Postpartum Depression from the Perspective of Third-Wave Psychotherapies

Üçüncü Dalga Psikoterapiler Çerçevesinden Doğum Sonrası Depresyon

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ABSTRACT

The pregnancy and postpartum period represent a sensitive transitional phase characterized by significant physiological and psychological changes in women's lives, during which various psychological issues may emerge. A psychological condition frequently encountered in this period is postpartum depression. This may directly affect maternal health and adversely influence the infant and the mother-infant interaction. Among treatment options, psychotherapy and psychopharmacological treatments are prominent, with especially cognitive-behavioral therapy and interpersonal therapy being widely preferred approaches for addressing this disorder. However, both therapeutic methods have certain limitations. Given the limitations of existing treatment methods, there is a pressing need for more effective and innovative intervention approaches to address this disorder. In this context, third-wave cognitive-behavioral therapies offer new treatment alternatives that have the potential to overcome the limitations of traditional therapeutic approaches. In this review, postpartum depression is examined from the perspective of third-wave cognitive-behavioral therapies. The main findings regarding the intervention processes of Acceptance and Commitment Therapy, Dialectical Behavior Therapy, Metacognitive Therapy, Mindfulness-Based Therapies, and Compassion-Focused Therapy are discussed. As a result, with third-wave cognitivebehavioral therapy approaches the negative effects of pregnancy and the postpartum period on women could be alleviated by working on issues such as acceptance of emotions, ruminative thinking, emotion regulation skills, and increasing awareness of internal processes.

Keywords: Postpartum depression, third-wave cognitive-behavioral therapies, pregnancy

ÖZ

Hamilelik ve doğum sonrası dönem, kadınların yaşamlarında önemli fizyolojik ve psikolojik değişikliklerin yaşandığı, aynı zamanda çeşitli psikolojik sorunların ortaya çıkabileceği hassas bir geçiş sürecidir. Bu dönemde sıklıkla karşılaşılan psikolojik bir durum ise doğum sonrası depresyondur. Bu durum, anne sağlığını doğrudan etkileyebileceği gibi, bebek ve bebekle olan etkileşimi de olumsuz yönde etkileyebilmektedir. Tedavi seçenekleri arasında psikoterapi ve psikofarmakolojik tedaviler öne çıkmakta, özellikle bilişsel davranışçı terapi ve kişilerarası terapi, bu bozukluğun tedavisinde yaygın olarak tercih edilen yaklaşımlar arasında yer almaktadır. Ancak, her iki terapi yönteminin de belirli sınırlılıkları bulunmaktadır. Mevcut tedavi yöntemlerinin sınırlılıkları göz önünde bulundurulduğunda, bu bozukluğun tedavisinde daha etkili ve yenilikçi müdahale yaklaşımlarına ihtiyaç duyulmaktadır. Bu bağlamda, üçüncü dalqa bilişsel davranışçı terapiler, geleneksel terapötik yaklaşımların sınırlılıklarını asma potansiyeline sahip yeni tedavi alternatifleri sunmaktadır. Bu derlemede, doğum sonrası depresyon üçüncü dalga bilişsel davranışçı terapiler perspektifinden incelenmiş ve kabul ve kararlılık terapisi, diyalektik davranış terapisi, metakognitif terapi, bilinçli farkındalık temelli terapiler ve şefkat odaklı terapilerin müdahale süreçlerine ilişkin temel bulguları ele alınmıştır. Sonuç olarak, üçüncü dalga bilişsel davranışçı terapi yaklaşımları ile duyguların kabulü, ruminatif düşünme, duygu düzenleme becerileri ve içsel süreçlere dair farkındalığı arttırma gibi konular üzerinde çalışılarak hamilelik ve doğum sonrası dönemin kadınlar üzerindeki olumsuz etkisinin hafifletilebileceği görülmüştür.

Anahtar sözcükler: Doğum sonrası depresyon, üçüncü dalga bilişsel davranışçı terapiler, hamilelik

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Introduction

Pregnancy and the postpartum period are recognized as critical transitional phases in a woman's life, characterized by profound changes and associated with increased vulnerability to various psychological disorders. Studies have reported elevated levels of somatic, obsessive-compulsive, and depressive symptoms, along with heightened psychological symptoms such as anxiety, hostility, paranoid ideation, psychoticism, anger, guilt, and perceived stress during this period (Graham et al. 2002, Bruno et al. 2017, Romero-Gonzalez et al. 2020). Furthermore, this period has been identified as a critical time for the onset and exacerbation of a range of psychopathologies (Meltzer-Brody et al. 2018), including generalized anxiety disorder (Misri et al. 2015, Goodman et al. 2016), post-traumatic stress disorder (Seng et al. 2010), panic disorder (Dannon et al. 2006, Martini et al. 2020), obsessive-compulsive disorder (Fairbrother et al. 2021, Miller et al. 2022), and eating disorders (Knoph et al. 2013).

Another disorder commonly observed during pregnancy and the postpartum period is postpartum depression (O'Hara and Swain 1996, Romero-Gonzalez et al. 2020, Liu et al. 2022, Tsai et al. 2023). According to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5), postpartum depression is defined as the presence of major depressive disorder symptoms occurring either during pregnancy or within four weeks following childbirth, persisting for at least two weeks (APA 2013). For a diagnosis, the presence of a depressed mood or a marked loss of interest or pleasure must persist for a minimum of two weeks. Additionally, symptoms such as increased or decreased appetite, hypersomnia or insomnia, psychomotor retardation or agitation, decreased energy, feelings of guilt or worthlessness, difficulty concentrating, suicidal ideation, and functional impairment may also be present. Although the DSM-5 specifies postpartum period as the first four-weeks following childbirth, different studies and measurement tools have variably defined this period as extending up to three months, six months, or even one year (Moraes et al. 2017).

It has been established that the prevalence of postpartum depression in the international literature ranges between 10% and 15% (O'Hara and Swain 1996, Liu et al. 2022, Tsai et al. 2023), with evidence indicating an increasing trend over the years and higher rates observed in low- and middle-income countries (Hahn-Holbrook et al. 2018, Wang et al. 2021). In Turkey, the prevalence of postpartum depression is reported to be rising, with estimates ranging between 15% and 32% (Ayvaz et al. 2006, Gümüş et al. 2012, Arıkan et al. 2016, Tan et al. 2019).

The pregnancy process inevitably leads to social, psychological, and hormonal changes. In connection with these changes, the literature has identified various individual and environmental factors that increase the risk of developing postpartum depression. Primarily, there is substantial scientific evidence indicating that biological factors, such as hormonal changes during pregnancy and genetic predisposition, play a significant role in the development of postpartum depression (Stewart and Vigod 2019, Konjevod et al. 2023). Additionally, prominent risk factors include depression and anxiety experienced during pregnancy, premenstrual syndrome, pregnancy or childbirth complications, sleep deprivation, pregnancy loss, unplanned pregnancies, exposure to life stressors, dissatisfaction with body image, marital problems and domestic violence, low socioeconomic status, employment status, and the likelihood of recurrence of perinatal depression (Cho et al. 2022, Gastaldon et al. 2022, Saharoy et al. 2023).

Moreover, the idealization of motherhood at both personal and societal levels creates unrealistic expectations for pregnant women, and when reality fails to align with these expectations, stress levels can increase (Maxwell et al. 2018). In Western societies, where individualism is more prevalent, individuals often receive limited support from their social surroundings, and mothers may find themselves isolated in meeting the demands of infant care, particularly in the absence of paternal involvement (Hayes et al. 2000). Furthermore, in some cultures, postpartum depression is poorly understood, and women who have recently given birth may find it difficult or impossible to express their negative emotions related to the postpartum experience (Maxwell et al. 2018).

Studies have shown that mothers experiencing postpartum depression tend to have poorer physical and psychological health, lower quality of life, and reduced levels of perceived social support. They also report

greater difficulties in their social and romantic relationships, and exhibit higher rates of risky behaviors such as smoking, alcohol consumption, and suicidal ideation (O'Hara and McCabe 2013, Suri et al. 2014, Brummelte and Galea 2016, Goodman 2019, Slomian et al. 2019). Furthermore, these studies report that infants of mothers with postpartum depression experience problems in social, cognitive, and language development, have poorer sleep quality, display more problematic behaviors, and are more likely to suffer from health issues. From the perspective of mother-infant interaction, postpartum depression has been associated with lower maternal caregiving quality, breastfeeding difficulties, and attachment problems, all of which negatively impact the development of a healthy mother-infant relationship (O'Hara and McCabe 2013, Brummelte and Galea 2016, Slomian et al. 2019). Moreover, it has been observed that in women diagnosed with depression during pregnancy who received pharmacological treatment and/or psychotherapy, postpartum depressive symptoms were alleviated (Yazıcı et al. 2015); however, in the absence of treatment, symptoms may persist even beyond the second year postpartum (Goodman 2004).

Given the prevalence of postpartum depression both globally and in our country, as well as its detrimental effects on mothers, infants, and mother-infant interactions if left untreated, effective treatment is considered crucial. Psychotherapy and psychopharmacological interventions have been proposed as firstline treatment options. Psychotherapy is recommended for mild to moderate depression, while a combination of psychotherapy and pharmacotherapy is advised for moderate to severe cases (American College of Obstetricians and Gynecologists 2023). When it comes to antidepressant treatment, women experiencing postpartum depression-particularly during pregnancy-often face difficulties in making decisions regarding medication use, with many expressing a preference for psychotherapy over pharmacological interventions (Goodman 2009, Walton et al. 2014). Some studies have linked prenatal antidepressant use to an increased risks of ADHD (Clements et al. 2014), autism spectrum disorder (Man et al. 2015), and certain adverse effects on gross motor skills and language development (Suri et al. 2014) whereas other research suggests that the use of antidepressants during pregnancy does not pose a serious teratogenic risk (Yonkers et al. 2014). Regarding antidepressant use during breastfeeding period, the literature is relatively limited. As Çopoğlu et al. (2015) point out, a profit-loss analysis should account for the teratogenic effect that could be transferred from breast milk to the infant. Nevertheless, further research is needed to better understand the long-term effects of pharmacological treatments for postpartum depression (Brummelte and Galea 2016).

Psychotherapy is considered a fundamental treatment option for addressing the emotional challenges that arise due to the changes experienced during pregnancy and the postpartum period. Cognitive Behavioral Therapy (CBT) and Interpersonal Psychotherapy (IPT) are regarded as first-line treatments for postpartum depression (O'Hara et al. 2000, Zlotnick et al. 2001, Huang et al. 2018, Roman et al. 2019, Van Lieshout et al. 2020). However, several limitations have been identified. These include limited therapeutic effects and findings indicating only moderate efficacy (Cuijpers et al. 2008, Werner et al. 2015), a predominant focus on short-term outcomes with a lack of evidence regarding long-term effects (Cuijpers et al. 2008, Werner et al. 2015, Stamou et al. 2018), methodological issues in some studies such as lack of randomization, small sample sizes, and absence of control groups (Stamou et al. 2018, Haseli and Mohamadi 2019), and low rates of treatment engagement and completion (Haseli and Mohamadi 2019). Given these limitations, the current study approaches postpartum depression through the framework of third-wave CBT approaches, including Acceptance and Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT), Mindfulness-Based Therapies, Metacognitive Therapy (MCT), and Compassion-Focused Therapy (CFT).

A systematic review addressing postpartum depression from the perspective of third-wave CBT approaches exists in the literature (Rodríguez-Muñoz et al. 2023). However, this review covers studies published between 2000 and 2022 and does not include research on Metacognitive Therapy (MCT) and Compassion-Focused Therapy (CFT). To date, no comprehensive review has been found in the literature that collectively and extensively examines postpartum depression through the framework of the aforementioned third-wave CBT approaches. In this context, the aim of the present study is to examine postpartum depression from the perspective of third-wave CBT approaches—including Acceptance and Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT), Mindfulness-Based Therapies, Metacognitive Therapy (MCT), and Compassion-Focused Therapy (CFT)—and to synthesize the core

findings. In doing so, this study seeks to guide future research and contribute to the development of more effective treatment strategies for clinical practice.

From the Perspective of Acceptance and Commitment Therapy

ACT, a therapeutic approach primarily aimed at enhancing individuals' ability to act in alignment with their values while alleviating the inevitable psychological pain inherent in life, is structured around six core processes: contact with the present moment, cognitive defusion, acceptance, self-as-context, values, and committed action (Hayes and Pierson 2005, Hayes et al. 2006). Contact with the present moment involves the individual's conscious focus on the physical world and internal experiences, rather than dwelling on the past or the future, thereby fostering a connection with current experiences. Cognitive defusion refers to the process of reducing the literal meaning attributed to internal experiences, allowing individuals to perceive thoughts, emotions, images, and memories simply as mental events, rather than merging with them. Acceptance, in contrast to efforts aimed at avoiding, controlling, or altering unpleasant internal experiences, entails opening up to and allowing these experiences to unfold as they are. Self-as-context emphasizes viewing oneself not as the content of constantly changing internal experiences, but rather as an observer distinct from these experiences. Values are conceptualized as desired qualities of physical and psychological actions, representing what an individual truly cares about, how they wish to behave consistently, and the kind of person they aspire to become. Finally, committed action involves the development of broader, flexible, and effective patterns of behavior that are consistently redirected toward chosen values (Hayes and Pierson 2005, Harris 2006, Twohig 2012, Harris 2024). These six core processes together constitute what is known as the psychological flexibility model. In the therapeutic process, the use of metaphors, logical paradoxes, and experiential exercises aims to enhance psychological flexibility by working through these six processes (Hayes and Pierson 2005, Harris 2006).

According to ACT, psychological inflexibility, which is the opposite of psychological flexibility, lies at the root of psychopathology (Hayes et al. 2006). The six pathological processes underlying psychological inflexibility—attentional rigidity, cognitive fusion, experiential avoidance, self-as-content, lack of connect with values, and ineffective action (Harris 2006, Hayes et al. 2006)—are regarded as the counterparts of the six core processes of psychological flexibility, with each contributing to the development of psychological inflexibility (Hayes et al. 2006). Psychological inflexibility hampers individuals' ability to adapt to internal and external contexts, thereby contributing to the emergence of various forms of psychopathology and associated symptoms (Harris 2024).

ACT does not provide a specific explanatory model for the onset of postpartum depression. However, consistent with its conceptualization of other forms of psychopathology, postpartum depression has been examined within the framework of psychological inflexibility (Zettle 2015). It has been proposed that the six core pathological processes associated with psychological inflexibility exacerbate the severity of depressive symptoms during pregnancy and the postpartum period (Monteiro et al. 2019, Shojaeifar et al. 2022). Similarly, another study demonstrated that psychological inflexibility plays a role in the maintenance of postpartum depressive symptoms (Thomas et al. 2023). Accordingly, rather than mindfully acknowledging and accepting the ordinary stressors, negative emotions and thoughts that may arise during pregnancy and the postpartum period, attempts to cognitively fuse with or avoid these experiences may contribute to the onset and persistence of depressive symptoms. Based on this understanding, increasing psychological flexibility is identified as a key therapeutic target in the treatment of postpartum depression (Zettle 2015).

Waters et al. (2020) discussed the adaptation of ACT techniques and experiential exercises to the perinatal context for women experiencing pregnancy and postpartum depression. This adaptation involves tailoring core ACT skills to the experiences of childbirth and parenting. For instance, within a mindfulness exercise, the mother may focus her attention on the baby. Similarly, Bonacquisti et al. (2017) emphasized that ACT-based group interventions during pregnancy and the postpartum period aim to enhance psychological flexibility by adapting therapeutic content to the perinatal context. For example, a woman who is experiencing heightened anxiety about an impending birth and increasing depressive symptoms while

adjusting to the maternal role may be asked to reflect on how her attempts to avoid difficult thoughts and emotions impact her quality of life and mood, and instead of avoidance, the therapeutic focus may shift toward exploring the possibility of fully embracing the reality of the experience as it is (Acceptance). Intrusive, unwanted thoughts regarding her competence in caring for her baby may also be addressed by highlighting that such thoughts are merely mental events and do not reflect reality, thereby encouraging the mother to engage more openly with her baby rather than withdrawing (Cognitive Defusion). For a woman who exhibits reactive behaviors fueled by future-oriented worries about her baby's health, her maternal adequacy, or family relationships, and who experiences depressive feelings about the past, mindfulness practices can be introduced as a method for anchoring attention in the present moment. She can be encouraged to consciously observe the emotions arising during her interactions with her baby, rather than being preoccupied with the past or future (Contact with the Present Moment) (Bonacquisti et al. 2017).

Related Studies

ACT has been found effective in treating various psychopathologies, including depression (Karlin et al. 2013, Zemestani and Mozaffari 2020), anxiety (Mohabbat-Bahar et al. 2015, Heydari et al. 2018), generalized anxiety disorder (Wetherell et al. 2011), social anxiety disorder (Khoramnia et al. 2020), panic disorder (Meuret et al. 2012), obsessive-compulsive spectrum disorders (Bluett et al. 2014), and post-traumatic stress disorder (Meyer et al. 2018, Wharton et al. 2019). In the literature, the effect of ACT on postpartum depression has been examined through depressive symptoms (Shojaeifar et al. 2022), psychological distress (Waters et al. 2020), mother-infant attachment (Witteveen 2020), psychological flexibility (Waters et al. 2020), anger levels (Sadeghirad et al. 2021), and sleep quality (Ezadee and Rasouli 2019), and it has been found that ACT is effective in the treatment of postpartum depression (Ezadee and Rasouli 2019, Monteiro et al. 2019, Waters et al. 2020). Reviewing the literature reveals that studies on ACT often focus on components of psychological flexibility. Relatedly, Monteiro et al. (2019) investigated the protective role of psychological flexibility in a study involving 185 women aged between 19 and 43 who were at risk of developing postpartum depression and anxiety. According to the results, women who did not exhibit depressive or anxiety symptoms had higher levels of psychological flexibility and were less prone to judgmental thinking compared to those who developed symptoms.

ACT has also been implemented as group therapy for women with postpartum depression and found to be effective (e.g., Waters et al. 2020, Shojaeifar et al. 2022). In a study conducted with 52 women aged between 18 and 45, who had given birth two to six months ago and had been diagnosed with moderate depression, the impact of ACT group therapy on postpartum depression was examined. The findings indicated that eight sessions of ACT group therapy significantly reduced depressive symptoms in women with moderate postpartum depression, and the mean depression scores of the therapy group were significantly lower than those of the control group that did not receive therapy (Shojaeifar et al. 2022). In another study involving 74 women aged between 23 and 41, who were either pregnant or within 12 months postpartum and exhibited moderate to high levels of mood and/or anxiety symptoms, a group therapy intervention was carried out in which the six core processes of ACT were adapted to the perinatal context, employing various techniques and experiential exercises (Waters et al. 2020). This study showed that following the eight-week ACT group therapy, women demonstrated a significant increase in psychological flexibility and a significant decrease in depressive symptoms.

Additionally, in a self-help program that conveyed information about ACT's six core processes through a book, supported by daily mindfulness exercises and weekly motivational emails, data were collected at four different time points between the 14th and 20th weeks of pregnancy and up to four months postpartum. The findings indicated that the self-help program based on ACT principles effectively reduced postpartum depression symptoms (Witteveen 2020). Furthermore, compared to a standard care group (participants who continued regular appointments with healthcare providers but were not included in the ACT-based self-help program), the self-help program was found to be effective in reducing the duration and severity of depressive symptoms, increasing maternal psychological resilience, improving postpartum

mother-infant attachment, and promoting more positive developments in areas such as infant motor development and social interaction (Witteveen 2020).

In a study involving 45 women aged between 18 and 44 with postpartum depression, the effects of nine sessions of ACT and CBT on anger were compared. The findings indicated that both therapy methods were significantly more effective in reducing anger levels compared to a control group that received no treatment, however, no significant differences were found between the ACT and CBT groups (Sadeghirad et al. 2021). Moreover, when the effects of CBT and ACT were re-evaluated three months after the conclusion of the intervention, no significant difference in anger levels was found between the CBT group and the untreated control group, whereas anger levels in the ACT group remained significantly lower compared to the control group.

The durability of ACT's effectiveness in treating postpartum depression has been examined through follow-up studies. The maintenance of improvements in postpartum depression symptoms observed after ACT interventions suggests that the effects of ACT may be long-term (Sadeghirad et al. 2021, Shojaeifar et al., 2022). Additionally, the studies reported high session attendance rates and low dropout rates (Waters et al. 2020, Shojaeifar et al. 2022). However, it should be noted that there is still a limited number of studies investigating the effectiveness of ACT in the treatment of postpartum depression.

From the Perspective of Dialectical Behavior Therapy

DBT approach is grounded in dialectical philosophy, which posits that reality is not static, that there are two opposing views—thesis and antithesis—and that the synthesis of these opposites gives rise to new, opposing perspectives (Linehan 1993). According to this philosophy, during psychotherapy, the DBT therapist adopts the belief that if there is a thesis (what the therapist says), there must also be an antithesis (what the client says), without engaging in conflict or insisting on their own viewpoint (Çelebi 2017). DBT is a multi-component, evidence-based cognitive and behavioral therapy method. It comprises four skill training modules: mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness. DBT primarily emphasizes the validation of a person's emotions, thoughts, and conditions. The individual is accepted as they are. Acknowledging the limitations of a person's past, present, and future is essential for change; only after acceptance, a favorable environment for change can be created (Rogers 1961). The coexistence of two seemingly opposing strategies—acceptance and change—also constitutes a dialectical process (Pederson 2015).

Linehan (1993) states that the primary cause of the emergence of psychopathologies lies in difficulties with emotion regulation and addresses these difficulties within the framework of the biosocial model. According to this model, individuals may be genetically predisposed to experiencing certain emotions, while their social environment often fails to understand, validate, or acknowledge these emotions—creating a context conducive to the development of psychopathology. DBT was initially developed for individuals with suicidal tendencies; however, it was later redesigned in both content and methodology to address the needs and challenges of individuals with borderline personality disorder (Linehan and Wilks 2015). One of the clinical domains in which DBT has been applied is postpartum depression.

Pregnancy marks the beginning of a period filled with new developments, and the awareness of impending fundamental changes in life conditions can evoke a range of emotions or emotional dysregulation in individuals (Johns and Belsky 2007). Emotional dysregulation is known to predict suicidal behavior (Zlotnick et al. 2003), and suicide is one of the leading causes of maternal death following childbirth (Knight et al. 2015). Considering its scope and original purpose, DBT offers support to women experiencing postpartum difficulties by helping them adapt to new conditions, accept the changes that come with them, or create the necessary conditions for change (Agako et al. 2023).

As mentioned above, the inability of the social environment to recognize and validate a person's emotions contributes to emotional dysregulation and the development of psychopathology, including postpartum depression. In some cultures, the concept of postpartum depression is not well understood, and women who experience it often report that their feelings are invalidated or criticized (Maxwell et al. 2018). In

cultures where motherhood is idealized, it can be anticipated that a mother who does not want to see or care for her baby may be subject to negative perceptions (Tunçdemir 2023). In this context, DBT focuses on addressing feelings of rejection in individuals who are sensitive to being rejected, and it explores how to cope with the negative emotions that result from a lack of inclusive support in their environment (Üstündağ-Budak and Özeke-Kocabaş 2019). In contrast to environments where emotions are not understood and social support is lacking, DBT offers a space that provides the inclusiveness needed by women experiencing postpartum depression (Pederson 2015).

Hellberg et al. (2023) note that the core DBT skill modules—mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness—are adapted to the perinatal period when applied to women with postpartum depression. For example, during mindfulness training, clients are asked to practice mindfulness while engaging in baby-related activities such as bathing or feeding. In the distress tolerance module, emphasis is placed on facing distressing situations (e.g., the baby's restlessness) and remaining with the emotional experience without trying to change it. Emotion regulation training focuses on recognizing how parenting-related beliefs may trigger negative emotions, while the interpersonal effectiveness module encourages individuals to disengage from unhealthy relationships, build healthier connections, seek help when needed, and establish personal boundaries.

Related Studies

Recent studies have demonstrated that DBT is an effective treatment method for various disorders such as eating disorders (Navarro-Haro et al. 2024), depression (Harley et al. 2008), post-traumatic stress disorder (Steil et al. 2011), and substance use (Dimeff and Linehan 2008). The effectiveness of DBT has also been investigated in women with postpartum depression in relation to emotion dysregulation (Wilson and Donachie 2018; Agako et al. 2023), mother-child attachment (Freethy et al. 2020), depression and anxiety (Rabiee et al. 2020, Amiri et al. 2021, Nunnery et al. 2021). Findings indicate that DBT improves emotion dysregulation as well as depression and anxiety symptoms in women experiencing postpartum depression. However, DBT has not been found to have a therapeutic effect on mother-infant bonding (Freethy et al. 2020).

DBT has also been found effective in situations where postpartum depression is accompanied by additional stressors. For example, in one case study, guilt feelings related to the possibility of having transmitted the virus to her surroundings and her baby were addressed through DBT in a woman who was in the early stages of postpartum depression and had tested positive for COVID-19 along with her spouse. (Huang et al. 2020). The DBT therapist addressed the client's feelings of guilt by considering both the positive and negative aspects of the situation together, reinforcing the belief that "there are always positive sides even in the worst-case scenario" and according to the findings, improvement was observed in the client's emotion regulation by the end of the sessions. In another study, DBT was adapted to suit the developmental level and specific needs of the participants, was implemented over 13 weeks with 25 adolescent mothers with postpartum depression, whose mean age was 19 (Kleiber et al. 2017). The results indicated that the adolescent mothers benefited from DBT in terms of reduced depressive symptoms; however, their participation rates were lower than in other DBT studies, due to school attendance requirements and childcare responsibilities.

DBT has been recommended by clinicians as a suitable treatment alternative for women with postpartum depression across various countries and cultures, including Wales (Freethy et al. 2020), the United Kingdom (Wilson and Donachie 2018), Iran (Amiri et al. 2021, Rabiee et al. 2020), Canada (Agako et al. 2023), and China (Huang et al. 2020). Studies emphasize that emotion regulation—the cornerstone of DBT (Freethy et al. 2020, Agako et al. 2023)—as well as acceptance (Rabiee et al. 2020, Nunnery et al. 2021) are appropriate strategies for addressing postpartum depression. However, certain limitations have been noted that negatively impact the therapy process, such as low session attendance (Kleiber et al. 2017) and the physical distance of therapy centers from clients (Wilson and Donachie 2018). Moreover, since most of the studies have been conducted either with small sample sizes (Agako et al. 2023) or in the form of case studies (Huang et al. 2020, Nunnery et al. 2021), there is a need for replication with larger, more representative sample groups.

From the Perspective of Mindfulness-Based Therapies

Rooted in Eastern meditation practices, mindfulness refers to directing one's attention to internal and external experiences occurring in the present moment (Kabat-Zinn 1990, Baer 2003). The core principles of mindfulness include: refraining from judging one's present experience; exercising patience toward one's mind and body; adopting a beginner's mind that viewing the world as if for the first time; cultivating trust in oneself and one's emotions; not striving toward a specific goal; accepting things as they are; and letting go of thoughts that linger in the mind (Kabat-Zinn 1990). Bishop et al. (2004) provided an operational definition of mindfulness based on two main components: (1) self-regulation of attention so as to enhance awareness of present-moment internal experiences, and (2) adopting a curious, open, and accepting attitude toward one's immediate experience.

Mindfulness-Based Cognitive Therapy (MBCT) was developed by integrating elements of Mindfulness-Based Stress Reduction (Kabat-Zinn 1982) with components of CBT (Segal et al. 2002). This psychotherapy approach focuses on altering one's relationship with unwanted emotions and thoughts through mindfulness meditation. Rather than avoiding these experiences or becoming trapped in habitual automatic patterns, individuals learn to observe them with awareness (Ma and Teasdale 2004). As a result, they develop greater cognitive flexibility, become more attuned to their physical sensations and bodily responses, and cultivate an accepting attitude toward their emotions (Goodman et al. 2014).

MBCT was originally developed to treat recurrent depression (Segal et al. 2002). Since women who have previously experienced depression are at greater risk for postpartum depression (Goodman and Tully 2009), MBCT has been proposed as a suitable treatment option for postpartum depression as well (Dimidjian et al. 2015). According to MBCT, the recurrence of depression is triggered by the reactivation of negative emotions and patterns of thinking (Segal et al. 2002). Mindfulness practice emphasizes that people often struggle to remain in the present moment due to thoughts about the past or future, which blurs their awareness. Perceiving the present with a clear mind is crucial, as one's perception of the present shapes their reality (Shapiro and Carlson 2017). Therefore, this therapeutic approach views psychopathology—particularly depression—from a perspective that acknowledges the transient nature of emotions, encourages individuals to feel these emotions in the moment, and then release them.

There is no specific theoretical explanation within mindfulness-based therapies that directly addresses postpartum depression. However, intervention programs designed to treat recurrent depression have been adapted for the treatment of postpartum depression. Pregnancy and childbirth are recognized as stressful experiences (Romero-Gonzalez et al. 2020), and it is emphasized that individuals with a history of depression may experience an automatic activation of ruminative and depressive thought content during such challenging periods (Segal et al. 2006). Mindfulness practices aim to prevent the recurrence of depression during and after pregnancy by replacing these automatic thought patterns (Dimidjian et al. 2014).

Related Studies

The effectiveness of mindfulness-based therapies has been explored in the literature across a range of psychological conditions such as addiction (Rogojanski et al. 2010), schizophrenia (Qin et al. 2024), and adult ADHD (Poissant et al. 2020). Numerous studies have also found that mindfulness has a positive impact on depression (e.g., Geschwind et al. 2011, van Aalderen et al. 2012). Additionally, mindfulness-based interventions have been suggested as a suitable therapeutic context for postpartum depression (Dimidjian et al. 2015). Mindfulness-based interventions have been shown to be effective in reducing depression, anxiety, and stress in pregnant women (Dunn et al. 2012, Lavender et al. 2016, Luberto et al. 2017), as well as in preventing depression relapse (Dimidjian et al. 2014). Both group-based interventions (Shulman et al. 2018) and those delivered via smartphone applications (Sun et al. 2021) have demonstrated efficacy. Furthermore, it has been found that individuals with higher levels of mindfulness as a personality trait—such as the ability to observe internal experiences, label them, accept without judgment, and act with awareness—exhibit fewer symptoms of postpartum depression (Godbout et al. 2023).

In the guideline prepared by MacQueen and colleagues (2016), mindfulness-based therapy is recommended as a third-line treatment for postpartum depression. Mackiewicz-Seghete and colleagues (2020) describe mindfulness-based therapy as a preventative treatment for postpartum depression, suggesting that it exerts its effects by enhancing emotion regulation. Similarly, an internet-based program that combined mindfulness and self-compassion was implemented with 144 pregnant women aged between 18 and 40, and it was concluded that the program had a preventive effect on postpartum depression (Guo et al. 2019).

In addition to mindfulness-based therapy, there are mindfulness-based practices that specifically address childbirth-related processes (pregnancy, labor, and breastfeeding), such as mindfulness-based childbirth and parenting education programs, aim to alleviate stressors specific to this period through mindfulness meditation practices (Ocak Aktürk and Yılmaz 2023). Such programs include components of mindfulness-based interventions, including body scanning, pain awareness and its connection to childbirth, awareness of painful sensations and thoughts, self-compassion, and mindfulness skills related to motherhood (Byrne et al. 2013). Several studies have demonstrated the effectiveness of mindfulness-based childbirth and parenting education in reducing symptoms of depression (Duncan and Bardacke 2009, Woolhouse et al. 2014).

Hall and colleagues (2015) reviewed studies that examined the effects of mindfulness-based interventions on the mental health of pregnant women. According to their findings, psychoeducation, breathing and body exercises for nonjudgmental acceptance of emotions and thoughts, as well as practices like yoga and walking meditation, are frequently used methods in these studies. Mindfulness-based therapy is reported to help participants become aware of negative triggers, step out of ruminative and depressive cognitive cycles and take action to regulate their mood (Dimidjian et al. 2014), pause and breathe, develop an accepting attitude, and stay in the present moment (Dunn et al. 2012)—thus supporting them in coping with pregnancy and parenting. Additionally, it is also stated that mindfulness-based interventions require active engagement, and incorporating these practices into daily routines has been found to foster a sense of control in women (Shulman et al. 2018).

Min and colleagues (2023) found that mindfulness interventions reduced negative emotions and depressive symptoms in pregnant women, however, they were not effective for women who exhibited severe depressive symptoms prior to childbirth. It has also been reported that mindfulness does not reduce the severity of depression (Dimidjian et al. 2015), and that in cases where pregnant women experience comorbid psychopathologies, mindfulness practices do not lead to significant improvements (Krusche et al. 2019). Therefore, while mindfulness may be effective for mild depressive symptoms (Shulman et al. 2018, Min et al. 2023), its effectiveness appears to be limited in more severe cases. Considering the existing literature, it can be inferred that mindfulness-based therapy interventions serve a protective or preventive function against depression both before and after childbirth.

From the Perspective of Metacognitive Therapy

MCT emerged as an integrative cognitive approach for the treatment of psychological disorders that incorporates the concept of metacognition (Wells 1995, Wells and Matthews 1996). Metacognition, or "thinking about thinking," refers to a person's awareness of and ability to regulate their own cognitive processes (Flavell 1979, Wells 2009). MCT is a transdiagnostic therapy and is based on a self-regulatory executive function model, which posits that metacognitive beliefs—beliefs about one's thoughts—are responsible for the onset and maintenance of psychopathology, particularly in how individuals respond to stressful thoughts and situations (Wells and Matthews 1996). Metacognitive beliefs are the core determinants of how individuals evaluate and manage their thoughts. These beliefs are typically classified as either positive or negative. Positive metacognitive beliefs involve the perception that certain thought patterns are beneficial (e.g., "If I focus on dangers, I'll stay safe"), whereas negative metacognitive beliefs involve assumptions about losing control over thoughts or about thoughts being inherently dangerous (e.g., "I can't control my mind" or "My thoughts will harm me") (Wells 2013).

Wells (2009) proposed that all psychological disorders are linked to common cognitive and attentional responses and stem from a particular thinking style known as the Cognitive Attentional Syndrome (CAS).

CAS consists of repetitive negative thinking styles such as worry, rumination, and threat monitoring, along with dysfunctional coping strategies like thought suppression and avoidance. Furthermore, CAS is generated and maintained by metacognitive beliefs. It becomes activated as a coping strategy through positive metacognitive beliefs about CAS (e.g., that it is helpful), but once activated, it leads to emotional distress in the individual due to negative metacognitive beliefs about coping (e.g., that it is uncontrollable and dangerous) (Wells 2009).

According to the metacognitive model of depression, the process of repetitive negative thinking is the primary factor in maintaining depression (Wells 2009). Rumination, a core cognitive feature of depression, is defined as the persistent focus on one's feelings and problems (Nolen-Hoeksema et al. 2008). Positive beliefs about rumination increase the tendency to ruminate in response to depressed mood, activating the rumination process. Once activated, rumination leads to depressive symptoms through negative metacognitive beliefs about the uncontrollability and danger of these ruminative thoughts (Papageorgiou and Wells 2003).

The relationship between repetitive negative thinking and depression, emphasized in the metacognitive model of depression, has also been found to be evident during the postpartum period, and repetitive negative thinking has been found to be associated with postpartum depression and with positive metacognitive beliefs (Moulds et al. 2023). During pregnancy, cognitive processes-involving thought and attention processes particularly those associated with the development of psychiatric disorders—and the negative impact of repetitive negative thinking have been highlighted for their negative impacts on both the mother and the infant (Stein et al. 2009). In a study examining the role of cognitive factors in the persistence of depressive symptoms from pregnancy into the postpartum period, rumination was found to predict long-term depressive symptoms (Barnum et al. 2013). Consistent with this, a comparison study between pregnant women with and without depression found that depressed pregnant women were more likely to hold positive beliefs about rumination, and that these positive beliefs predicted depression during pregnancy (Isa-Alfaraj et al. 2009). In addition to rumination, similar results have been obtained in studies regarding worry, another form of repetitive negative thinking. Studies have shown that worry at the beginning of pregnancy is associated with depressive symptoms later on (Penacoba-Puente et al. 2016, Schmidt et al. 2016). Another study found that high levels of worry during pregnancy increased the likelihood of developing postpartum depression by fourfold (Osborne et al. 2021). Furthermore, metacognitive evaluations of postpartum cognitions, emotions, and states have also been found to be related to postpartum depression (Fonseca and Canavarro 2020).

Although there are studies in the literature supporting the metacognitive model of rumination and depression, a model specifically defined for postpartum depression has not yet been established. In a study that adapted the metacognitive model of rumination to postpartum depression, it was found consistent with the broader depression model-that positive metacognitive beliefs about rumination increased rumination, and through negative metacognitive beliefs, predicted postpartum depression (Petrošanec et al. 2022). In another study aiming to develop a theoretical model for postpartum depression based on existing research on worry and rumination in the literature, a cognitive processing model was proposed to explain how postpartum depression emerges and is maintained (DeJong et al. 2016). This model is built around cognitive bias (the tendency to excessively focus on negative information) and cognitive control difficulty (the inability to regulate negative thoughts), focusing on how low mood and environmental cues trigger rumination. The proposed model suggests that rumination has a two-way connection: top-down cognitive control difficulty and bottom-up cognitive biases. Top-down processing refers to the influence of an individual's existing beliefs and thoughts on their perception. Due to cognitive control difficulties, the individual cannot disengage from negative thoughts, leading them to interpret surrounding cues more negatively. Bottom-up processing, on the other hand, describes how individuals perceive environmental cues. Increased sensitivity to negative information causes the mother to focus on negative thoughts about her parenting abilities. Rumination is initially triggered by internal (e.g., low mood or unwanted negative thoughts) or external factors (e.g., daily stressors, managing demands related to parenting, or coping with a baby's negative reactions), and it is maintained through cognitive biases and cognitive control difficulties. Rumination further strengthens cognitive biases and increases the tendency to ruminate. Cognitive control difficulties experienced by the individual reduce their ability to flexibly shift their attention, thereby trapping them in a cycle of repetitive thinking. This cognitive model of postpartum depression, based on the cognitive features of the disorder, appears to offer a coherent explanation for the repetitive and uncontrollable nature of rumination, as well as its persistence over time (DeJong et al. 2016).

Related Studies

The effectiveness of MCT has been tested in both clinical and non-clinical populations for the treatment of various psychological disorders (Wells et al. 2020). Systematic reviews and meta-analyses examining these studies have concluded that MCT shows effective outcomes in the treatment of psychological disorders such as anxiety disorders, major depression, borderline personality disorder, post-traumatic stress disorder, psychosis, and obsessive-compulsive disorder (Normann et al. 2014, Normann and Morina, 2018, Philipp et al. 2019, Rochat et al. 2018).

Findings from research provide potential implications for clinical practice, suggesting that targeting repetitive negative thinking patterns—such as worry and rumination—and the positive beliefs associated with them may be important interventions for the prevention and treatment of depression during pregnancy and the postpartum period (Isa-Alfaraj et al. 2009, Osborne et al. 2021, Moulds et al. 2023). Given evidence indicating that CBT may not effectively reduce rumination and, consequently, may fail to prevent relapse, MCT is recommended as a treatment method that directly targets these processes (DeJong et al. 2016). MCT aims to enhance individuals' metacognitive control over the CAS through various strategies (Wells 2009). Studies in this area suggest that MCT reduces symptoms of rumination and depression, as well as symptoms of worry and anxiety (Papageorgiou and Wells 2000, Wells and King 2006, Wells et al. 2009, Wells et al. 2010).

In the first study examining the effectiveness of MCT for postpartum depression, the standard MCT protocol for depression was applied due to the similarities between postpartum depression and major depression. The results of this study, conducted with six participants aged between 18 and 41 who had infants aged 5 to 7 months, showed that MCT reduced symptoms of postpartum depression, decreased metacognitive beliefs, and that improvements in well-being were maintained at three- and six-month follow-ups (Bevan et al. 2013). In another study involving 30 women with postpartum depression (15 in the control group and 15 in the MCT group), it was observed that MCT led to improvements in emotion regulation, stress, and frustration levels compared to those who did not receive any intervention (Farzaneh and Afzali 2021). Additionally, the use of techniques such as detached mindfulness and attention training, key components of MCT, has been found effective in reducing postpartum depression symptoms (Pour et al. 2016, Ahmadpanah et al. 2018, Hashemi and Afshari 2019, Daryadel et al. 2022). However, there remains a lack of sufficient studies specifically addressing the treatment of postpartum depression within the MCT framework.

From the Perspective of Compassion-Focused Therapy

CFT is an integrative third-wave CBT approach that draws from neuroscience, evolutionary psychology, social and developmental psychology, and Buddhist traditions (Gilbert 2009, Carvalho et al. 2017). Paul Gilbert (2014) realized that some people have difficulty in showing compassion to themselves and developed this approach to understand the underlying basis of this situation and how attachment and compassion are effective in the emergence and healing of psychological problems.

CFT approaches human psychology from an evolutionary and functional perspective. It highlights psychological problems as arising from the interaction between ancient social motivational systems (e.g., forming groups and hierarchies, cooperation and sharing, giving and receiving care) and emotional systems (e.g., detecting and responding to threats, seeking rewards, experiencing satisfaction, safety, and tranquility), along with newly evolved cognitive abilities (e.g., problem-solving, imagining, anticipating, ruminating, self-perception) that emerged during human evolution. CFT uses compassion as a tool to manage these interactions, enabling individuals to develop self-esteem and strengthen their social

relationships (Gilbert 2014). Within this framework, CFT utilizes the "three affect regulation systems" approach: the threat system (fight or flight), the drive system (reward and excitement), and the soothing affiliative system (calmness and self-compassion). It aims to balance these three systems and was specifically developed for individuals with high levels of self-criticism, characterized by a dominant threat system and an underactive soothing system (Gilbert 2009, 2014). The therapeutic process includes breathing exercises, posture work, the use of facial expressions and vocal tones, and various activities designed to help balance the autonomic nervous system. Clients are also taught compassion cultivation exercises such as attention training, mindfulness practices, developing a compassionate self-identity, using compassionate imagery, writing compassionate letters, and regularly engaging in compassionate behaviors. In doing so, the therapy activates and internalizes the motivational, emotional, and cognitive systems that form the foundation of compassion (Gilbert 2014).

The aim of CFT is to help individuals cultivate experiences of inner warmth, safety, and calmness through the practice of self-compassion (Gilbert 2000, 2009). Self-compassion consists of three main components: approaching oneself with kindness and understanding during moments of suffering or failure, recognizing such experiences as part of the broader human condition, and responding to emotional difficulties with mindful awareness (Neff 2003a). This attitude helps individuals avoid harsh self-criticism and over-identification with negative emotions and thoughts, thereby promoting psychological well-being. Self-compassion has been shown to reduce negative emotional states such as depression, anxiety, and perfectionism, while increasing life satisfaction and encouraging proactive behavior to prevent suffering. Additionally, self-compassion fosters a more accurate self-awareness, enabling individuals to accept their limitations and engage in healthier self-assessment. A self-compassionate approach also strengthens coping with stress and enhances emotional regulation skills (Neff 2003b).

According to CFT, psychological problems arise from the overactivation or underactivation of individuals' social motivational systems and the ways these systems regulate one another. Additionally, evolutionary developments in cognitive functions can lead to issues such as narcissism, health anxiety, panic, fear of death, shame, self-criticism, and self-harm. These problems are generally considered to be associated with psychological difficulties through the activation of the threat system (Gilbert 2014). Moreover, Gilbert (2009) argues that shame and guilt are transdiagnostic issues that play a significant role in the onset and maintenance of various psychological disorders. From this perspective, when looking at pregnancy and the postpartum period, it becomes evident that self-criticism and shame are frequently experienced. Although pregnancy and motherhood are culturally portrayed as times of great happiness, not all women experience such emotions. Comparing themselves to cultural expectations, some women may perceive themselves as different or inadequate (Cree 2010). Adjustment to motherhood is deeply rooted in women's internal experiences, which can include negative thoughts and emotions. Societal expectations often make it difficult to accept these negative experiences, leading mothers to use maladaptive coping strategies, such as self-criticism and judgment of negative thoughts. Over time, these strategies can exacerbate negative experiences (Monteiro et al. 2019). Women who perceive themselves as different and inadequate may feel isolated, leading to shame, self-criticism, difficulty in sharing emotions related to their baby, and fear of being judged as inadequate (Cree 2010). Breastfeeding difficulties, a heightened sense of responsibility, feelings of fragmentation, and exhaustion have been found to contribute to maternal guilt (Constantinou et al. 2021). Among women who internalize the image of the "perfect mother," feelings of self-inconsistency, shame, and guilt become more common when they perceive themselves as falling short of this ideal, particularly under the fear of negative evaluation by others (Liss et al. 2013). Research shows that maternal shame and guilt during the postpartum period are associated with depressive symptoms, with shame-more than guilt-emerging as a stronger predictor of depressive symptoms (Dunford and Granger 2017, Caldwell et al. 2021).

Research has shown that high levels of self-criticism are significant factors in the onset and maintenance of depression (Lerman et al. 2012, Ehret et al. 2015). Various studies conducted during pregnancy and the postpartum period have revealed the detrimental effects of high self-criticism on postpartum depression (Vliegen and Luyten 2009, Gerhardt et al. 2024). In one study, it was observed that mothers' self-critical thoughts increased from pregnancy through 18 months postpartum, and this increase was associated with

heightened depressive symptoms (Brassel et al. 2020). Another recent study also found that high self-criticism and low self-compassion significantly predicted depression (Andrei et al. 2023). Specifically, self-criticism was found to contribute to postpartum depression by increasing the frequency of negative automatic thoughts and by negatively affecting the metacognitive evaluations of these thoughts (Pedro et al. 2019).

Cree (2010) specifically adapted CFT for mothers in the perinatal period to address feelings of shame and self-criticism, as well as to reduce attachment difficulties during pregnancy and postpartum. While the arrival of a new baby often evokes feelings of joy and compassion in mothers, threats such as hormonal changes, fatigue, and lack of support can disrupt this bond. CFT aims to strengthen the mother-infant attachment by activating the soothing oxytocin system; however, an overactive threat system can interfere with this process. This approach focuses on enhancing the mother's self-compassion and reinforcing the mother-infant bond (Cree 2010).

Related Studies

Studies reviewing the evidence on the effectiveness of Compassion-Focused Therapy (CFT) as a psychotherapeutic intervention have found that it leads to clinical improvements in conditions such as major depression, anxiety, psychosis, schizophrenia spectrum disorders, post-traumatic stress disorder, eating disorders, and personality disorders (Beaumont and Hollins-Martin 2015, Leaviss and Uttley 2015, Craig et al. 2020). According to a recent meta-analysis, existing evidence indicates that CFT has a positive impact on psychological well-being in both clinical and non-clinical samples. It has been found to be effective in reducing depression and self-criticism, as well as in enhancing compassion toward oneself and others (Petrocchi et al. 2024).

Research has found that self-compassion is associated with greater psychological well-being and lower levels of psychopathology symptoms (Macbeth and Gumley 2012, Kirby et al. 2017). In a six-month longitudinal study, self-compassion was shown to reduce perceived stress, thereby lowering rates of depression, anxiety, and negative mood (Stutts et al. 2018). The impact of self-compassion on postpartum depression has generally been examined through factors such as mother-infant bonding (Cree 2010), selfcriticism (Pedro et al. 2019), psychopathological symptoms (Mahurin-Smith and Beck 2022), and psychological well-being (Gammer et al. 2020). During pregnancy and the postpartum period, using selfcompassion to cope with negative emotions and thoughts may help women reduce self-criticism and view their challenges as a normal part of motherhood (Cree 2015, Pedro et al. 2019). Other studies investigating the effect of self-compassion on emotional difficulties during the postpartum period support this notion, indicating that higher levels of self-compassion effectively reduce postpartum depression and anxiety symptoms (Narimani and Ghafari 2015, López et al. 2018, Saleh 2020, Mahurin-Smith and Beck 2022). For example, in a study involving 686 women during the first 12 months postpartum, self-compassion was found to have a protective effect on the relationship between self-criticism and women's cognitive patterns. This suggests that although self-criticism increases the risk of postpartum depression, selfcompassion may help mitigate that risk (Pedro et al. 2019).

Various studies examining the effects of compassion-based interventions on postpartum depression and mothers' psychological well-being have shown similarly positive results. For instance, a transdiagnostic CFT intervention conducted with 114 participants during the prenatal period resulted in statistically significant improvements in women's levels of self-criticism, self-compassion, mood, and mother-infant bonding (Lawrence et al. 2024). Similarly, compassion-focused interventions have also been found to yield effective outcomes when delivered online. In a sample of mothers over the age of 18 with infants under two years old, an eight-week intervention providing online self-compassion resources led to significant improvements compared to the control group in areas such as depression, compassionate behavior toward oneself, and the ability to receive compassion from others, suggesting that compassion-focused interventions can effectively enhance mothers' psychological health (Lennard et al. 2021). Following a sixweek online compassion-based intervention program and a subsequent six-week follow-up period, a study involving 206 participants with babies under one year of age found that the intervention group showed a significant increase in self-compassion levels compared to the waitlist control group (Gammer et al. 2020).

Another study investigating the effects of brief online self-compassion writing exercises on emotion regulation found that following the intervention, self-compassion increased and negative emotional impact decreased (Angus et al. 2024). Finally, in a study comparing internet-based compassionate mind training and CBT interventions among 84 participants who were either currently pregnant, had been pregnant in the past year, or were planning to become pregnant (ages 18–54), both interventions produced similar improvements in self-esteem, self-criticism, and self-compassion. However, the compassionate mind training program was found to be more effective in reducing depression and anxiety (Kelman et al. 2018).

In addition to all these studies, a review examining the findings on the impact of CFT on psychological well-being in women during pregnancy and the postpartum period emphasized that there is still limited research on whether interventions based on CFT or Cree's (2010) adapted approach effectively improve mothers' psychological states. It was noted that most studies have been conducted with non-clinical samples, that clinical sample sizes are quite small, and that interventions are often delivered as self-help-oriented online programs (Millard and Wittkowski 2023).

Discussion

This review presents how third-wave CBT approaches—namely Acceptance and Commitment Therapy, Dialectical Behavior Therapy, Mindfulness-Based Therapy, Metacognitive Therapy, and Compassion-Focused Therapy—work with and impact postpartum depression, offering an alternative to the dominant CBT and interpersonal psychotherapy frameworks in the literature. Notably, this is the first review to collectively examine postpartum depression through the framework of these third-wave CBT approaches.

The literature suggests that in ACT, postpartum depression is interpreted as a weakness in psychological flexibility processes. During the perinatal period, it is thought that women tend to fuse with their negative thoughts and emotions without accepting them, or attempt to avoid these experiences altogether, thereby reducing their psychological flexibility. ACT aims to strengthen this psychological flexibility by working on acceptance of internal and external experiences during pregnancy and postpartum period, promoting cognitive defusion, and the clarification of personal values (Bonacquisti et al. 2017, Sadeghirad et al. 2021). In DBT, it is suggested that women in the perinatal period often feel misunderstood by those around them and, in the absence of an inclusive environment, begin to reject their own emotional experiences (Pederson 2015). DBT offers a therapeutic environment in which emotions and thoughts are validated, supporting the acceptance and regulation of present emotional states while focusing on the development of interpersonal relationships (Agako et al. 2023). Mindfulness-Based Therapy, on the other hand, emphasizes increasing awareness of internal experiences and enhancing the capacity to stay with one's emotions in the present moment during the perinatal period (Dimidjian et al. 2014). By integrating meditation and CBT interventions, this approach helps women to mindfully experience and accept both the positive and negative changes brought by pregnancy and childbirth (Dunn et al. 2012). MCT focuses on metacognitive beliefs and repetitive negative thinking, proposing that postpartum depression emerges and persists through the Cognitive Attentional Syndrome (CAS) (Wells 2009, DeJong et al. 2016). A treatment approach has been developed that targets the modification of these thinking processes. Finally, CFT addresses transdiagnostic constructs such as shame, guilt, and self-criticism in relation to postpartum depression. It proposes that enhancing self-compassion can help individuals cope with emotional distress more effectively (Cree 2010, Gilbert 2014).

According to the findings of studies examining the effectiveness of the aforementioned psychotherapeutic approaches on postpartum depression, ACT—both in individual and group formats—has been found effective in reducing depressive symptoms during pregnancy and the postpartum period by increasing psychological flexibility, and these effects have also been shown to persist beyond the end of therapy (Sadeghirad et al. 2021, Shojaeifar et al. 2022). DBT has been implemented across different countries and cultures. Results indicate that DBT is effective in improving emotion dysregulation and in reducing levels of depression and anxiety among postpartum women (Rabiee et al. 2020, Amiri et al. 2021, Nunnery et al. 2021). However, it has not shown significant effects on improving mother-infant attachment

(Freethy et al. 2020). MBCT has been found effective for cases of mild to moderate depression (Shulman et al. 2018), but has not yielded effective results in more severe cases (Min et al. 2023). MCT has been shown to effectively reduce postpartum depression symptoms, with improvements maintained over time (Bevan et al. 2013). Finally, results from CFT interventions indicate that women in the pregnancy and postpartum periods experience reductions in negative mood and self-criticism, as well as increases in self-compassion (Pedro et al. 2019, Lawrence et al. 2024).

There is a limited number of studies comparing the effectiveness of third-wave CBT approaches with first-line treatments such as traditional CBT and interpersonal psychotherapy for postpartum depression (Kelman et al. 2018, Sadeghirad et al. 2021, Mancinelli et al. 2022). Some of these studies have found that third-wave CBT approaches are more effective than traditional CBT in reducing symptoms of depression and anxiety (Kelman et al. 2018), and also in reducing anger levels during follow-up (Sadeghirad et al. 2021), however, other studies have found no significant differences in effectiveness between traditional CBT and third-wave CBT approaches (Mancinelli et al. 2022). These findings suggest that the limited number of comparative studies available have not produced consistent results, and it is worth noting that not all third-wave CBT approaches have been covered in these comparisons. This indicates a clear need for more comparative studies that include all third-wave CBT approaches in order to comprehensively evaluate their effectiveness in treating postpartum depression.

Additionally, existing studies on the treatment of postpartum depression show a wide range of dropout rates, from low to high (Dimidjian et al. 2014, Wilson and Donachie 2018, Gammer et al. 2020, Shojaeifar et al. 2022). Participants have cited reasons such as the time-consuming nature of infant care, the distant location of intervention centers, and early delivery as reasons for discontinuing treatment (Kleiber et al. 2017, Waters et al. 2020). It has also been suggested that some participants in the intervention groups may have dropped out because they did not find the interventions helpful (Gammer et al. 2020). However, in the studies included within the scope of the current review have not sufficiently addressed or discussed dropout rates and their underlying causes. Future research should investigate dropout rates and their reasons more systematically, as doing so would contribute to a deeper understanding of the challenges faced by women during the postpartum period, enhance the reliability of study findings, and provide valuable insights for addressing practical barriers in clinical settings.

Conclusion

Third-wave CBT approaches aim to alleviate the challenging effects of pregnancy, childbirth, and the postpartum period by fostering the acceptance of emotions commonly labeled as negative, developing the capacity to remain with such emotions without resorting to automatic or ruminative thinking and behaviors, and enhancing emotion regulation skills. However, as emphasized in the present review, although there is growing evidence supporting the effectiveness of third-wave CBT approaches in the treatment of postpartum depression, the overall number of studies in this area remains insufficient (Rodríguez-Muñoz et al., 2023). Therefore, there is a pressing need for a greater number of randomized controlled trials (RCTs) that include a broader range of third-wave CBT approaches. In addition, systematic reviews and meta-analyses should be conducted to assess the outcomes of these interventions more comprehensively. Existing research is limited by small sample sizes, the frequent use of non-clinical samples, the implementation of self-help-oriented online programs, and low intervention adherence rates—factors that restrict the generalizability and reliability of findings regarding treatment efficacy. Moreover, the studies included in this review have not sufficiently analyzed the effects of third-wave CBT interventions in relation to postpartum depression severity, socioeconomic status, cultural background, or participant age. Accordingly, future research should focus on replicating these studies with larger and more diverse samples from various cultural contexts. There is also a need for systematic reviews and meta-analyses to further investigate the effectiveness of third-wave CBT approaches in treating postpartum depression and to assess treatment outcomes in light of sociodemographic variables.

Additionally, it has been observed that there are currently no intervention programs specifically designed within third-wave CBT approaches that exclusively target postpartum depression. In the future,

intervention programs developed with standardized protocols tailored specifically for postpartum depression using third-wave CBT methods could offer more precise and effective treatment options. Furthermore, to better understand the long-term effects of third-wave CBT interventions on postpartum depression, it is recommended that follow-up studies be conducted after the completion of therapy. Postpartum depression not only affects the mother but also impacts the infant and the quality of motherinfant interactions. However, many intervention studies have neglected to examine these areas. Future research should therefore investigate not only the effects of third-wave CBT interventions on maternal depressive symptoms but also their influence on infant outcomes and mother-infant interactions. Moreover, postpartum depression is commonly studied in mothers, but fathers may also experience similar symptoms during the postpartum period (Paulson and Bazemore 2010). Despite this, paternal postpartum depression remains an understudied issue. Given the potential negative consequences for both fathers and family functioning, this topic warrants further investigation (Scarff 2019). One limitation of the present review is its exclusive focus on postpartum depression in women. Another limitation is that the review did not include the effectiveness of third-wave CBT approaches on postpartum anxiety, but rather focused solely on depressive symptoms. Anxiety, which frequently co-occurs with depression, is also highly prevalent among women during the prenatal and postpartum periods (Zappas et al. 2020, Cheng et al. 2021, van der Zee-van den Berg et al. 2021). Therefore, it is recommended that future research examine postpartum anxiety in addition to depression within the framework of third-wave CBT approaches.

References

Agako A, Burckell L, McCabe RE, Frey BN, Barrett E, Silang K et al. (2023) A pilot study examining the effectiveness of a short-term, DBT informed, skills group for emotion dysregulation during the perinatal period. Psychol Serv, 20:697–707.

Ahmadpanah M, Nazaribadie M, Aghaei E, Ghaleiha A, Bakhtiari A, Haghighi M et al. (2018) Influence of adjuvant detached mindfulness and stress management training compared to pharmacologic treatment in primiparae with postpartum depression. Arch Womens Ment Health, 21:65-73.

American College of Obstetricians and Gynecologists (2023) Treatment and management of mental health conditions during pregnancy and postpartum. Obstet Gynecol, 141:1262–1288.

APA (2013) Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5). Washington DC, American Psychiatric Association.

Amiri NP, Ahmadi A, Mirzaee F, Mirzai M, Shahrokhi N (2021) The effect of dialectic behavioral counseling on depression, anxiety, and postpartum hematocrit level. Rev Bras Ginecol Obstet, 43:275-282.

Andrei AM, Webb R, Enea V (2023) Self-criticism and self-compassion as mediators of the relationship between alexithymia and postpartum depressive symptoms. Psihologija, 56:145-162.

Angus BM, Saling LL, Moffitt RL (2024) Self-compassionate reflective writing for affect regulation in Australian perinatal women. Appl. Psychol Health Well-Being, 16:745-764.

Arıkan I, Demir BK, Korkut Y, Şahin S, Dibeklioglu SE (2016) Doğum sonrası depresyon yaygınlığı ve ilişkili etkenler. Anadolu Psikiyatri Derg, 17(Suppl 4):27.

Ayvaz S, Hocaoğlu Ç, Tiryaki A, Ak İ (2006) Trabzon il merkezinde doğum sonrası depresyon sıklığı ve gebelikteki ilişkili demografik risk etmenleri. Turk Psikiyatri Derg, 17:243-251.

Baer RA (2003) Mindfulness training as a clinical intervention: a conceptual and empirical review. Clin Psychol (New York), 10:125-143.

Barnum SE, Woody ML, Gibb BE (2013) Predicting changes in depressive symptoms from pregnancy to postpartum: the role of brooding rumination and negative inferential styles. Cognit Ther Res, 37:71-77.

Beaumont E, Hollins-Martin CJ (2015) A narrative review exploring the effectiveness of compassion-focused therapy. Counselling Psychology Review, 30:21–32.

Bevan D, Wittkowski A, Wells A (2013) A multiple-baseline study of the effects associated with metacognitive therapy in postpartum depression. J Midwifery Womens Health, 58:69-75.

Bishop SR (2004) Mindfulness: a proposed operational definition. Clin Psychol (New York), 11:230-241.

Bluett EJ, Homan KJ, Morrison KL, Levin, ME, Twohig MP (2014) Acceptance and commitment therapy for anxiety and OCD spectrum disorders: an empirical review. J Anxiety Disord, 28:612-624.

Bonacquisti A, Cohen M, Schiller CE (2017) Acceptance and commitment therapy for perinatal mood and anxiety disorders: development of an inpatient group intervention. Arch Womens Ment Health, 20:645–654.

Brassel A, Townsend ML, Pickard JA, Grenyer BFS (2020) Maternal perinatal mental health: associations with bonding, mindfulness, and self-criticism at 18 months' postpartum. Infant Ment Health J, 41:69-81.

Brummelte S, Galea LA (2016) Postpartum depression: etiology, treatment and consequences for maternal care. Horm Behav, 77:153-166

Bruno A, Laganà AS, Leonardi V, Greco D, Merlino M, Vitale SG et al. (2017) Inside-out: the role of anger experience and expression in the development of postpartum mood disorders. J Matern Fetal Neonatal Med, 31:3033-3038.

Budak AMÜ, Kocabaş EÖ (2019) Diyalektik davranış terapisi ve beceri eğitimi: kullanım alanları ve koruyucu ruh sağlığındaki önemi. Psikiyatride Güncel Yaklaşımlar, 11:192–204.

Byrne J, Hauck Y, Fisher C, Bayes S, Schutze R (2013) Effectiveness of a mindfulness-based childbirth education pilot study on maternal self-efficacy and fear of childbirth. J Midwifery Womens Health, 59:192–197.

Caldwell J, Meredith P, Whittingham K, Ziviani J (2021) Shame and guilt in the postnatal period: a systematic review. J Reprod Infant Psychol, 39:67-85.

Carvalho S, Martins CP, Almeida HS, Silva F (2017) The evolution of cognitive behavioural therapy – the third generation and its effectiveness. Eur Psychiatry, 41:773-774.

Cheng CY, Chou YH, Chang CH, Liou SR (2021) Trends of perinatal stress, anxiety, and depression and their prediction on postpartum depression. Int J Environ Res Public Health, 18:9307.

Cho H, Lee K, Choi E, Cho HN, Park B, Suh M et al. (2022) Association between social support and postpartum depression. Sci Rep, 12:3128.

Clements CC, Castro VM, Blumenthal S R, Rosenfield HR, Murphy SN, Fava M et al. (2014) Prenatal antidepressant exposure is associated with risk for attention-deficit hyperactivity disorder but not autism spectrum disorder in a large health system. Mol Psychiatry, 20:727-734.

Constantinou G, Varela S, Buckby B (2021) Reviewing the experiences of maternal guilt - the "motherhood myth" influence. Health Care Women Int, 42:852-876.

Craig C, Hiskey S, Spector A (2020) Compassion focused therapy: a systematic review of its effectiveness and acceptability in clinical populations. Expert Rev Neurother, 20:385–400.

Cree M (2010). Compassion focused therapy with perinatal and mother-infant distress. Int J Cogn Ther, 3:159-171.

Cree M (2015) The Compassionate Mind Approach to Postnatal Depression: Using Compassion Focused Therapy to Enhance Mood, Confidence and Bonding. London, UK, Constable&Robinson.

Cuijpers P, Brännmark JG, van Straten A (2008) Psychological treatment of postpartum depression: a meta-analysis. J Clin Psychol, 64:103–118.

Çelebi E (2017) Eytişimsel (Diyalektik) Davranışçı Terapi. InPsikoterapi Yöntemleri: Kuramlar ve Uygulama, 4th ed. (Eds E Köroğlu, H Türkçapar): 291-322. Ankara, Hekimler Yayın Birliği.

Çopoğlu ÜS, Kokaçya MH, Demircan C (2015) Gebelik ve laktasyon döneminde ruhsal bozukluklar ve tedavisi. Mustafa Kemal Üniversitesi Tıp Dergisi, 6:43-53.

Dannon PN, Iancu I, Lowengrub K, Grunhaus L, Kotler M (2006) Recurrence of panic disorder during pregnancy: a 7-year naturalistic follow-up study. Clin Neuropharmacol, 29:132-137.

Daryadel J, Mikaeili N, Atadokht A, Molavi P (2022) The efficacy of metacognitive therapy based on detached mindfulness on metaworry and interpersonal cognitive distortion in women with postpartum depression. Journal of Psychological Science, 21:349-365.

DeJong H, Fox E, Stein A (2016) Rumination and postnatal depression: a systematic review and a cognitive model. Behav Res Ther, 82:38-49.

Dimeff LA, Linehan MM (2008) Dialectical behavior therapy for substance abusers. Addict Sci Clin Pract, 4:39–47.

Dimidjian S, Goodman SH, Felder JN, Gallop R, Brown AP, Beck A (2014) An open trial of mindfulness-based cognitive therapy for the prevention of perinatal depressive relapse/recurrence. Arch Womens Ment Health, 18:85–94.

Dimidjian S, Goodman SH, Felder JN, Gallop R, Brown AP, Beck A (2015) Staying well during pregnancy and the postpartum: a pilot randomized trial of mindfulness-based cognitive therapy for the prevention of depressive relapse/recurrence. J Consult Clin Psychol, 84:134-145.

Duncan LG, Bardacke N (2009) Mindfulness-based childbirth and parenting education: promoting family mindfulness during the perinatal period. J Child Fam Stud, 19:190–202.

Dunford E, Granger C (2017) Maternal guilt and shame: relationship to postnatal depression and attitudes towards help-seeking. J Child Fam Stud, 26:1692-1701.

Dunn C, Hanieh E, Roberts R, Powrie R (2012) Mindful pregnancy and childbirth: effects of a mindfulness-based intervention on women's psychological distress and well-being in the perinatal period. Arch Womens Ment Health, 15:139–143.

Ehret AM, Joormann J, Berking M (2015) Examining risk and resilience factors for depression: the role of self-criticism and self-compassion. Cogn Emot, 29:1496-1504.

Ezadee M, Rasouli A (2019) Effectiveness of acceptance and commitment psychotherapy in improving depression and quality of sleep in women with postpartum depression. Iran J Nurs Midwifery Res, 14:21-28.

Fairbrother N, Collardeau F, Albert AY, Challacombe FL, Thordarson DS, Woody SR et al. (2021) High prevalence and incidence of obsessive-compulsive disorder among women across pregnancy and the postpartum. J Clin Psychiatry, 82:20m13398.

Farzaneh F, Afzali M (2021) Evaluation of the effectiveness of metacognitive therapy on emotion regulation, stress and frustration in patients with postpartum depression. Journal of Applied Family Therapy, 2:176-191.

Flavell JH (1979) Metacognition and cognitive monitoring: a new area of cognitive-developmental inquiry. Am Psychol, 34:906-911.

Fonseca A, Canavarro MC (2020) Cognitive correlates of women's postpartum depression risk and symptoms: the contribution of dysfunctional beliefs and negative thoughts. J Ment Health, 29:614-622.

Freethy I, Jacobi E, Douglass S (2020) Dialectical behaviour therapy and perinatal mental health: an evaluation of an adapted DBT programme for mothers with emotional dysregulation. Clinical Psychology Forum, 330:10–16.

Gammer I, Hartley-Jones C, Jones FW (2020) A randomized controlled trial of an online, compassion-based intervention for maternal psychological well-being in the first year postpartum. Mindfulness, 11:928-939.

Gastaldon C, Solmi M, Correll CU, Barbui C, Schoretsanitis G (2022) Risk factors of postpartum depression and depressive symptoms: umbrella review of current evidence from systematic reviews and meta-analyses of observational studies. Br J Psychiatry, 221:591-602

Gerhardt BC, Serra JG, Zimmer C, Arteche AX (2024) Role of self-criticism in postpartum mental health: a network analysis. Psicol Reflex Crit, 37:38.

Geschwind N, Peeters F, Drukker M, Van-Os J, Wichers M (2011) Mindfulness training increases momentary positive emotions and reward experience in adults vulnerable to depression: a randomized controlled trial. J Consult Clin Psychol, 79:618-628.

Gilbert P (2000) Social mentalities: internal "social" conflict and the role of inner warmth and compassion in cognitive therapy. In Genes on the Couch: Explorations in Evolutionary Psychotherapy (Eds P Gilbert, KG Bailey):118-150. London, UK, Brunner-Routledge.

Gilbert P (2014) The origins and nature of compassion focused therapy. Br J Clin Psychol, 53:6-41.

Gilbert P (2009) Introducing compassion-focused therapy. Adv Psychiatr Treat, 15:199-208.

Godbout N, Paradis A, Rassart C, Sadikaj G, Herba CM, Drapeau-Lamothe M (2023) Parents' history of childhood interpersonal trauma and postpartum depressive symptoms: the moderating role of mindfulness. J Affect Disord, 325:459-469.

Goodman JH (2004) Postpartum depression beyond the early postpartum period. J Obstet Gynecol Neonatal Nurs, 33:410-420.

Goodman JH (2009) Women's attitudes, preferences, and perceived barriers to treatment for perinatal depression. Birth, 36:60-69.

Goodman JH (2019) Perinatal depression and infant mental health. Arch Psychiatr Nurs, 33:217-224.

Goodman JH, Guarino A, Chenausky K, Klein L, Prager J, Petersen R et al. (2014) CALM pregnancy: results of a pilot study of mindfulness-based cognitive therapy for perinatal anxiety. Arch Womens Ment Health, 17:373–387.

Goodman JH, Watson GR, Stubbs, B. (2016) Anxiety disorders in postpartum women: a systematic review and meta-analysis. J Affect Disord, 203:292–331.

Goodman SH, Tully EC (2009) Recurrence of depression during pregnancy: psychosocial and personal functioning correlates. Depress Anxiety, 26:557–567.

Graham JE, Lobel, DeLuca RS (2002) Anger after childbirth: an overlooked reaction to postpartum stressors. Psychol Women Q, 26:222-233.

Guo L, Zhang J, Mu L, Ye Z (2019) Preventing postpartum depression with mindful self-compassion intervention. J Nerv Ment Dis, 208:101–107.

Gümüş AB, Keskin G, Alp N, Özyar S, Karsa A (2012) Postpartum depresyon yaygınlığı ve ilişkili değişkenler. Yeni Symposium, 50:145-

Hahn-Holbrook J, Cornwell-Hinrichs T, Anaya I (2018) Economic and health predictors of national postpartum depression prevalence: a systematic review, meta-analysis, and meta-regression of 291 studies from 56 countries. Front Psychiatry, 8:248.

Hall HG, Beattie J, Lau R, East C, Biro MA (2015) Mindfulness and perinatal mental health: a systematic review. Women Birth, 29:62–71.

Harley R, Sprich S, Safren S, Jacobo M, Fava M (2008) Adaptation of dialectical behavior therapy skills training group for treatment-resistant depression. J Nerv Ment Dis, 196:136–143.

Harris R (2006) Embracing your demons: an overview of acceptance and commitment therapy. Psychotherapy in Australia, 12:2-8. Harris R (2024) ACT'i Kolay Öğrenmek (4. baskı). İstanbul, Litera Yayıncılık.

Haseli A, Mohammadi S (2019) The effect of cognitive behavioral therapy on postpartum depression: a review and meta-analysis study. International Journal of Health Studies, 5:15-20.

Hashemi Z, Afshari A (2019) The effectiveness of attention training technique on depression, anxiety and cognitive beliefs in patients with postpartum depression. Journal of Hayat, 25:195-207.

Hayes MJ, Roberts S, Davare A (2000) Transactional conflict between psychobiology and culture in the etiology of postpartum. Med Hypotheses, 55:266-276.

Hayes SC, Luoma JB, Bond FW, Masuda A, Lillis J (2006) Acceptance and commitment therapy: model, process and outcomes. Behav Res Ther, 44:1-25.

Hayes SC, Pierson H (2005) Acceptance and commitment therapy. In Encyclopedia of Cognitive Behavior Therapy (Eds A Freeman, SH Felgoise, CM Nezu, AM Nezu, MA Reinecke):1-4. Boston, Springer.

Hellberg SN, Bruening AB, Thompson KA, Hopkins TA (2023) Applications of dialectical behavioural therapy in the perinatal period: a scoping review. Clin Psychol Psychother, 31:e2937.

Heydari M, Masafi S, Jafari M, Saadat SH, Shahyad S (2018) Effectiveness of acceptance and commitment therapy on anxiety and depression of razi psychiatric center staff. Open Access Maced J Med Sci, 6:410-415.

Hofmann SG, Sawyer AT, Fang A (2010) The empirical status of the "new wave" of cognitive behavioral therapy. Psychiatr Clin North Am, 33:701–710.

Huang J, Zhou X, Lu S, Xu Y, Hu J, Huang M et al. (2020) Dialectical behavior therapy-based psychological intervention for woman in late pregnancy and early postpartum suffering from covid-19: a case report. J Zhejiang Univ Sci B, 21:394-399.

Huang L, Zhao Y, Qiang C, Fan B (2018) Is cognitive behavioral therapy a better choice for women with postnatal depression? a systematic review and meta-analysis. PloS One, 13:e0205243.

Isa-Alfaraj AMA, Spada MM, Nikčević AV, Puffett A, Meer S (2009) Positive beliefs about rumination in depressed and non-depressed pregnant women: a preliminary investigation. J Reprod Infant Psychol, 27:54-60.

Johns SE, Belsky J (2007) Life transitions: becoming a parent. In Family Relationships: An Evolutionary Perspective (Eds CA Salmon, TK Shackelford):71-90. Oxford, Oxford University Press.

Kabat-Zinn J (1982) An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: theoretical considerations and preliminary results. Gen Hosp Psychiatry, 4:33–47.

Kabat-Zinn J (1990) Full Catastrophe Living, 15th ed. New York, Delta Trade Paperbacks.

Karlin BE, Walser RD, Yesavage J, Zhang A, Trockel M, Taylor CB (2013) Effectiveness of acceptance and commitment therapy for depression: comparison among older and younger veterans. Aging Ment Health, 17:555–563.

Kelman AR, Evare BS, Barrera AZ, Muñoz RF, Gilbert P (2018) A proof-of-concept pilot randomized comparative trial of brief internet-based compassionate mind training and cognitive-behavioral therapy for perinatal and intending to become pregnant women. Clin Psychol Psychother, 25:608-619.

Khoramnia S, Bavafa A, Jaberghaderi N, Parvizifard A, Foroughi A, Ahmadi M et al. (2020) The effectiveness of acceptance and commitment therapy for social anxiety disorder: a randomized clinical trial. Trends Psychiatry Psychother, 42:30-38.

Kirby JN, Tellegen CL, Steindl SR (2017) A meta-analysis of compassion-based interventions: current state of knowledge and future directions. Behav Ther, 48:778-792.

Kleiber BV, Felder JN, Ashby B, Scott S, Dean J, Dimidjian S (2017) Treating depression among adolescent perinatal women with a dialectical behavior therapy-informed skills group. Cogn Behav Pract, 24:416–427.

Konjevod M, Gredicak M, Vuic B, Tudor L, Nikolac Perkovic M, Milos T et al. (2023) Overview of metabolomic aspects in postpartum depression. Prog Neuropsychopharmacol Biol Psychiatry, 127:110836.

Knight M, Tuffnell D, Kenyon S, Shakespeare J, Gray R, Kurinczuk JJ (2015) Saving lives, improving mothers' care: surveillance of maternal deaths in the UK 2011-13 and lessons learned to inform maternity care from the UK and Ireland. Confidential Enquiries into Maternal Deaths and Morbidity 2009-13. Oxford, National Perinatal EpidemiologyUnit, University of Oxford.

Knoph C, Von Holle A, Zerwas S, Torgersen L, Tambs K, Stoltenberg C et al (2013) Course and predictors of maternal eating disorders in the postpartum period. Int J Eat Disord, 46:355-368.

Krusche A, Crane C, Dymond M (2019) An investigation of dispositional mindfulness and mood during pregnancy. BMC Pregnancy Childbirth, 19:273.

Lavender TJ, Ebert L, Jones D (2016) An evaluation of perinatal mental health interventions: an integrative literature review. Women Birth, 29:399-406.

Lawrence K, Nicholson H, Iwanow M, Johnstone T, Skelhorn L, Toole E et al. (2024) An evaluation of compassion-focused therapy groups for women accessing a specialist perinatal service in england. Couns Psychother Res, 25:e12860.

Leaviss J, Uttley L (2015) Psychotherapeutic benefits of compassion-focused therapy: an early systematic review. Psychol Med, 45:927-945.

Lennard GR, Mitchell AE, Whittingham K (2021) Randomized controlled trial of a brief online self-compassion intervention for mothers of infants: effects on mental health outcomes. J Clin Psychol, 77:473-487.

Lerman SF, Shahar G, Rudich Z (2012) Self-criticism interacts with the affective component of pain to predict depressive symptoms in female patients. Eur J Pain, 16:115-122.

Linehan MM (1993) Cognitive-Behavioral Treatment of Borderline Personality Disorder. New York, Guilford Press.

Linehan MM, Wilks CR (2015) The course and evolution of dialectical behavior therapy. Am J Psychother, 69:97-110.

- Liu X, Wang S, Wang G (2022) Prevalence and risk factors of postpartum depression in women: a systematic review and meta-analysis. J Clin Nurs, 31:2665-2677.
- Liss M, Schiffrin H, Rizzo K (2013) Maternal guilt and shame: the role of self-discrepancy and fear of negative evaluation. J Child Fam Stud, 22:1112-1119.
- López A, Sanderman R, Ranchor AV, Schroevers MJ (2018) Compassion for others and self compassion: levels, correlates, and relationship with psychological well-being. Mindfulness, 9:325-331.
- Luberto CM, Park ER, Goodman JH (2017) Postpartum outcomes and formal mindfulness practice in mindfulness-based cognitive therapy for perinatal women. Mindfulness, 9:850–859.
- Ma SH, Teasdale JD (2004) Mindfulness-based cognitive therapy for depression: replication and exploration of differential relapse prevention effects. J Consult Clin Psychol, 72:31-40.
- MacBeth A, Gumley A (2012) Exploring compassion: a meta-analysis of the association between self-compassion and psychopathology. Clin Psychol Rev, 32:545-552.
- Mackiewicz-Seghete KL, Graham AM, Lapidus JA, Jackson ELA, Doyle OJ, Feryn AB et al. (2020) Protocol for a mechanistic study of mindfulness based cognitive therapy during pregnancy. Health Psychol, 39:758-766.
- MacQueen GM, Frey BN, Ismail Z, Jaworska N, Steiner M, Van Lieshout RJ et al. (2016) Canadian network for mood and anxiety treatments (CANMAT) 2016 clinical guidelines for the management of adults with major depressive disorder. Can J Psychiatry, 61:588–603.
- Mahurin-Smith J, Beck AR (2022) Self-compassion may protect against postpartum depression and anxiety. Breastfeed Rev, 30:27-
- Man KK, Tong HH, Wong LY, Chan EW, Simonoff E, Wong IC (2015) Exposure to selective serotonin reuptake inhibitors during pregnancy and risk of autism spectrum disorder in children: a systematic review and meta-analysis of observational studies. Neurosci Biobehav Rev, 49:82–89.
- Mancinelli E, Bassi G, Gabrielli S, Salcuni S (2022). The efficacy of digital cognitive-behavioral interventions in supporting the psychological adjustment and sleep quality of pregnant women with sub-clinical symptoms: a systematic review and meta-analysis. Int J Environ Res Public Health, 19:9549.
- Martini J, Beesdo-Baum K, Garthus-Niegel S, Wittchen HU (2020) The course of panic disorder during the peripartum period and the risk for adverse child development: a prospective-longitudinal study. J Affect Disord, 266:722-730.
- Maxwell D, Robinson SR, Rogers K (2018) "I keep it to myself": a qualitative meta interpretive synthesis of experiences of postpartum depression among marginalised women. Health Soc Care Community, 27:e23–e36.
- Meltzer-Brody S, Howard L, Bergink V, Vigod S, Jones I, Munk-Olsen T et al. (2018) Postpartum psychiatric disorders. Nat Rev Dis Primers, 4:18022.
- Meuret AE, Twohig MP, Rosenfield D, Hayes SC, Craske MG (2012) Brief acceptance and commitment therapy and exposure for panic disorder: a pilot study. Cogn Behav Pract, 19:606–618.
- Meyer EC, Walser R, Hermann B, La Bash H, DeBeer BB, Morissette SB et al. (2018) Acceptance and commitment therapy for cooccurring posttraumatic stress disorder and alcohol use disorders in veterans: pilot treatment outcomes. J Trauma Stress, 31:781– 789.
- Miller ML, Roche Al, Lemon E, O'Hara MW (2022) Obsessive-compulsive and related disorder symptoms in the perinatal period: prevalence and associations with postpartum functioning. Arch Womens Ment Health, 25:771-780.
- Millard LA, Wittkowski A (2023) Compassion focused therapy for women in the perinatal period: a summary of the current literature. Front Psychiatry, 14:1288797.
- Min W, Jiang C, Li Z, Wang Z (2023) The effect of mindfulness-based interventions during pregnancy on postpartum mental health: a meta-analysis. J Affect Disord, 331:452-460.
- Misri S, Abizadeh J, Sanders S, Swift E (2015) Perinatal generalized anxiety disorder: assessment and treatment. J Womens Health, 24:762-770.
- Mohabbat-Bahar S, Maleki-Rizi F, Akbari ME, Moradi-Joo M (2015) Effectiveness of group training based on acceptance and commitment therapy on anxiety and depression of women with breast cancer. Iran J Cancer Prev, 8:71-76.
- Monteiro F, Fonseca A, Pereira M, Alves S, Canavarro MC (2019) What protects at-risk postpartum women from developing depressive and anxiety symptoms? the role of acceptance-focused processes and self-compassion. J Affect Dis, 246:522-529.
- Moraes GPA, Lorenzo L, Pontes GAR, Montenegro MC, Cantilino A (2017) Screening and diagnosing postpartum depression: when and how? Trends Psychiatry Psychother, 39:54-61.
- Moulds ML, Black MJ, Newby JM, Hirsch CR (2023) Correlates of repetitive negative thinking in postnatal first time mothers. J Reprod Infant Psychol, 41:53-64.
- Narimani M, Ghafari M (2015) The relationship between senses of coherence, self compassion and personal intelligence with postpartum depression in women. Iranian Journal of Nursing Research, 11:25-33.

Navarro-Haro MV, Morillo AA, García-Palacios A (2024) Applying dialectical behavior therapy as a transdiagnostic treatment in a case of borderline personality disorder and eating disorder. J Clin Psychol, 81:102-112.

Nolen-Hoeksema S, Wisco BE, Lyubomirsky S (2008) Rethinking rumination. Perspect Psychol Sci, 3:400-424.

Neff K (2003b) Self-compassion: an alternative conceptualization of a healthy attitude toward oneself. Self Identity, 2:85-101.

Neff KD (2003a) The development and validation of a scale to measure self-compassion. Self Identity, 2:223-250.

Normann N, Morina N (2018) The efficacy of metacognitive therapy: a systematic review and meta-analysis. Front Psychol, 9:2211.

Normann N, van Emmerik AA, Morina N (2014) The efficacy of metacognitive therapy for anxiety and depression: a meta-analytic review. Depress Anxiety, 31:402-411.

Nunnery R, Fauser M, Hatchuel E, Jones M (2021) The use of dialectical behavioral therapy (DBT) techniques creatively in the treatment of perinatal mood and anxiety disorders. Journal of Counseling Research and Practice, 6:16–32.

Ocak Aktürk S, Yılmaz T (2023) Mindfulness in pregnancy, childbirth and parenting. Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi, 16:223-233.

O'Hara MW, McCabe JE (2013) Postpartum depression: current status and future directions. Annu Rev Clin Psychol, 9:379-407.

O'Hara MW, Stuart S, Gorman LL, Wenzel A (2000) Efficacy of interpersonal psychotherapy for postpartum depression. Arch Gen Psychiatry, 57:1039-1045.

O'Hara MW, Swain AM (1996) Rates and risk of postpartum depression-a meta analysis. Int Rev Psychiatry, 8:37-54.

Osborne LM, Voegtline K, Standeven LR, Sundel B, Pangtey M, Hantsoo L et al. (2021) High worry in pregnancy predicts postpartum depression. J Affect Disord, 294:701–706.

Papageorgiou C, Wells A (2000) Treatment of recurrent major depression with attention training. Cogn Behav Pract, 7:407-413.

Papageorgiou C, Wells A (2003) An empirical test of a clinical metacognitive model of rumination and depression. Cognit Ther Res, 27:261-273.

Paulson JF, Bazemore SD (2010) Prenatal and postpartum depression in fathers and its association with maternal depression. JAMA, 303:1961–1969.

Pederson LD (2015) Dialectical Behavior Therapy: A Contemporary Guide for Practitioners. Hoboken, NJ, Wiley-Blackwell.

Pedro L, Branquinho M, Canavarro MC, Fonseca A (2019) Self-criticism, negative automatic thoughts and postpartum depressive symptoms: the buffering effect of self-compassion. J Reprod Infant Psychol, 37:539–553.

Penacoba-Puente C, Marin-Morales D, Carmona-Monge FJ, Furlong LV (2016) Post-partum depression, personality, and cognitive-emotional factors: a longitudinal study on spanish pregnant women. Health Care Women Int, 37:97–117.

Petrocchi N, Ottaviani C, Cheli S, Matos M, Baldi B, Basran JK et al. (2024) The impact of compassion-focused therapy on positive and negative mental health outcomes: results of a series of meta-analyses. Clin Psychol (New York), 31:230–247.

Petrošanec M, Brekalo M, Nakić Radoš S (2022) The metacognitive model of rumination and depression in postpartum women. Psychol Psychother, 95:838-852.

Philipp R, Kriston L, Lanio J, Kühne F, Härter, M, Moritz S et al. (2019) Effectiveness of metacognitive interventions for mental disorders in adults-a systematic review and meta-analysis (METACOG). Clin Psychol Psychother, 26:227–240.

Poissant H, Moreno A, Potvin S, Mendrek A (2020) A meta-analysis of mindfulness-based interventions in adults with attention-deficit hyperactivity disorder: impact on ADHD symptoms, depression, and executive functioning. Mindfulness, 11:2669–2681.

Pour E, Azizi A, Mohamadi J (2016) The efficacy of detached mindfulness in meta-cognitive therapy on postpartum depression. J Nurs Educ, 5:17–22.

Qin K, Yu Y, Cai H, Li J, Zeng J, Liang H (2024) Effectiveness of mindfulness-based intervention in schizophrenia: a meta-analysis of randomized controlled trials. Psychiatry Res, 334:115808.

Rabiee N, Nazari AM, Keramat A, Khosravi A, Bolbol-Haghighi N (2020) Effect of dialectical behavioral therapy on the postpartum depression, perceived stress and mental coping strategies in traumatic childbirth: a randomized controlled trial. International Journal of Health Studies, 6:41–48.

Rochat L, Manolov R, Billieux J (2018) Efficacy of metacognitive therapy in improving mental health: a meta-analysis of single-case studies. J Clin Psychol, 74:896–915.

Rodríguez-Muñoz MF, Radoš SN, Uka A, Marques M, Maia BR, Matos M et al. (2023) Effectiveness of the third wave cognitive behavior therapy for peripartum depression treatment-a systematic review. Midwifery, 127:103865.

Rogers CR (1961) On Becoming a Person: A Therapist's View of Psychotherapy. Boston, Houghton Mifflin.

Rogojanski J, Vettese LC, Antony MM (2010) Coping with cigarette cravings: comparison of suppression versus mindfulness-based strategies. Mindfulness, 2:14–26.

Roman M, Constantin T, Bostan CM (2019) The efficiency of online cognitive-behavioral therapy for postpartum depressive symptomatology: a systematic review and meta-analysis. Women Health, 60:99–112.

- Romero-Gonzalez B, Caparros-Gonzalez RA, Gonzalez-Perez R, Garcia-Leon MA, Arco-Garcia L, Peralta-Ramirez MI (2020) "I am pregnant. am I different?": psychopathology, psychological stress and hair cortisol levels among pregnant and non-pregnant women. J Psychiatr Res, 131:235–243.
- Sadeghirad S, Peyvandi P, Mohammadi Shir Mahale F, Hossein Zade Taghvae M, Borjali A (2021) Comparison of cognitive-behavioral therapy and acceptance and commitment therapy on anger in women with postpartum depression. Journal of Sabzevar University of Medical Sciences, 28:596–607.
- Saharoy R, Potdukhe A, Wanjari M, Taksande AB (2023) Postpartum depression and maternal care: exploring the complex effects on mothers and infants. Cureus, 15:e41381.
- Saleh ASEM (2020) Acceptance-focused processes and self-compassion protect pregnant women from developing postpartum depressive and anxiety symptoms and improve relationships with health caregivers. Evid Based Nurs, 23:26.
- Scarff JR (2019) Postpartum depression in men. Innov Clin Neurosci, 16:11-14.
- Schmidt D, Seehagen S, Vocks S, Schneider S, Teismann T (2016) Predictive importance of antenatal depressive rumination and worrying for maternal-foetal attachment and maternal well-being. Cognitive Therapy and Research, 40:565–576.
- Segal ZV, Kennedy S, Gemar M, Hood K, Pedersen R, Buis T (2006) Cognitive reactivity to sad mood provocation and the prediction of depressive relapse. Arch Gen Psychiatry, 63:749–755.
- Segal ZV, Williams JMG, Teasdale JD (2002) Mindfulness-Based Cognitive Therapy for Depression: A New Approach to Preventing Relapse. New York, Guilford Press.
- Seng JS, Rauch SA, Resnick H, Reed CD, King A, Low LK et al. (2010) Exploring posttraumatic stress disorder symptom profile among pregnant women. J Psychosom Obstet Gynaecol, 31:176–187.
- Shapiro SL, Carlson LE (2017) The Art and Science of Mindfulness: Integrating Mindfulness into Psychology and the Helping Professions, 2nd ed. American Psychological Association.
- Shojaeifar S, Torkestani NA, Jamiliyan H (2022) The effectiveness of acceptance and commitment group therapy on the improvement of postpartum moderate depression. EC Nursing and Healthcare, 4:17–25.
- Shulman B, Dueck R, Ryan D, Breau G, Sadowski I, Misri S (2018) Feasibility of a mindfulness-based cognitive therapy group intervention as an adjunctive treatment for postpartum depression and anxiety. J Affect Disord, 235:61-67.
- Slomian J, Honvo G, Emonts P, Reginster JY, Bruyère O (2019) Consequences of maternal postpartum depression: a systematic review of maternal and infant outcomes. Women's Health, 15:1745506519844044.
- Stamou G, García-Palacios A, Botella C (2018) Cognitive-behavioural therapy and interpersonal psychotherapy for the treatment of post-natal depression: a narrative review. BMC Psychol, 6:28.
- Steil R, Dyer A, Priebe K, Kleindienst N, Bohus M (2011) Dialectical behavior therapy for posttraumatic stress disorder related to childhood sexual abuse: a pilot study of an intensive residential treatment program. J Trauma Stress, 24:102–106.
- Stein A, Lehtonen A, Harvey AG, Nicol-Harper R, Craske M (2009) The influence of postnatal psychiatric disorder on child development. is maternal preoccupation one of the key underlying processes? Psychopathology, 42:11–21.
- Stewart DE, Vigod SN (2019) Postpartum depression: pathophysiology, treatment, and emerging therapeutics. Annu Rev Med, 70:183-196.
- Stutts LA, Leary MR, Zeveney AS, Hufnagle AS (2018) A longitudinal analysis of the relationship between self-compassion and the psychological effects of perceived stress. Self Identity, 17:609-626.
- Sun Y, Li Y, Wang J, Chen Q, Bazzano AN, Cao F (2021) Effectiveness of smartphone-based mindfulness training on maternal perinatal depression: randomized controlled trial. J Med Internet Res, 23:e23410.
- Suri R, Lin AS, Cohen LS, Altshuler LL (2014) Acute and long-term behavioral outcome of infants and children exposed in utero to either maternal depression or antidepressants. J Clin Psychiatry, 75:e1142–e1152.
- Tan Y, Şahin EM, Yurdakul F, Çetin H (2019) Çanakkale onsekiz mart üniversitesi hastanesinde peripartum depresyon yaygınlığı ve sosyodemografik faktörler ile ilişkisi. Troia Medical Journal, 1:98–104.
- Thomas EB, Miller ML, Grekin R, O'Hara MW (2023) Examining psychological inflexibility as a mediator of postpartum depressive symptoms: a longitudinal observational study of perinatal depression. J Contextual Behav Sci, 27:11-15.
- Twohig MP (2012) Acceptance and commitment therapy: introduction. Cogn Behav Pract, 19:499–507.
- Tsai JM, Tsai LY, Tsay SL, Chen YH (2023) The prevalence and risk factors of postpartum depression among women during the early postpartum period: a retrospective secondary data analysis. Taiwan J Obstet Gynecol, 62:406–411.
- Tunçdemir NO (2023) Toplumsal cinsiyet ve annelik: kadınların deneyimleri üzerinden nitel bir araştırma. Akdeniz Kadın Çalışmaları ve Toplumsal Cinsiyet Dergisi, 7:26–55
- Üstündağ-Budak AM, Özeke-Kocabaş E (2019) Diyalektik davranış terapisi ve beceri eğitimi: kullanım alanları ve koruyucu ruh sağlığındaki önemi. Psikiyatride Güncel Yaklaşımlar, 11:192–204.

Van Aalderen JR, Donders ART, Giommi F, Spinhoven P, Barendregt HP, Speckens AEM (2012) The efficacy of mindfulness-based cognitive therapy in recurrent depressed patients with and without a current depressive episode: a randomized controlled trial. Psychol Med, 42:989–1001.

van der Zee-van den Berg Al, Boere-Boonekamp MM, Groothuis-Oudshoorn CGM, Reijneveld SA (2021) Postpartum depression and anxiety: a community-based study on risk factors before, during and after pregnancy. J Affect Disord, 286:158–165.

Van Lieshout RJ, Layton H, Feller A, Ferro MA, Biscaro A, Bieling PJ (2020) Public health nurse delivered group cognitive behavioral therapy (CBT) for postpartum depression: a pilot study. Public Health Nurs, 37:50–55.

Vliegen N, Luyten P (2009) Dependency and self-criticism in post-partum depression and anxiety: a case control study. Clin Psychol Psychother, 16:22–32.

Walton GD, Ross LE, Stewart DE, Grigoriadis S, Dennis C, Vigod S (2014) Decisional conflict among women considering antidepressant medication use in pregnancy. Arch Womens Ment Health, 17:493–501.

Wang Z, Liu J, Shuai H, Cai Z, Fu X, Liu Y et al. (2021) Mapping global prevalence of depression among postpartum women. Transl Psychiatry, 11:543.

Waters CS, Annear B, Flockhart G, Jones I, Simmonds JR, Smith S et al. (2020) Acceptance and commitment therapy for perinatal mood and anxiety disorders: a feasibility and proof of concept study. Br J Clin Psychol, 59:461-479.

Wells A (1995) Meta-cognition and worry: a cognitive model of generalized anxiety disorder. Behav Cogn Psychother, 23:301-320.

Wells A (2009) Metacognitive Therapy for Anxiety and Depression. New York, Guilford Press.

Wells A (2013) Advances in metacognitive therapy. Int J Cogn Ther, 6:186-201.

Wells A, Capobianco L, Matthews G, Nordahl HM (2020) Editorial: metacognitive therapy: science and practice of a paradigm. Front Psychol, 11:576210.

Wells A, Fisher P, Myers S, Wheatley J, Patel T, Brewin CR (2009) Metacognitive therapy in recurrent and persistent depression: a multiple-baseline study of a new treatment. Cognit Ther Res, 33:291–300.

Wells A, King P (2006) Metacognitive therapy for generalized anxiety disorder: an open trial. J Behav Ther Exp Psychiatry, 37:206–212. Wells A, Matthews G (1996) Modelling cognition in emotional disorder: the S-REF model. Behav Res Ther, 34:881–888.

Wells A, Welford M, King P, Papageorgiou C, Wisely J, Mendel E (2010) A pilot randomized trial of metacognitive therapy vs applied relaxation in the treatment of adults with generalized anxiety disorder. Behav Res Ther, 48:429–434.

Werner E, Miller M, Osborne LM, Kuzava S, Monk C (2015) Preventing postpartum depression: review and recommendations. Arch Womens Ment Health, 18:41–60.

Wetherell JL, Liu L, Patterson TL, Afari N, Ayers CR, Thorp SR et al. (2011) Acceptance and commitment therapy for generalized anxiety disorder in older adults: a preliminary report. Behav Ther, 42:127–134.

Wharton E, Edwards KS, Juhasz K, Walser RD (2019) Acceptance-based interventions in the treatment of PTSD: group and individual pilot data using acceptance and commitment therapy. J Contextual Behav Sci, 14:55–64.

Wilson H, Donachie AL (2018) Evaluating the effectiveness of a dialectical behaviour therapy (DBT) informed programme in a community perinatal team. Behav Cogn Psychother, 46:541–553.

Witteveen AB, Henrichs J, Walker AL, Bohlmeijer ET, Burger H, Fontein-Kuipers Y et al. (2020) Effectiveness of a guided ACT-based self-help resilience training for depressive symptoms during pregnancy: study protocol of a randomized controlled trial embedded in a prospective cohort. BMC Pregnancy Childbirth, 20:705.

Woolhouse H, Mercuri K, Judd F, Brown SJ (2014) Antenatal mindfulness intervention to reduce depression, anxiety and stress: a pilot randomised controlled trial of the mindbabybody program in an Australian tertiary maternity hospital. BMC Pregnancy Childbirth, 14:369.

Yazıcı E, Kırkan TS, Aslan PA, Aydın N, Yazıcı AB (2015) Untreated depression in the first trimester of pregnancy leads to postpartum depression: high rates from a natural follow-up study. Neuropsychiatr Dis Treat, 11:405–411.

Yonkers KA, Blackwell KA, Glover J, Forray A (2014) Antidepressant use in pregnant and postpartum women. Annu Rev Clin Psychol, 10:369–392.

Zappas M, Becker K, Walton-Moss B (2020) Postpartum anxiety. J Nurse Pract, 17:60-64.

Zemestani M, Mozaffari S (2020) Acceptance and commitment therapy for the treatment of depression in persons with physical disability: a randomized controlled trial. Clin Rehabil, 34:938–947.

Zettle RD. (2015) Acceptance and commitment theory of depression. In Treating Depression: MCT, CBT, and Third-Wave Therapies (Eds A Wells, PL Fisher):169–193. Hoboken, NJ, Wiley.

Zhang H, Watson-Singleton NN, Pollard SE, Pittman DM, Lamis DA, Fischer N et al. (2019) Self-criticism and depressive symptoms: mediating role of self-compassion. Omega (Westport), 80:202–223.

Zlotnick C, Johnson SL, Miller IW, Pearlstein T, Howard M (2001) Postpartum depression in women receiving public assistance: pilot study of interpersonal-therapy-oriented group intervention. Am J Psychiatry, 158:638–640.

Zlotnick C, Wolfsdorf BA, Johnson B, Spirito A (2003) Impaired self-regulation and suicidal behavior among adolescent and young adult psychiatric inpatients. Arch Suicide Res, 7:149–157.

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