13$, was small.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2446.69$, $SD = 1168.82$) and did not ($M = 2085.30$, $SD = 1690.55$) mention *awareness of*

*negative emotions and thoughts*, $t(34) = -0.68$, $p = .50$. The effect size, $r = .12$, was small. Contrary to hypothesis, participants who mentioned *awareness of negative emotions and thoughts* ($M = 25.75$, $SD = 8.88$) did not have significantly higher levels of concurrent observing compared to participants who did not mention the theme ($M = 26.30$, $SD = 4.47$), $t(8.46) = 0.17$, $p = .87$. The effect size was $r = .03$.

*3b. Describing.* We predicted that concurrent scores on the FFMQ factor describing would be positively correlated with *discerning depressive relapse, depression objectified, mindfully noticing difficulty, awareness of emotional connection,* and *awareness of negative emotions and thoughts.* Total mention of *discerning depressive relapse* was significantly correlated with interview word count, $r(36) = .56$, $p = .000$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between concurrent describing and *discerning depressive relapse*, $r_{ab.c}(25) = -.23$, p = .24. The effect size of the correlation was small.

Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mentions of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent describing and *depression objectified*, $r_{ab.c}(25) = .16$, $p = .40$. The effect size of the correlation was small.

*Mindfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2846.00$, $SD = 1860.79$) and did not ($M = 1938.52$, $SD = 1938.52$) mention *mindfully noticing difficulty*, $t(34) =$

-1.70, $p$ = .10. The effect size, $r$ = .27, was small. Contrary to hypothesis, participants who mentioned *mindfully noticing difficulty* ($M$ = 30.60, $SD$ = 3.51) did not have significantly higher levels of concurrent describing compared to participant who did not mention the theme ($M$ = 32.56, $SD$ = 4.97), $t(26) = 1.10$, $p$ = .28. The effect size, $r$ = .21, was small.

*Awareness of emotional connection* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2562.00, $SD$ = 1697.69) and did not ($M$ = 2146.57, $SD$ = 1498.04) mention *awareness of emotional connections*, $t(34) = -0.61$, $p$ = 55. The effect size, $r$ = .10, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connection* ($M$ = 32.00, $SD$ = 4.77) did not have significantly higher levels of concurrent describing compared to participant who did not mention the theme ($M$ = 31.82, $SD$ = 4.58), $t(26) = -0.09$, $p$ = .93. The effect size was $r$ = .02.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2446.69, $SD$ = 1168.82) and did not ($M$ = 2085.30, $SD$ = 1690.55) mention *awareness of negative emotions and thoughts*, $t(34) = -0.68$, $p$ = .50. The effect size, $r$ = .12, was small. Contrary to hypothesis, participants who mentioned *awareness of negative emotions and thoughts* ($M$ = 30.25, $SD$ = 5.98) did not have significantly higher levels of concurrent describing compared to participant who did not mention the theme ($M$ = 31.60, $SD$ = 3.98), $t(26) = -0.47$, $p$ = .64. The effect size was $r$ = .09.

*3c. Acting with awareness.* We hypothesized that *awareness-everyday, awareness of emotions/negative thought, mindfully noticing difficulty, allowing difficulty,* and *awareness of emotional connection* would be positively correlated with concurrent mention of the FFMQ factor acting with awareness.

*Awareness-everyday* was treated dichotomously due to range restrictions. Participants who mentioned *awareness-everyday* had significantly higher interview word counts ($M$ = 2851.13, $SD$ = 1593.84) than women who did not mention the theme ($M$ = 1762.00, $SD$ = 1311.67), $t(34) = -2.25$, $p = .03$. The effect size, $r = .36$, was medium. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the concurrent acting with awareness of participants who did and did not mention *awareness-everyday*. The independent variable was concurrent acting with awareness, the dependent variable was *awareness-everyday*. Participants' word count was used as the covariate in the analysis. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant differences in decentering concurrently between participants who did (unadjusted M = 29.58, SD = 5.52) and did not mention *awareness-everyday* (unadjusted M = 27.00, SD = 4.66), $F(1,25) = 0.25$, $p = .64$, partial eta squared = .01. The effect size of the partial eta squared was small.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2446.69, $SD$ = 1168.82) and did not ($M$ = 2085.30, $SD$ = 1690.55) mention *awareness of negative emotions and thoughts*, $t(34) = -0.68$, $p = .50$. The effect size, $r = .12$, was small. Contrary to hypothesis, participants who mentioned *Awareness of negative emotions and thoughts* ($M$ = 30.25, $SD$ = 6.02) did not have higher levels of concurrent acting with awareness compared to participant who did not mention the theme ($M$ = 27.25, $SD$ = 4.60), $t(26) = -1.43$, $p = .17$. The effect size, $r = .27$, was small.

*Mindfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2846.00, $SD$ = 1860.79) and did not ($M$ = 1938.52, $SD$ = 1938.52) mention *mindfully noticing difficulty*, $t(34) = -1.70$, $p = .10$. The effect size, $r = .27$, was small. Contrary to hypothesis, participants who mentioned *mindfully noticing difficulty* ($M$ = 27.80, $SD$ = 3.79) did not have higher levels of concurrent acting with awareness compared to participant who did not mention the theme ($M$ = 28.28, $SD$ = 5.82), $t(25.15) = 0.23$, $p = .82$. The effect size was $r = .04$.

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2629.80, $SD$ = 1649.97) and did not ($M$ = 2056.58, $SD$ = 1462.58) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty* ($M$ = 28.00, $SD$ = 6.35) did not have higher levels of concurrent acting with awareness compared to participant who did not mention the theme ($M$ = 28.15, $SD$ = 4.73), $t(26) = 0.07$, $p = .95$. The effect size was $r = .01$.

*Awareness of emotional connection* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2562.00, $SD$ = 1697.69) and did not ($M$ = 2146.57, $SD$ = 1498.04) mention *awareness of emotional connections*, $t(34) = -0.61$, $p = 55$. The effect size, $r = .10$, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connection* ($M$ = 28.67, $SD$ = 8.14) did not have higher levels of concurrent acting with awareness compared to participant who did not mention the theme ($M$ = 27.95, $SD$ = 4.21), $t(26) = -0.30$, $p = .77$. The effect size was $r = .06$.

*3d. Non-judgment of inner experience.* We hypothesized that *depression objectified, impact of activities,* and *self-criticalness of motherhood* would be positively correlated with

concurrent levels of the FFMQ factor nonjudge of inner experience. Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent nonjudge and *depression objectified*, $r_{ab.c}(25) = .12$, $p = .55$. The effect size of the correlation was small.

Total mention of *impact of activities* was found to be positively correlated with word count, $r(36) = .53$, $p = .001$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent in nonjudge and *impact of activities*, $r_{ab.c}(25) = .19$, $p = .34$. The effect size of the correlation was small.

*Self-criticalness of motherhood* was treated dichotomously due to range restrictions. Participants who mentioned *self-criticalness of motherhood* had significantly higher interview word counts ($M = 3391.85$, $SD = 1692.70$) than women who did not ($M = 1551.09$, $SD = 900.20$) mention the theme, $t(34) = -4.28$, $p = .000$. The effect size, $r = .59$, was large. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the concurrent nonjudge levels of participants who did and did not mention *self-criticalness of motherhood*. The independent variable was concurrent nonjudge, the dependent variable was *self-criticalness of motherhood*. Participants' word count was used as the covariate in the analysis. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. A Levene's test of equality of error variances revealed significant differences in the variance of the nonjudge score across the two groups. Therefore, a more

stringent significance level was set for evaluating the results of the ANCOVA ($p < .01$). As hypothesized, after adjusting for word count, there were no group differences between women who did (unadjusted M=30.71, SD = 6.62) and did not mention *self-criticalness of motherhood* (unadjusted M = 36.64, SD = 3.50), $F(1,25) = 5.35$, $p = .03$, partial eta squared = .18. The effect size of the partial eta squared was large.

*3e. Non-reactivity to inner experience.* We hypothesized that *depression objectified, impact of activities, irritability, reactivity/escalation of anger,* and *allowing difficulty* would be positively correlated with the FFMQ factor non-reactivity to inner experience. Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent non-reactivity and *depression objectified*, $r_{ab.c}(25) = .33$, $p = .10$. The effect size of the correlation was medium.

Total mention of *impact of activities* was found to be positively correlated with word count, $r(36) = .53$, $p = .001$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent non-reactivity and *impact of activities*, $r_{ab.c}(25) = .16$, $p = .43$. The effect size of the correlation was small.

*Irritability* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 3381.02$, $SD = 2244.38$) and did not mention *irritability* ($M = 2070.06$, $SD = 1381.02$), $t(34) = -1.67$, $p = .10$. The effect size, $r = .27$, was small. Contrary to hypothesis, participants who mentioned *irritability* ($M = 25.00$, $SD =$

1.73) did not have higher levels of concurrent non-reactivity compared to participant who did not mention the theme ($M$ = 23.20, $SD$ = 5.19), $t(26) = -0.59$, $p = .56$. The effect size, $r = .11$, was small.

Total mention of *reactivity/escalation of anger* was found to be positively correlated with word count, $r(36) = .42$, $p = .01$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between concurrent non-reactivity and *reactivity/escalation of anger*, $r_{ab.c}(25) = .32.$, $p = .10$. The effect size of the correlation was medium.

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2629.80, $SD$ = 1649.97) and did not ($M$ = 2056.58, $SD$ = 1462.58) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty* ($M$ = 24.38, $SD$ = 3.66) did not have higher levels of concurrent non-reactivity compared to participant who did not mention the theme ($M$ = 23.00, $SD$ = 5.41), $t(26) = -0.66$, $p = .52$. The effect size, $r = .13$, was small.

***Fourth hypothesis.*** We predicted that change in mindfulness from baseline to six months postpartum would be positively correlated with mention of themes conceptually related to the five factors of the FFMQ.

*4a. Observing.* We predicted that the change in scores from baseline to six months postpartum on the FFMQ factor observing would be positively correlated with mentions of the themes *awareness-everyday, discerning depressive relapse, taking action, mindfully noticing*

*difficulty*, *awareness of emotional connections*, and *awareness of negative emotions and thoughts*.

*Awareness-everyday* was treated dichotomously due to range restrictions. Participants who mentioned *awareness-everyday* had significantly higher interview word counts ($M$ = 2851.13, $SD$ = 1593.84) than women who did not mention the theme ($M$ = 1762.00, $SD$ = 1311.67), $t(34) = -2.25$, $p = .03$. The effect size, $r = .36$, was medium. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the change in observing levels from baseline to six months postpartum of participants who did and did not mention *awareness-everyday*. The independent variable was change in observing, the dependent variable was *awareness-everyday*. Participants' word count was used as the covariate in the analyses. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant differences in decentering concurrently between participants who did (unadjusted $M$ = 5.42, $SD$ = 4.70) and did not mention *awareness-everyday* (unadjusted $M$ = 2.13, $SD$ = 5.07), $F(1,25) = 3.44$, $p = .08$, partial eta squared = .12. The effect size of the partial eta squared was medium.

Total mention of *discerning depressive relapse* was significantly correlated with interview word count, $r(36) = .56$, $p = .000$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between observing and *discerning depressive relapse*, $r_{ab.c}(25) = -.08$, p = .69.

Total mention of *taking action* was significantly correlated with interview word count, $r(36) = .62$, $p = .000$, so that participants with more mention of the theme had higher word count.

The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between change in observing from baseline to six months postpartum and *taking action*, $r_{ab.c}(25) = .16$, $p = .49$. The effect size of the correlation was small.

*Mindfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2846.00$, $SD = 1860.79$) and did not ($M = 1938.52$, $SD = 1938.52$) mention *mindfully noticing difficulty*, $t(34) = -1.70$, $p = .10$. The effect size, $r = .27$, was small. Contrary to hypothesis, participants who mentioned *mindfully noticing difficulty* ($M = 4.40$, $SD = 5.13$) did not statistically significant increase in observing from baseline to six months postpartum compared to participant who did not mention the theme ($M = 3.06$, $SD = 5.17$), $t(26) = -0.66$, $p = .51$. The effect size, $r = .13$, was small.

*Awareness of emotional connections* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2562.00$, $SD = 1697.69$) and did not ($M = 2146.57$, $SD = 1498.04$) mention *awareness of emotional connections*, $t(34) = -0.61$, $p = 55$. The effect size, $r = .10$, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connections* ($M = 4.33$, $SD = 5.89$) did not have significantly greater increase in observing compared to participant who did not mention the theme ($M = 3.32$, $SD = 5.00$), $t(26) = -0.43$, $p = .67$. The effect size was $r = .08$.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2446.69$, $SD = 1168.82$) and did not ($M = 2085.30$, $SD = 1690.55$) mention *awareness of negative emotions and thoughts*, $t(34) = -0.68$, $p = .50$. The effect size, $r = .12$, was small.

Contrary to hypothesis, participants who mentioned *awareness of negative emotions and thoughts* ($M$ = 4.50, $SD$ = 4.41) did not have significantly greater increase in observing compared to participant who did not mention the theme ($M$ = 3.15, $SD$ = 5.41), $t(26) = -0.61$, $p = .55$. The effect size was $r = .08$.

*4b. Describing.* We predicted that change in scores from baseline to six months postpartum on the FFMQ factor describing would be positively correlated with *discerning depressive relapse, depression objectified, mindfully noticing difficulty, awareness of emotional connection,* and *awareness of negative emotions and thoughts.* Total mention of *discerning depressive relapse* was significantly correlated with interview word count, $r(36) = .56$, $p = .000$, so that participants with more mentions of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to our hypothesis, we found no significant correlation between change in describing from baseline to six months postpartum and *discerning depressive relapse*, $r_{ab.c}(28) = .01$, p = .97. The effect size of the correlation was small.

Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mentions of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in describing from baseline to six months postpartum and *depression objectified*, $r_{ab.c}(28) = .27$, $p = .17$. The effect size of the correlation was small.

*Mindfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2846.00, $SD$ = 1860.79) and did not ($M$ = 1938.52, $SD$ = 1938.52) mention *mindfully noticing difficulty*, $t(34) =$

-1.70, $p$ = .10. The effect size, $r$ = .27, was small. Contrary to hypothesis, participants who mentioned *mindfully noticing difficulty* ($M$ = 2.20, $SD$ = 5.94) did not have greater increase in describing compared to participant who did not mention the theme ($M$ = 1.00, $SD$ = 3.97), $t$(26) = -0.64, $p$ = .53. The effect size, $r$ = .12, was small.

*Awareness of emotional connection* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2562.00, $SD$ = 1697.69) and did not ($M$ = 2146.57, $SD$ = 1498.04) mention *awareness of emotional connections*, $t$(34) = -0.61, $p$ = 55. The effect size, $r$ = .10, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connection* ($M$ = 2.50, $SD$ = 7.42) did not have greater increase in describing compared to participant who did not mention the theme ($M$ = 1.14, $SD$ = 3.85), $t$(26) = -0.43, $p$ = .67. The effect size was $r$ = .08.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2446.69, $SD$ = 1168.82) and did not ($M$ = 2085.30, $SD$ = 1690.55) mention *awareness of negative emotions and thoughts*, $t$(34) = -0.68, $p$ = .50. The effect size, $r$ = .12, was small. As hypothesized, participants who mentioned *awareness of negative emotions and thoughts* ($M$ = -1.63, $SD$ = 3.16) did have greater increase in describing compared to participant who did not mention the theme ($M$ = 2.65, $SD$ = 4.71), $t$(26) = 2.35, $p$ = .03. The effect size, $r$ = .42, was medium.

*4c. Acting with awareness.* We hypothesized that *awareness-everyday, awareness of emotions/negative thought, mindfully noticing difficulty, allowing difficulty,* and *awareness of emotional connection* would be positively correlated with change in mention of the FFMQ factor acting with awareness from baseline to six months postpartum.

*Awareness-everyday* was treated dichotomously due to range restrictions. Participants who mentioned *awareness-everyday* had significantly higher interview word counts ($M$ = 2851.13, $SD$ = 1593.84) than women who did not mention the theme ($M$ = 1762.00, $SD$ = 1311.67), $t(34) = -2.25$, $p = .03$. The effect size, $r = .36$, was medium. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the change in acting with awareness from baseline to six months postpartum of participants who did and did not mention *awareness-everyday*. The independent variable was change in acting with awareness, the dependent variable was *awareness-everyday*. Participants' word count was used as the covariate in the analysis. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no group differences between women who did (unadjusted M = 0.08, SD = 4.89) and did not mention *awareness-everyday* (unadjusted M = -2.56, SD = 4.15), $F(1,25) = 2.99$, $p = .10$, partial eta squared = .11. The effect size of the partial eta squared was medium.

*Awareness of negative emotions and thoughts* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2446.69, $SD$ = 1168.82) and did not ($M$ = 2085.30, $SD$ = 1690.55) mention *awareness of negative emotions and thoughts*, $t(34) = -0.68$, $p = .50$. The effect size, $r = .12$, was small. Contrary to hypothesis, participants who mentioned *Awareness of negative emotions and thoughts* ($M$ = -0.25, $SD$ = 4.95) did not have greater increase in acting with awareness compared to participant who did not mention the theme ($M$ = -1.90, $SD$ = 4.48), $t(26) = -0.86$, $p = .40$. The effect size, $r = .17$, was small.

M*indfully noticing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2846.00, $SD$ =

1860.79) and did not ($M$ = 1938.52, $SD$ = 1938.52) mention *mindfully noticing difficulty*, $t(34) = -1.70$, $p = .10$. The effect size, $r = .27$, was small. Contrary to hypothesis, participants who mentioned *mindfully noticing difficulty* ($M$ = -0.10, $SD$ = 4.70) did not have greater increase in acting with awareness compared to participant who did not mention the theme ($M$ = -2.17, $SD$ = 4.49), $t(26) = -1.15$, $p = .26$. The effect size, $r = .22$, was small.

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2629.80, $SD$ = 1649.97) and did not ($M$ = 2056.58, $SD$ = 1462.58) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty* ($M$ = -2.38, $SD$ = 2.83) did not have greater increase in acting with awareness compared to participant who did not mention the theme ($M$ = -1.05, $SD$ = 5.15), $t(26) = 0.68$, $p = .50$. The effect size, $r = .13$, was small.

*Awareness of emotional connection* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M$ = 2562.00, $SD$ = 1697.69) and did not mention *awareness of emotional connections* ($M$ = 2146.57, $SD$ = 1498.04), $t(34) = -0.61$, $p = 55$. The effect size, $r = .10$, was small. Contrary to hypothesis, participants who mentioned *awareness of emotional connection* ($M$ = -1.83, $SD$ = 4.96) did not have greater increase in acting with awareness compared to participant who did not mention the theme ($M$ = -1.32, $SD$ = 4.60), $t(26) = 0.24$, $p = .81$. The effect size was $r = .05$.

*4d. Non-judgment of inner experience.* We hypothesized that *depression objectified, impact of activities,* and *self-criticalness of motherhood* would be positively correlated with change in levels of the FFMQ factor nonjudgement of inner experience from baseline to six months postpartum. Total mention of *depression objectified* was found to be positively

correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mentions of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in nonjudge from baseline to six months postpartum and *depression objectified*, $r_{ab.c}(25) = -.07$, $p = .72$. The effect size of the correlation was small.

Total mention of *impact of activities* was found to be positively correlated with word count, $r(36) = .53$, $p = .001$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in in nonjudge from baseline to six months postpartum and *impact of activities*, $r_{ab.c}(25) = .14$, $p = .48$. The effect size of the correlation was small.

*Self-criticalness of motherhood* was treated dichotomously due to range restrictions. Participants who mentioned *self-criticalness of motherhood* had significantly higher interview word counts ($M = 3391.85$, $SD = 1692.70$) than women who did not ($M = 1551.09$, $SD = 900.20$) mention the theme, $t(34) = -4.28$, $p = .000$. The effect size, $r = .59$, was large. In order to control for word count, one way between-groups analysis of covariance was conducted to compare the change in nonjudge from baseline to six months postpartum of participants who did and did not mention *self-criticalness of motherhood*. The independent variable was change in nonjudge, the dependent variable was *self-criticalness of motherhood*. Participants' word count was used as the covariate in the analyses. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to our hypothesis, after adjusting for word count, there were no group differences between women who did (unadjusted M = 5.27, SD = 7.00) and did not mention *self-criticalness of motherhood* (unadjusted M = 2.53, SD = 6.05),

$F(1,25) = 0.14$, $p = .72$, partial eta squared = .01. The effect size of the partial eta squared was small.

*4e. Non-reactivity to inner experience.* We hypothesized that *depression objectified, impact of activities, irritability, reactivity/escalation of anger,* and *allowing difficulty* would be positively correlated with the FFMQ factor non-reactivity to inner experience. Total mention of *depression objectified* was found to be positively correlated with word count, $r(36) = .33$, $p = .05$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in non-reactivity from baseline to six months postpartum and *depression objectified,* $r_{ab.c}(25) = .19$, $p = .34$. The effect size of the correlation was small.

Total mention of *impact of activities* was found to be positively correlated with word count, $r(36) = .53$, $p = .001$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was large. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in nonreactivity from baseline to six months postpartum and *impact of activities*, $r_{ab.c}(25) = .31$, $p = .12$. The effect size of the correlation was medium.

*Irritability* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 3381.02$, $SD = 2244.38$) and did not ($M = 2070.06$, $SD = 1381.02$) mention *irritability*, $t(34) = -1.67$, $p = .10$. The effect size, $r = .27$, was small. Contrary to hypothesis, participants who mentioned *irritability* ($M = 2.33$, $SD = 6.66$) did not have greater increase in non-reactivity compared to participant who did not mention the theme ($M = 1.24$, $SD = 6.38$), $t(26) = -0.28$, $p = .78$. The effect size was $r = .05$.

Total mention of *reactivity/escalation of anger* was found to be positively correlated with word count, $r(36) = .42$, $p = .01$, so that participants with more mention of the theme had higher word count. The effect size of the correlation was medium. A partial correlation was calculated controlling for word count. Contrary to hypothesis, we found no significant correlation between change in non-reactivity from baseline to six months postpartum and *reactivity/escalation of anger*, $r_{ab.c}(25) = .34.$, $p = .08$. The effect size of the correlation was medium.

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2629.80$, $SD = 1649.97$) and did not ($M = 2056.58$, $SD = 1462.58$) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty* ($M = 2.25$, $SD = 4.46$) did not have significantly greater increase in non-reactivity compared to participant who did not mention the theme ($M = 1.00$, $SD = 6.96$), $t(26) = -0.47$, $p = .64$. The effect size was $r = .09$.

***Fifth hypothesis.*** We hypothesized that concurrent experiental avoidance would be negatively associated with *awarenesss-everyday* and *allowing difficulty*. *Awareness-everyday* was treated dichotomously due to range restrictions.

Participants who mentioned *self-criticalness of motherhood* had significantly higher interview word counts ($M = 3391.85$, $SD = 1692.70$) than women who did not ($M = 1551.09$, $SD = 900.20$) mention the theme, $t(34) = -4.28$, $p = .000$. The effect size, $r = .59$, was large. In order to control for word count, one way between-groups analysis of covariance was conducted to compare concurrent experiental avoidance of participants who did and did not mention *awareness-everyday*. The independent variable was concurrent experiental avoidance, the dependent variable was *awareness-everyday*. Participants' word count was used as the covariate

in the analyses. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no group differences between participants who did (unadjusted M = 26.92, SD = 7.10) and did not mention *awareness-everyday* (unadjusted M = 28.50, SD = 6.35), $F(1,25) = 0.005$, $p = .94$, partial eta squared = .000. The effect size of the partial eta squared was small

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2629.80$, $SD = 1649.97$) and did not ($M = 2056.58$, $SD = 1462.58$) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty* ($M = 25.88$, $SD = 7.95$) did not have significantly lower levels of concurrent experiental avoidance compared to participant who did not mention the theme ($M = 28.60$, $SD = 6.03$), $t(26) = 0.95$, $p = .33$. The effect size, $r = .18$, was small.

***Sixth hypothesis.*** We hypothesized that change in experiental avoidance from baseline to six months postpartum would be negatively associated with *awarenesss-everyday* and *allowing difficulty*.

*Awareness-everyday* was treated dichotomously due to range restrictions. Participants who mentioned *awareness-everyday* had significantly higher interview word counts ($M = 2851.13$, $SD = 1593.84$) than women who did not mention the theme ($M = 1762.00$, $SD = 1311.67$), $t(34) = -2.25$, $p = .03$. The effect size, $r = .36$, was medium. In order to control for word count, one way between-groups analysis of covariance was conducted to compare change in experiental avoidance from baseline to six months postpartum of participants who did and did not mention *awareness-everyday*. The independent variable was change in experiental avoidance, the dependent variable was *awareness-everyday*. Participants' word count was used

as the covariate in the analyses. Preliminary checks were conducted to ensure that there were no violations of the assumptions of normality. Contrary to hypothesis, after adjusting for word count, there were no significant group differences between participants who did (unadjusted M = -4.75 SD = 7.39) and did not mention *awareness-everyday* (unadjusted M = -3.94,SD = 5.26), $F(1,25) = 0.002$, $p = .97$, partial eta squared = .000. The effect size of the partial eta squared was small.

*Allowing difficulty* was treated dichotomously due to range restrictions. There were no significant differences in word count between participants who did ($M = 2629.80$, $SD = 1649.97$) and did not ($M = 2056.58$, $SD = 1462.58$) mention *allowing difficulty*, $t(34) = -1.02$, $p = .32$. The effect size, $r = .17$, was small. Contrary to hypothesis, participants who mentioned *allowing difficulty*($M = -6.25$, $SD = 6.86$) did not have significantly greater decrease in experiental avoidance from baseline to six months postpartum compared to participant who did not mention the theme ($M = -3.50$, $SD = 5.84$), $t(26) = 1.07$, $p = .29$. The effect size, $r = .21$, was small.

**Other Results of Note.** The interview included a number of direct questions, participant responses are presented in Table 10 and Table 11. In general, the majority of women gave positive answers about the course.

## Discussion

This study aimed to examine the experiences of women who were participants in a study examining preliminary evidence for the effectiveness of MBCT-PD. This intervention aimed to prevent depressive relapse for women in the perinatal period with histories of major depressive disorder. Exit interviews have been found to be an important source of information, offering participants freedom of response when telling about their experiences with interventions, creating personal narratives (Mason & Harvgreaves, 2011). This study built on the literature by

attempting to replicate themes identified in studies of MBCT innon-perinatal populations toa sample of MBCT-PD participants, describing the extent to which themes specific to the MBCT-PD alterations were found in this sample, and presenting results of tests of associations between theme mention and levels of theorized mechanisms.

The first aim of the study was to see to what extent the themes found in the interviews of women who had completed MBCT-PD significantly differed from those found by researchers who conducted exit interviews among general population samples of MBCT participants (Allen et al., 2009) and samples of parents (Bailie et al. (2012) . For Bailie et al. (2012), our sample statistically significantly differed in the proportion of individuals mentioning two out of eight themes and failed to mention two others of their themes. In total, then, on four out of eight of Bailie et al.'s themes, MBCT-PD participants less often mentioned them or did not mention them at all. This difference may have been due to the fact that the ages of the children of participants were very different in our study than in Bailie et al. (2012). Whereas Bailie et al.'s participants' children ranged in age from 2-28 years old and were, on average, 14.70 years old (*SD* = 6.97), 58.3% of the women in our sample had only one child, the infant who was six months old at the time of the exit interview. For women with older children, their ages ranged from 1-13 years with an average age of 4.94 years (*SD* = 3.52). These age differences mean that women in our sample would have different types of interactions with their children, and an MBCT or MBCT-PD course would change different aspects of the mother-child relationship. Consistent with this interpretation, the themes with fewer mentions in our sample can be expected to be more applicable to older children. *Sadness-giving in* involves elements of a child's communication to the parent about needs that are not present in infants. Similarly, the theme *recognition of own needs* required that the parents communicate their needs to the child. This is mentioned in Bailie

et al. (2012); three mothers of "younger children" were not able to communicate their needs to their children. A possible explanation for the lower proportion mentioning *empathy and acceptance* and *irritability* in the MBCT-PD sample versus Bailie et al.'s (2012) sample is that women seemed disinclined to say they had negative feelings towards their infants, which may have led to lower rates of these two themes, both of which require acknowledgement of frustration towards the child.

For the comparison of our sample of MBCT participants with Allen et al. (2009), only one approximation was made because the paper did not provide quantities for the majority of its themes. MBCT-PD participants had fewer mentions of *improved relationships* compared to Allen et al. (2009). It is unclear why this theme had fewer mentions. Each theme was found in this sample, and even the theme with the fewest mentions in our sample (improved relationships) was mentioned by 44.4% of women. With the exception of *improved relationships* and *destigmatization*, each theme from Allen et al. (2009) was mentioned by more than 50% of participants.

The second aim of the study described the extent to which themes specific to the alterations from MBCT to MBCT-PD were present in the exit interviews. These themes were mentioned less frequently by participants when compared to the rates of mention of themes from Allen et al. (2009). This may be due to the fact that the themes specific to MBCT-PD were more specific than the themes by Allen et al. (2009). Their definitions were specific to a situation or thought about the pregnancy or the baby, whereas many of the Allen et al. (2009) themes described broader concepts that could be coded for in a number of different configurations. Additionally, only two questions in the interview specifically asked about parenting.There were

many more questions about how MBCT-PD affected the participants more generally (e.g. in relation to emotions, mood decline, beginning of depressive relapse, etc.).

With the second aim we also analyzed the interviews for themes present in other literature that may have been relevant to the theorized mechanisms. Two of the three themes from other literature seem to be important in the interviews, specifically, 41.7% of women mentioned *awareness-everyday* and 36.1% of women mentioned *awareness- negative emotions/thoughts*. These themes seem important both to skills taught in MBCT-PD and to some participants' experiences. Few participants mentioned the theme *relaxation*. This may be due to the fact that relaxation is not a direct aim of the course, but something some participants experience during some of the formal practices.

The third aim of the study was to examine to what extent mention of themes was related to self report questionnaire measures of mechanisms. Only one of the hypothesized predictions was statistically significant. Participants who had mentioned *awareness of negative emotions and thoughts* had greater increases in describing from baseline to six months postpartum compared to participants who did not mention the theme.

No clear pattern emerged from the significant findings from the tests of the second hypothesis. Several non statistically significant results had medium effect sizes, suggesting that these may have attained statistical significance with a larger sample. The effect size of the partial correlation controlling for word count between concurrent non-reactivity and *depression objectified* had a medium effect size. The effect size of the partial correlation controlling for word count between concurrent non-reactivity and *reactivity/escalation of anger* had a medium effect size. The effect size of the partial correlation controlling for word count between increase in decentering from baseline to six months postpartum and *reactivity/escalation of anger* was

medium. The effect size of the mean difference (controlling for word count) in change in acting with awareness from baseline to six months postpartum between participants who did and did not mention *awareness-everyday* was medium. The effect size of the partial correlation between change in non-reactivity from baseline to six months postpartum and *reactivity/escalation of anger* was medium. Because so many findings were not statistically significant, we were unable to conclude that there is significant association between participants' narratives and scores from self report questionnaire based measures of theorized mechanisms. Further research with larger sample sizes is needed to explore the relationships between these two sources of data.

From the reading of the exit interviews, three points emerged as very important to the women. First, "thoughts are not facts" was a phrase repeated in many of the interviews, captured in the theme *depression objectified.* This concept really seemed to made a big impact on a lot of women and become part of their everyday thinking. The second was the idea of using the breath as a focusing, calming tool. Women talked about using the breath in many different contexts, with everyday frustrations or interactions with their infants. The three-minute breathing space taught in the class was often mentioned. Use of the breath was part of the themes *taking action, impact of activities,* and *reactivity/escalation of anger.* Third, almost all of the women seemed to report changes in how they viewed their depression, captured in the themes *discerning depressive relapse, depression objectified,* and *sense of control.* They tended to view depression as something that they can recognize and have control over, rather than it being a process that happens to them.

Other notable results include the strong association between word count of the interview and the mention of themes. It is unclear whether women who had more to say about the course

and were affected in more areas spoke longer during the interview, or if some women spoke less for other reasons unknown and therefore mentioned fewer themes.

The structure of the interview is clearly very important for the type of themes that might be identified. Questions about children, relationships, group experience, and difficulty yielded themes related to those questions that were found at low frequency in other places throughout the interview. The last questions of the interview (16-23) yielded very few themes because they asked mostly about the logistics of the course. These types of questions are more relevant to planning alterations to the course rather than to the questions addressed in this study.

**Limitations**

The study findings cannot be generalized to samples with different demographics. The majority of the sample was white, well educated, and married. The narrative reports of how participants use MBCT-PD may differ in other populations.

More questions specific to the effects of MBCT-PD on the relationship with child and parenting could have produced greater frequency of the Bailie et al. (2012) and MBCT-PD specific themes, and perhaps a greater variety of themes would have been seen. An interesting issue arose with question 14, "Bring to mind a recent time when you became angry or frustrated with your baby. What happened?" Many mothers denied having any such experiences directed toward their infants. The question was used in Bailie et al. (2012), of the older children, and some women in our sample said they could describe times of anger or frustration with their older children. A differently phrased question may have elicited more responses.

While the sample size may have been a limiting factor in detecting statistical significance, this study had a larger sample ($N$ = 36) than the sample sizes of the qualitative studies surveyed, which had $N$*'s* ranging from 7-32.

**Future Directions**

This study expanded upon the qualitative literature of MBCT by showing the relevance of themes identified in participants of MBCT to participants of MBCT-PD and further describing women's experiences particular to MBCT-PD. The theme data could be used to guide future course revision, emphasizing portions of the course that were salient to womens' reports of their experiences. The results of this study demonstrate that coding for themes generated from thematic analyses from published literature can yield compelling results. We failed to support associations between interview data and data derived from psychometrically sound questionnaire measures of theory-based mechanism. This suggests that these two sources of data are separate but important sources of information that can each capture aspects of the mechanisms of MBCT-PD and women's experiences.

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Table 1
*Themes reported by Allen et. al (2009)*

| Over-Arching Theme | Theme | Definition |
|---|---|---|
| Control | Discerning depressive relapse | "knowing my triggers" and recognizing early warning signs. |
| | Taking action | "Changing my focus." At times of low mood engaging with an activity that substitutes a negative focus of attention for one that is either positive or neutral. |
| | Impact of activities | New tools help people step out of habitual negative thoughts and feelings, which change their perspective and improves mood. |
| | Sense of control | Increased sense of agency over depression |
| Acceptance | De-stigmatization | Feeling understood, cared for, identifying with others and revising their views of themselves |
| | Depression objectified | Relating differently to depressive thoughts and feelings, seeing them as characteristics of depression, not of themselves |
| Relationships | Valuing self | Recognizing and meeting own needs |
| | Improved relationships | Greater emotional closeness with friends and family, better communication and increased empathy |
| Struggle | Struggle | Bringing an orientation of striving / high expectation to MBCT.<br>The dialectical tension between acceptance and change. |

Table 2
*Themes Reported by Baillie et. al (2012)*

| Main Themes | Patterns of change |
|---|---|
| Emotional reactivity and regulation | Changes in management of negative emotions in challenging situations with children, includes 3 sub-themes:<br>*1.1 Irritability*: Using the 3-Minute Breathing Space to manage irritability arising from general stress, previously directed at children<br>1.2 Reactivity and escalation of anger: Changes in the management of reactivity and the escalation of anger in incidents previously appraised as challenging with children<br>*1.3 Sadness and giving-in*: Changes in the management of sadness and the tendency towards ruminating and giving in to children following incidents previously appraised as challenging with children |
| Empathy and acceptance | Changes in the appraisal of children and or their behaviour |
| Involvement | Changes in the ability to fulfill parenting duties, be physically available to children and participate in pleasurable activities |
| Emotional availability | Changes in availability to provide comfort, manner of providing comfort and communication about emotions |
| Recognition of own needs | Changes in parents' recognition, understanding and ability to communicate their own emotional support needs |

Table 3
*Additional Themes Drawn From Other Literature*

| Theme | Description |
|---|---|
| Awareness-everyday | Participant mentions of increased daily mindfulness in non-formal practices, the intentional noticing of everyday experiences |
| Awareness of negative emotions and thoughts | Descriptions of participants noticing their negative thoughts and emotions not specifically labeled as depression |
| Relaxation | Participants using formal or informal mindful practices to relax, or mentioning an increased feeling of relaxation as a result of the course |

Table 4

*Justifications for Individual Pairing of Themes and Mechanisms*

| Construct | Theme | Justification |
|---|---|---|
| Decentering | Depression objectified | Both theme and mechanism involve viewing thoughts objectively, mechanism covers a range of thoughts, theme is specific to depression |
| | Self-criticalness of motherhood | Theme involves a change in relationship to thoughts |
| Observing | Awareness- everyday | Theme is a description of the action the construct describes |
| | Discerning depressive relapse | Theme requires observation of mental states |
| | Taking action | Many actions described by participants involved observing |
| | Mindfully noticing difficulty | Theme requires observation of mental states |
| | Awareness of emotional connections | Theme describes an observation and understanding of one's own mental state |
| | Awareness of negative emotions/thoughts | Mention of theme requires observation of negative internal states |
| Describing | Discerning depressive relapse | Theme requires labeling of internal states |
| | Depression objectified | Theme requires labeling of internal states |
| | Awareness of emotions and negative thoughts | Theme required description of negative emotions or thoughts |
| | Mindfully noticing difficulty | Mention of theme in interview would have descriptions of internal states |
| | Awareness of emotional connection | Text of interview would include description of internal states |

Table 5
*Justifications for Individual Pairing of Themes and Mechanisms, continued*

| | | |
|---|---|---|
| Acting with awareness | Awareness- everyday | Both theme and construct involve attention to everyday activities |
| | Awareness of emotions and negative thoughts | Theme is the intentional attention to one's activities, same concept as the mechanism |
| | Mindfully noticing difficulty | Theme involves attention to an inner state |
| | Allowing difficulty | Theme involves attention to an inner state |
| | Awareness of emotional connection | Theme requires attention to an inner state |
| Non-judgment of inner experience | Depression objectified | Theme can involve non-judgment of depressive thoughts and feelings |
| | Impact of activities | If an activity leads to non-judgment of inner experience, it could fall under this theme |
| | Self-criticalness of motherhood | Theme can describe a change in the relationship to negative thoughts about motherhood |
| Non-reactivity to inner experience | Depression objectified | Theme can involve non-reactivity to depressive thoughts and feelings |
| | Impact of activities | If an activity leads to non-reactivity of inner experience, it could fall under this theme |
| | Irritability | Theme indicates a change in reaction to experience, inner experience does not negatively affect childcare |
| | Reactivity/escalation of anger | Frustrations with the child or childcare are reacted to differently |
| | Allowing difficulty | Theme indicates the acceptance and non-reactivity of feelings about certain childcare experiences |
| Experiential avoidance | Awareness- everyday | Theme involves intentionally experiencing everyday things |
| | Allowing difficulty | Involves the acceptance of difficult feelings, not avoidance |

Table 6

*Themes Specific to the Alterations of MBCT-PD*

| Theme | Definition |
|---|---|
| Self-criticalness of motherhood | Lessening of guilt and self-blame about motherhood and baby care. "You're not a bad mom" |
| | Global ok-ness with how one is parenting: Lessened stress and anxiety about the child. More relaxed about parenting. More broad than reactivity/escalation of anger because it's not about specific stressful incidents but the whole baby. |
| | Letting go of the "shoulds"/shame/guilt (from self or others) |
| Mindfully noticing difficulty | Awareness of incidents with the child as challenging (not avoiding/distancing). Mindful awareness versus being reactive (pushing away). |
| Allowing difficulty related to pregnancy or parenting | Being attentive to the mood AND completing it despite the difficulty. Completing an activity despite the baby being fussy, "I'm attentive and understand sometimes he'll be like that." (NOT avoidant suppression, "gritting my teeth," grin and bear it, or pushing through) |
| | Stepping back from baby- Letting them cry when they recognize that they've done what is reasonable and this is just the way it is (not that the mom can't handle being with the infant). |
| | I realize I can stay with it longer; I can let him cry and I know it will pass. |
| Emotions and well-being | Mothers recognizing the importance of their own well-being for the sake of the baby. Feeling the need or obligation to stay well and take care of the child emotionally and physically. (Related to recognition of own needs, but more broadly defined) |
| Awareness of the emotional connections | Awareness of how the mom's mood and baby's mood are connected. |
| Destigmatization-Pregnancy | Same guidelines as Kuyken group definition "Feeling understood, cared for, identifying with others and revising their views of themselves," but specifically for benefits from being among other pregnant women |

Table 7
*Theme mentions by Percentage and Count (M and SD)*

| | % of MBCT-PD sample, *N* = 36 | *M* | *SD* |
|---|---|---|---|
| Allen et al. themes | | | |
| Sense of control | 63.9 | 1.58 | 1.99 |
| Discerning Depressive Relapse | 80.6 | 1.83 | 1.63 |
| Taking Action | 88.9 | 2.67 | 2.2 |
| Impact of Activities | 75 | 2.14 | 1.79 |
| Destigmatization | 30.6 | 0.92 | 0.97 |
| Depression Objectified | 69.4 | 1.5 | 1.25 |
| Valuing Self | 52.8 | 1.14 | 1.69 |
| Improved Relationships | 44.4 | 0.81 | 1.09 |
| Struggle | 52.8 | 0.75 | 0.87 |
| Themes from other literature | | | |
| Awareness-everyday | 41.7 | 0.61 | 0.93 |
| Awareness negative thoughts/emotions | 36.1 | 0.58 | 0.99 |
| Relaxation | 11.1 | 0.11 | 0.32 |
| Baillie et al. themes | | | |
| Irritability | 11.1 | 0.17 | 0.56 |
| Reactivity/escalation of anger | 61.1 | 1.14 | 1.27 |
| Sadness/Giving in | 0 | 0 | 0 |
| Recognition of Own Needs | 0 | 0 | 0 |
| Empathy/Acceptance | 19.4 | 0.22 | 0.49 |
| Emotional Availability | 44.4 | 0.53 | 0.65 |
| Involvement | 47.2 | 0.81 | 1.09 |
| MBCT-PD Themes | | | |
| Self-criticalness of motherhood | 36.1 | 0.42 | 0.6 |
| Mindfully Noticing Difficulty | 30.6 | 0.33 | 0.54 |
| Allowing Difficulty | 27.8 | 0.28 | 0.45 |
| Emotions and well being | 8.3 | 0.11 | 0.4 |
| Awareness of connection | 16.7 | 0.17 | 0.38 |
| Destigmatization- Pregnancy | 30.6 | 0.33 | 0.54 |

Table 8

*Results of T-Test of Proportions Between Study Sample and Baillie et. al (2012)*

| | Baillie, *N*=16 | MBCT-PD, *N*=36 | | | |
|---|---|---|---|---|---|
| | % mentioning theme | % mentioning theme | 95% CI for Mean Difference | *t* | *df* |
| Any change in emotional relationship with child | 93.75 | 91.67 | -0.13, 0.17 | 0.27 | 32.2 |
| Irritability | 87.5 | 2.78 | 0.57, 0.96 | 7.81** | 27.1 |
| Reactivity/escalation of anger | 81.25 | 61.11 | -0.05, 0.45 | 1.59 | 35.2 |
| Sadness/giving in | 18.75 | 0 | — | — | — |
| Empathy and acceptance | 50 | 19.44 | 0.03, 0.58 | 2.16* | 23.2 |
| Involvement | 37.5 | 47.22 | -0.39, 0.19 | -0.66 | 29.2 |
| Emotional availability | 31.25 | 44.44 | -0.41, 0.15 | -0.93 | 30.3 |
| Recognition of own needs | 43.75 | 0 | — | — | — |

Notes: *p<.05, **p<.001

Table 9

*Percent of MBCT-PD Participants Mentioning Themes Compared with Allen et. al (2009)*

| | Allen Sample, *N* = 20 | MBCT-PD Sample, *N* = 36 |
|---|---|---|
| Theme | Quantitative word | % |
| Discerning Depressive Relapse | Most | 80.5 |
| Taking Action | Many | 88.8 |
| Impact of Activities | Majority | 75 |
| Sense of control | Many | 63.8 |
| Destigmatization | Most | 63.8 |
| Depression objectified | Many | 69.4 |
| Valuing Self | Many | 52.7 |
| Improved Relationships | 18/20 | 44.4 |
| Struggle | Many | 52.7 |

Table 10

*Question Responses, 1-6*

| | *n* | Percent yes |
|---|---|---|
| 1A. Was being mindful of daily actions responsible for you staying well these last six months? | 7 | 71.4 |
| 1B. Was body scan responsible for you staying well these last six months? | 6 | 33.3 |
| 1C. Was noticing automatic thoughts responsible for you staying well these last six months? | 6 | 83.3 |
| 1D. Was meditation responsible for you staying well these last six months? | 9 | 66.7 |
| 1E. Was yoga responsible for you staying well these last six months? | 7 | 57.1 |
| 1F. Was the 3-minute breathing exercise responsible for you staying well these last six months? | 5 | 60 |
| 4. (If relapse) Did you use the skills from class right before your relapse? | 9 | 66.7 |
| 4A. Did you use the being mindful of daily actions? | 2 | 0 |
| 4B. Did you use the body scan? | 4 | 25 |
| 4C. Did you use noticing automatic thoughts? | 5 | 40 |
| 4D. Did you use meditation? | 2 | 50 |
| 4E. Did you use yoga? | 1 | 0 |
| 4F. Did you use the 3- minute breathing exercise? | 2 | 0 |
| 5. Were there any differences [between this episode of MDD and previous episodes] | 11 | 100 |
| 6A. did anything good come out of this experience of depression | 9 | 88.9 |
| 6B. Were you able to use the skills from the class | 5 | 80 |
| 6C. Did it change how you view yourself in relation to emotions | 8 | 62.5 |

Table 11

*Question Responses, 7-15*

| | *n* | Percent yes | Percent unsure |
|---|---|---|---|
| 7 Has the mindfulness course been helpful to you? | 33 | 93.9 | - |
| 7A Has it helped you to notice negative thoughts? | 17 | 82.4 | - |
| 7B Has it helped you to take mindful action to prevent depression? | 12 | 83.3 | - |
| 7C Has it helped you to use your support system? | 15 | 86.7 | - |
| 9 Has the mindfulness course changed how you cope with intense emotions, like sadness, anger, fear, or shame? | 36 | 88.9 | - |
| 10 Has the mindfulness course changed how you cope with times when you feel you may start to become depressed again? | 35 | 78.9 | 5.3 |
| 13 Have your children, partner, other family or friends noticed anything different about you? | 34 | 23.5 | 35.3 |
| 13A. If yes, have they noticed that you are emotionally different? | 7 | 14.3 | 28.6 |
| 13B. If yes, have they noticed that you are closer? | 7 | 42.8 | 14.3 |
| 13C. If yes, have they noticed that you are more accepting? | 7 | 28.6 | 28.6 |
| 13D. If yes, have they noticed that you are more responsive? | 5 | 0 | 40 |
| 13E. If yes, have they noticed that you are more involved? | 5 | 40 | 0 |
| 15. Has the mindfulness course affected your life in any other ways? | 35 | 51.4 | 2.9 |

## Appendix A
## Text of the six-month postpartum exit interviewer script

Thank you for taking the time to answer these questions. We would like to learn about your experience in the course and since the course ended. We invite you to answer in as much detail as possible and to describe your experience in an honest and open way. We are interested in all of your experiences, both positive and negative, as your feedback will help us to identify ways in which we can improve the course in the future.

A. Staying Well and Relapse

Opening: I have two sets of questions. With the first set of questions, I am interested to hear about any experiences you may have had with staying well or with times of depression or feeling down since you ended the class in _____, which was about _____ months ago. It would be helpful to talk with you about your thoughts about what helped you stay well or what may have contributed to times of depression returning.

1. (If sustained recovery) What was responsible for you staying well these last six months? Anything else?

a. being mindful of daily actions

b. body scan

c. noticing automatic thoughts

d. Meditation

e. Yoga

f. 3-minute breathing exercise

2. What about any times when your mood started to decline? How did you cope with this? What else did you do? What about another time when your mood started to decline?

3. (If relapse) What do you think contributed to your experiencing a relapse of depression in (insert time)?

4. (If relapse) Looking back at the time right before you began to experience a relapse of your depression in (insert time) what might have prevented the relapse? Did you use the skills from class?

a. being mindful of daily actions

b. body scan

c. noticing automatic thoughts

d. meditation

e. yoga

f. 3- minute breathing exercise

Did these skills help? If you did not use the skills from class do you think they would have helped you in this situation?

5. (If relapse) How did this experience of depression compare with your previous experiences of depression? Were there any differences?

6. (If relapse and appropriate) I know this might seem like a strange question, but did anything good come out of this experience of depression? Were you able to use the skills from class? Did it change how you view yourself in relation to emotions?

B. Experience of MBCT

Opening: With this next set of questions, I am interested in hearing your experiences with the course. I am interested in both positive and negative feedback about the program and your experiences. This will be really helpful to us as we continue to modify it for the next classes we'll offer.

7. Has the mindfulness course been helpful to you? [If yes] please provide examples of how it has helped you.

a. notice negative thoughts?

b. take mindful action to prevent depression?

c. use your support system-?

8. What surprised you about the course?

9. Has the mindfulness course changed how you cope with intense emotions, like sadness, anger, fear, or shame? [if yes] how has the course changed how you cope with intense emotions? [get general sense and specific examples]

10. Has the mindfulness course changed how you cope with times when you feel you may start to become depressed again? [If yes], how [get general sense and specific examples]?

11. How has the mindfulness course affected the key relationships in your life? (Interviewer should be referencing the list of key relationships from the LIFE, and ask about the baby too)

12. How has the mindfulness course affected you as a mother?

13. Have your children, partner, other family or friends noticed anything different about you? [If yes,] what have they noticed? Are you:

a. emotionally different?

b. closer?

c. more accepting?

d. more responsive?

e. more involved?

14. Bring to mind a recent time when you became angry or frustrated with your baby. What happened?

15. Has the mindfulness course affected your life in any other ways?

16. What did you find difficult about the mindfulness course? (follow up with a list of specifics, e.g. transportation, time, amount of homework, negative reactions to any of the homework, etc., talking in the class, the practices in the class)

17. Was there anything you found disappointing about the mindfulness course?

18. What was it like for you being a member of a group in the mindfulness course?

19. What aspects of the course were not useful to you or less useful?

20. What, if anything, would you add to the course? What would you remove? What would you change?

21. In what ways was the instructor helpful? In what ways could the instructor have been more effective?

22. Would you recommend the course to a friend who is pregnant or considering pregnancy and has had depression? Why or why not?

C. Looking Ahead

Opening: As we wrap up, I wanted to ask…

23. Is there anything else you would like to share with me about your experiences that we haven't addressed today?

On behalf of Sona, Sherryl and everyone involved with the Mindfulness and pregnancy project I would like to thank you for sharing your experiences with us. Your participation has made a generous contribution to our understanding of how to help women and their families

during pregnancy and postpartum. We are very grateful for all of your time and commitment and we wish you all the very best.

Appendix B

Count of Participant Mentions of Theme per Question

| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *n* | 33 | 31 | 13 | 11 | 11 | 9 | 35 | 35 | 36 | 35 | 36 | 35 |
| Allen et. Al themes | | | | | | | | | | | | |
| Sense of control | 2 | 3 | 0 | 6 | 3 | 2 | 11 | 1 | 5 | 10 | 0 | 1 |
| Discerning Depressive Relapse | 8 | 8 | 10 | 2 | 0 | 1 | 4 | 0 | 5 | 14 | 0 | 0 |
| Taking Action | 16 | 14 | 2 | 3 | 0 | 2 | 11 | 0 | 9 | 12 | 0 | 0 |
| Impact of Activities | 12 | 8 | 2 | 4 | 1 | 2 | 15 | 0 | 12 | 5 | 1 | 0 |
| Destigmatization | 3 | 2 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 0 | 0 | 0 |
| Depression Objectified | 1 | 6 | 2 | 2 | 2 | 2 | 11 | 0 | 10 | 4 | 0 | 0 |
| Valuing Self | 6 | 5 | 0 | 1 | 1 | 3 | 8 | 1 | 2 | 1 | 5 | 0 |
| Improved Relationships | 1 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 1 | 15 | 0 |
| Struggle | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 |
| Themes from other literature | | | | | | | | | | | | |
| Awareness-everyday | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 1 | 2 | 0 | 0 | 0 |
| Awareness negative thoughts/emotions | 1 | 3 | 0 | 1 | 1 | 1 | 4 | 1 | 7 | 2 | 0 | 0 |
| Relaxation | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 |
| Baillie et. Al Themes | | | | | | | | | | | | |
| Irritability | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 |
| Reactivity/escalation of anger | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 1 | 2 | 6 |
| Sadness/Giving in | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recognition of Own Needs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Empathy/Acceptance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Emotional Availability | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 13 |
| Involvement | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 9 | 6 |
| MBCT-PD Themes | | | | | | | | | | | | |
| Self-criticalness of motherhood | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 8 |
| Mindfully Noticing Difficulty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| Allowing Difficulty | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Emotions and well being | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| Awareness of connection | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Destigmatization- Pregnancy | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |

*Count of Participant Mentions of Theme per Question, Continued*

| | Q13 | Q14 | Q15 | Q16 | Q17 | Q18 | Q19 | Q20 | Q21 | Q22 | Q23 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *n* | 36 | 36 | 35 | 35 | 34 | 35 | 35 | 32 | 33 | 34 | 33 |
| Allen et. Al themes | | | | | | | | | | | |
| Sense of control | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| Discerning Depressive Relapse | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Taking Action | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Impact of Activities | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Destigmatization | 0 | 0 | 1 | 2 | 1 | 17 | 0 | 0 | 0 | 0 | 0 |
| Depression Objectified | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Valuing Self | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Improved Relationships | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Struggle | 0 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Themes from other literature | | | | | | | | | | | |
| Awareness-everyday | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Awareness negative thoughts/emotions | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Relaxation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Baillie et al themes | | | | | | | | | | | |
| Irritability | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reactivity/escalation of anger | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sadness/Giving in | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recognition of Own Needs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Empathy/Acceptance | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Emotional Availability | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Involvement | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MBCT-PD Themes | | | | | | | | | | | |
| Self-criticalness of motherhood | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mindfully Noticing Difficulty | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Allowing Difficulty | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Emotions and well being | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Awareness of connection | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Destigmatization- Pregnancy | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |