DOULA SUPPORT FOR PERINATAL MENTAL HEALTH NEEDS:
PERSPECTIVES ON TRAINING AND PRACTICE

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DOULA SUPPORT FOR PERINATAL MENTAL HEALTH

Abstract

Doulas are perinatal support professionals who increasingly serve parents across socioeconomic brackets. Although present during a time of significant emotional upheaval, doulas receive limited training in emotional support. Research has shown that brief clinical trainings for health professionals can prevent or mitigate depressive symptoms in mothers of all demographics. Such training has not been extended to doulas. These professionals have sustained, intimate contact with parents that uniquely positions them to combat a significant public health concern: perinatal mood and anxiety disorders. We surveyed 252 birth, postpartum, and community doulas across the U.S. to investigate perceived emotional support needs of their clients, as well as doulas’ comfort in addressing these needs, their desire for further training in emotional support, and their training format preferences. Regression analyses were used to examine the relationship between responses and participant demographics. This study found that doulas overwhelmingly desired more training in emotional support and that nearly all doulas perceived symptoms of emotional distress in their clients. Doulas with more years of experience, doulas who spent more time with clients, and doulas with additional training in emotional support tended to perceive symptoms at higher rates. The development of a brief clinical training for doulas may mitigate the perinatal mental health treatment gap and address doulas’ self-reported training needs. Results suggest that such a training would a) refine doulas’ sensitivity to clients’ mental health referral needs, thus allowing doulas to further their public health impact while remaining within their scope of certification, and b) build skills in addressing and preventing common symptoms of emotional distress.
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Key Terms

**Birth Doula**

A labor support person who is trained in providing nonmedical physical, emotional, and informational support to a mother and her family during the birth process. A birth doula typically meets with a family 1-2 times prior to the birth, is available remotely throughout the remainder of the pregnancy for informational support, is present throughout labor and birth, and meets with the family 1-2 times after the birth.

**Postpartum Doula**

A trained support professional who provides evidence-based information about baby care (e.g., safe sleep practices), practical assistance with the infant or around the home, and emotional support for the mother, her partner, and any other family members. Services are provided through home visits in the weeks and/or months following the birth, with the duration and frequency of visits being mutually determined by the postpartum doula and client.

**Community Doula**

A community health worker who has training in prenatal health, childbirth education, labor support, lactation counseling, and infant care. Services are provided through home visits during pregnancy, continuous labor support at the birth site, and home visits during the postpartum period.

**Postpartum and Antepartum Depression**

Depression occurring during the perinatal period, with symptoms developing during pregnancy or within the first year of birth.
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Perinatal

The few weeks immediately preceding and immediately following birth.

Prenatal or antenatal

Occurring before birth.

Intrapartum

The time period that encompasses childbirth, beginning at the first signs of labor and concluding with the delivery of the placenta after the baby is born.

Postpartum or postnatal

Occurring after birth.

Premature Birth

Delivery prior to 37 weeks’ gestation.

Perinatal Mood and Anxiety Disorders

Mood and anxiety disorders experienced during the perinatal period, including but not limited to: Prenatal or Postpartum Anxiety, Prenatal or Postpartum Obsessive-Compulsive Disorder, Prenatal or Postpartum Post-Traumatic Stress Disorder, and Prenatal or Postpartum Depression.
Chapter I: Introduction

A doula is a labor or postpartum support professional who provides nonmedical emotional, physical, and informational support to families as they transition to parenthood. In the U.S., three types of doulas assist women in the perinatal period: birth doulas, postpartum doulas, and community doulas. While traditionally hired privately and therefore only accessible to those with means, doulas have come to be seen as a tool in service of health equity in the U.S. and are now covered by Medicaid in four states, with pending legislation in others (Chen et al., 2020). The presence of a doula at birth and thereafter has been shown to improve maternal-infant health outcomes and to increase positive parenting behaviors (Bohren et al., 2017; Hans et al., 2018). However, research examining the psychological benefits of doulas is limited. Although emotional support is a significant component of doula work, explicit teaching of emotional support strategies comprises a limited portion of birth, postpartum, and community doula trainings.

Perinatal mood and anxiety disorders (PMADs) affect approximately a quarter of birthing parents in the U.S., with prevalence rates for families of low socioeconomic status, or low-SES, ranging from 25 to 40% (Willis et al., 2018). Untreated PMADs are estimated to cost the U.S. $14 billion per birth cohort (Luca et al., 2020). Postpartum depression (PPD) is by far the most studied of the PMADs and has significant consequences for public health. It adversely impacts the following factors, among others: maternal functioning, infant wellbeing, mother-infant interactions, child mental health, and child physical, cognitive, and linguistic development (Field, 2010; Junge et al., 2017; O’Hara & McCabe, 2013; Stein et al., 2014). While PPD is a public health concern for all women in the U.S., those of ethnic minority and low SES are
particularly vulnerable to this consequence of childbearing, with research pointing to a threefold risk of developing the disorder (Guintivano et al., 2018). PPD is treatable and preventable through psychological interventions (e.g., individual or group therapy) and psychosocial interventions (e.g., peer support, nondirective counseling) (Dennis & Dowswell, 2013; O’Connor et al., 2019). Both preventive and reactive approaches have also been successfully adapted for difficult-to-reach, high-risk mothers (Segre et al., 2015; Werner et al., 2015). Psychosocial interventions are delivered by laypeople and health professionals, such as nurses and home visitors, who have been shown to make a clinically significant impact on PPD symptom rates after undergoing trainings as brief as four hours (Dennis et al., 2009). Considering the mental health treatment gap in the U.S., which is maintained by the dearth of licensed providers with respect to the number of individuals who need mental health services (Kazdin, 2018), training other health professionals in PPD support strategies is an elegant solution to a public health challenge. Doulas may be ideally positioned to benefit from such a training.

Doulas have intimate, sustained contact with new and expectant families over months; they often spend more time with parents than most other healthcare providers. However, their training in specific emotional support strategies is limited. Initial evidence from small, qualitative studies suggests that doulas would like more training in PMADs and the emotional support aspects of their role (Jensen, 2018; McComish & Visger, 2009). A larger-scale investigation of doulas’ desire for training in emotional support skills – as well as their clients’ need for emotional support, their current comfort level in delivering emotional support, and any preferences for training content and format – is warranted. Such an investigation is particularly timely considering a) the recent push to expand access to doula care through Medicaid, and b) the increased risk of PPD in ethnic minority and low SES mothers. The present study seeks to fill
this gap through a training needs assessment of birth doulas, postpartum doulas, and community doulas nationwide. The results of this study may inform the development of a brief clinical training for doulas around delivering emotional support for parent mental health needs.
Chapter II: Review of the Literature

The Birth Doula

A birth doula is a labor support professional who works with a family before, during, and after childbirth to provide nonmedical emotional, physical, and informational support. These services are offered with the aim of helping a mother to have the healthiest, most satisfying birth experience possible (Doulas of North America [DONA] International, 2017a). Birth doulas may undergo training, certification, continuing education, and professional support through several certifying organizations. A 2013 survey of childbearing women in the U.S. indicated that 6% of women had used doulas during their most recent birth experiences (DeClerq et al., 2013).

Birth doula care during pregnancy includes a few meetings between the doula and family to establish a relationship, discuss any concerns each partner may have, and provide anticipatory guidance about labor and pain-management strategies. Doulas are then available by phone to answer questions and provide reassurance when needed. The family contacts the birth doula when the mother goes into labor, and throughout the process she provides: a) guidance for the family with respect to pain-management techniques and coping skills, b) physical assistance in the implementation of such strategies, c) emotional support that adapts to the client and partner’s needs at any given stage of labor, and d) advocacy for the mother’s or family’s preferences in the birth setting.

The type of emotional support provided during labor and birth varies greatly. Women may find themselves losing faith in their ability to handle labor, be required to have a cesarean section when they had strongly preferred a vaginal birth, give birth prematurely and cope with a Neonatal Intensive Care Unit (NICU) stay, or be faced with the loss of an infant. After the birth, the doula meets with the family to process the birth experience (e.g., share favorite moments,
help mother to express feelings about aspects of the birth that did not meet her expectations, etc.). Qualitative research has shown that birth doulas engage in emotional support strategies attributed to nurses in the literature (reassurance, encouragement, praise, explanations), as well as additional, unique strategies: mirroring, acceptance, reinforcing, reframing, and debriefing (Gilliland, 2010). Birth doulas are well-versed in the work of interdisciplinary perinatal professionals, spanning from lactation consultants to psychologists, and are expected to connect their clients to services that are beyond the scope of their own training (DONA International, 2017b).

**Birth Doula Training & Certification**

Doulas of North America (DONA) is the first and largest certifying organization for doulas, having certified over 12,000 doulas in over 50 countries since its founding in 1992 (DONA International, 2019). Another example of such a nonprofit is Childbirth and Postpartum Professional Association (CAPPA), an international certification organization for doulas, childbirth educators, and lactation educators that has trained thousands of perinatal professionals since 1998 (CAPPA, 2019). The International Childbirth Education Association (ICEA) also trains educators and healthcare professionals “in family-centered maternity and newborn care,” offering certifications for childbirth educators, birth doulas, and postpartum doulas (ICEA, 2019). Considering the size and scope of the organization, DONA’s trainings for birth doulas and postpartum doulas will be used as models in this paper.

Birth doulas’ steps toward certification include attending a 16 to 24-hour, workshop, seeking out childbirth education and breastfeeding education through workshops or courses (approximately 8 and 3 hours of education, respectively), reading from a list of approved books, and providing labor support for at least three families (DONA International, 2017a). In 2015,
DONA announced that those certified for at least six years who have also made major contributions in service of DONA, doulas, or maternal/child health also qualify for an “Advanced Doula” designation (DONA International, 2015). According to DONA’s website, as of September 2019, 52 individuals hold this designation.

A limited portion of birth doula training is dedicated to the emotional component of the transition to motherhood. One of the birth doula trainee’s required books is chosen from a selection of four volumes about PPD, which range from first-person accounts to self-help guides on the topic (DONA International, 2017a). The in-person training then briefly covers emotional support strategies and PMADs Relevant pages of the training manual are described in detail here (DONA International, 2017a). These pages, which comprise eight pages of the 124-page manual (6%), are introduced during the training, and workshop attendees are encouraged to independently review them in detail.

Two pages of the training manual describe the objectives and components of reflective listening (“Reflective [Active] Listening,” p. 4.1-4.2). This section identifies four goals of reflective listening (e.g., “To facilitate communication,” “To foster relationships”) and three circumstances in which one would use reflective listening (e.g., “When a person has a problem he or she needs to solve”). The following components to the skill are identified: mirrored body language, open-ended statements, summarizing and requesting confirmation, reflecting feelings, using tentative statements, clarifying when appropriate, and using silence. Each of these is described in a bullet point (e.g., “Reflect the feelings you are hearing or sensing in a non-judgmental way”). This section also provides information about which responses block communication, urging that doulas avoid the following: “order, command, direct; threat, warn; preach, moralize; advise, solve; lecture, logic; agree, praise; judge, criticize, blame, label;
sympathize, reassure; analyze, diagnose; probe, question; humor, sarcasm; distract, take subject away.” Finally, this section advises that doulas give feedback “when you have strong feelings or when it’s your issue, problem, etc.” by describing the behavior, event, situation, or action, describing its “impact or tangible effect on your life,” and “describe how it makes you feel.” After these bulleted lists, this section concludes by stating that “once people have had the opportunity to express their feelings and feel they have been heard, they can then move toward problem-solving.”

This section is followed by one page entitled, “Counseling Skills for Difficult Situations” (p. 4.3), which offers “general hints” for interacting with clients who are “scared, distressed, angry, or upset.” These are, 1) “‘Connect’” with her,” 2) “If she wants to (and you have the skills), help her explore the problem,” and 3) “Follow up and follow through.” Connecting is described using seven bullet points, which suggest that doulas invite their client to talk, do more listening than talking, “listen for meaning behind the words,” normalize intense reactions for those in crisis, communicate concern and acceptance, use touch when appropriate, bring “calm control,” and offer undivided attention. Problem-solving is described as relying on open-ended questions, helping a client to “be concrete,” and prioritizing tasks instead of “feeding [the client] a solution.” The following sample questions are provided: “What would happen if you did such and such? What has she tried so far? What has worked for her in the past? What kind of resources does she have? Who else is available to help?” Doulas are also instructed to “assess how she is coping” and “be aware of danger signs,” although neither of these is described in more detail. Finally, “following up” is described as the following: “Stay in touch as long as appropriate, and let her know you’re there for her.” One page offers “Encouraging and
Empowering Statements” (p. 5.9), such as, “You’re doing so well,” “It’s ok to cry,” and “Trust that you can do it.”

Two pages critical to the emotional support component make up the section titled, “Processing the Birth Experience with the Woman” (p. 9.1-9.2). A paragraph that opens this section explains that reliving positive aspects will reinforce those memories and enhance self-esteem, whereas processing and reframing “negative or mistaken impressions” may prevent post-traumatic stress or depression. A bulleted list of suggestions and guiding principles follow. These include the suggestion that before the birth, the doula let the client know that she’ll be interested in hearing her feelings after the birth, as well as that she introduce the subject in an open-ended way at the postpartum visit. Seven goals of reviewing the birth experience are identified, including “Help the woman put experience into words,” “For the doula, greater understanding of what the experience was for the woman,” and “Feedback for the doula from the mother regarding his/her role.” The purposes of processing the birth experience are described as including acknowledgement and validation of feelings, answering questions, and clarifying or correcting misconceptions or misunderstandings. The description of “Methods to use to achieve these goals” is as follows: “A) Explanation/clarification of events, B) Active listening, C) Constructive feedback (“I-messages”), D) Acknowledgment and validation of feelings, E) Appropriate allocation/acceptance of responsibility, F) Planting “seeds of accomplishment” – compliments in reference to specific events from the labor, G) Good timing when shifting from listening to giving feedback to planting seeds to concluding the session.”

The manual also includes a 10-item Likert questionnaire entitled, “Unhappiness after Childbirth” (p. 9.8), which is described as a self-assessment for mothers. The questions on this scale are taken from the Edinburgh Postnatal Depression Scale (EPDS; see Postpartum
Depression section, this paper), yet the questionnaire does not have any scoring instructions, unlike the EPDS. This statement, directed at mothers, follows the last item on the survey: “If you have a ‘feeling’ after completing this form that something ‘isn’t right’ or if you have any questions, please contact your childbirth educator, doula, care provider, or mental health therapist.” Although the EPDS shows reliability and validity in clinical samples, no data exist on using the scale’s questions in this manner.

Finally, one page is dedicated to the risk factors and behaviors associated with PMADs (“Postpartum Mood and Anxiety Disorders: What Can Birth Doulas Do?” p. 9.9). This page lists 13 risk factors for PPD and 13 “Postpartum behaviors of concern.” Doulas are warned that they ought never to make a diagnosis and that they must be knowledgeable about “community and professional support so appropriate referrals can be made.” This section encourages doulas to provide mothers with the “Unhappiness after Childbirth” self-assessment tool and to “discuss concerns over her postpartum adjustment with family, friends, or a mental health professional.” The aforementioned “behaviors of concern” are as follows:

- Persistent sleep problems (can’t sleep even when the baby sleeps, or wants to sleep all the time; having nightmares, etc.)
- Eating problems (doesn’t want to eat or eats much more than usual)
- Nothing makes her feel better, including help and support from family and friends
- Doesn’t want to leave the house, isolates herself
- Feels overwhelmed or persistently sad. Feels like crying (or does cry) all the time.
- Constantly feels angry, irritable
- Extreme lack of energy – everything seems like an effort (including day-to-day living activities like getting dressed, personal hygiene)
- Lack of interest in her usual activities
- Anxiety – lots of worries, her mind races
- Difficulty concentrating
- Physical symptoms, such as headaches, chest pain, stomach/intestinal problems
- Doesn’t interact with the baby
- Has scary thoughts of any kind, feels like harming herself or the baby

**Benefits of Birth Doulas**

Randomized controlled trials (RCTs) provide evidence for physical and psychosocial benefits of having support during the birth process. In 2017, the Cochrane Library published a systematic review of continuous support in labor, with continuous support being defined as emotional support (e.g., reassurance, praise, continuous presence), information and advice about labor progress and coping techniques, comfort measures (e.g., touch, massage, facilitation of movement, encouragement of fluid intake), and advocacy (e.g., helping women and partners to articulate their preferences) (Bohren et al., 2017). Evidence from randomized trials in high- and middle-income settings, in which continuous support was given by an individual whose sole responsibility was to provide that support, showed shorter length of labor, decreased cesarean birth, decreased use of analgesia, improved infant health outcomes at 5 minutes after birth, and decreased negative feelings about childbirth. This data has led the American College of Obstetricians and Gynecologists to recommend the use of a birth doula to reduce the need for intervention during labor and birth (ACOG, 2019).

**The Postpartum Doula**

Postpartum doulas offer emotional support, practical support, and education in evidence-based baby care during the weeks after birth. The postpartum doula typically meets the family
once prior to the birth in order to establish rapport and expectations. She then assists the family for a few weeks or beyond, providing however many hours of assistance are agreed upon by her and the family. Emotional support from a postpartum doula includes processing the birth experience, normalizing and allowing space for mixed feelings about parenting a newborn, and general reflective listening. With respect to education, postpartum doulas can offer instruction in guidelines for infant sleep to prevent sudden infant death syndrome (SIDS), provide benchmarks for appropriate food quantities based on a baby’s age, provide instruction in bathing and swaddling, etc. Practical support may include provision of childcare, assistance with errands, or light housekeeping duties. In a qualitative, observational study, McComish and Visger (2009) found that postpartum doulas’ work spanned eleven domains, ranging from partner and sibling support to infant care, but that “emotional support was used consistently and in combination with the other domains” (p. 148).

Similar to a birth doula, a postpartum doula’s ethical code mandates that she be highly knowledgeable of resources offered by other perinatal professionals, referring out when services beyond her scope are needed (DONA International, 2017c). Indeed, this is a core aspect of the mission of all doulas: connecting clients to appropriate professionals and evidence-based information, empowering women and families to be educated consumers of their own healthcare.

**Postpartum Doula Training & Certification**

Postpartum doulas’ steps toward certification include attending at a 27-hour, workshop, seeking out breastfeeding education through a workshop or course (approximately 3 hours), reading from a list of approved books, and providing postpartum support for at least three families (DONA International, 2013).
Although postpartum doula training offers a greater focus on emotional adjustment relative to birth doula training, the degree to which this topic is covered remains limited. Postpartum doulas are required to read one book from each of 11 categories, two of which are relevant to emotional support. One of these categories is “Becoming a Mother” and includes three possible volumes to choose from, including, *Misconceptions: Truth, Lies, and the Unexpected on the Journey to Motherhood* (Wolf, 2001) and *Mothering the New Mother: Women’s Feelings and Needs After Childbirth, Second Edition* by (Placksin, 2000). The other relevant category is “Perinatal Mood and Anxiety Disorders.” Postpartum doulas may choose one of five possible options, with books ranging from first-person accounts to self-help guides on the topic. One of these five books is a 50-page guide for listening to, educating, and referring mothers with postpartum mood difficulties: *I’m Listening: A Guide to Supporting Postpartum Families* (Honikman, 2014). Although this book offers concrete advice (e.g., suggested phrasing for responding to common questions), it is only one of five possible volumes that a postpartum doula might choose to read for the PMAD section of their reading list.

The in-person training provides some guidance about emotional support strategies and PMADs. Relevant pages of the training manual are described in detail here (DONA International, 2013). These 24 pages of the 141-page manual (17%) are introduced during the training, and workshop attendees are encouraged to independently review them in detail.

A section titled “Effective Communications” (p. 31-33) leads attendees through a four-question self-assessment of their communication style, helping respondents to reflect on how they typically respond when listening, when being asked questions, when uncomfortable with a topic, and when in disagreement with the speaker. A paragraph at the bottom of this questionnaire suggests that the best way to approach a difficult professional conversation is to a)
reflect what one is hearing, and b) refer clients to others who have expertise in the area should they feel unqualified to offer an opinion. This is followed by the same pages about reflective listening that are found in the birth doula workshop manual, which are described above (“Reflective [Active] Listening”).

The postpartum doula manual contains the same pages about processing the birth experience as the birth doula manual (“Processing the Birth Experience with the Woman”). This is immediately followed by a chart that indicates factors that promote or inhibit recovery in the first days (e.g., adequate rest versus exhaustion), the first week (e.g., help with newborn care and self-care versus isolation and lack of support), and the first one to two months (e.g., normal versus abnormal infant development) (p. 36-37). A section entitled, “Transition to Parenting” (p. 76-77) offers a paragraph description of each of the following tips for helping parents transition into their new role: “determine the expectations of the parents prenatally if possible;” “suggest to your clients that being a parent is NOT a job;” “remind the parent that their previously existing relationship is still secure;” “establish the ‘bubble time’ theory” (e.g., allowing the working parent to have transition time when they return home); “encourage the parents to have fun with this experience;” “assure them that this is the time to ‘live in the moment;’” and “remind the parents that they are doing amazingly well.” A page specifically about motherhood (p. 78) encourages the doula to consider where women’s expectations about motherhood come from and which challenges are relevant to contemporary culture (e.g., lack of ceremony for honoring the transition, expectations that women will immediately “fall in love” with their babies, and family leave policies). This is followed by a description of the postpartum self-help acronym, “NURSE:” nourishment and needs, understanding, rest and relaxation, spirituality, and exercise (p. 79).
A 10-page section about PMADs offers definitions, symptoms, and risk factors thereof, as well as a list of steps doulas can take when working with a mother or partner they suspect is experiencing a PMAD (p. 106-116). The manual differentiates between “baby blues” and PPD, offering statistics on the prevalence of each, and explains that PMADs include a range of disorders and is not limited to PPD. This introduction to PMADs stresses that “the most effective treatments involve a combination of medical treatment, counseling, and social support” and that early intervention is critical to long-term wellbeing. A bulleted list of risk factors for all PMADs is followed by a list of sample symptoms for each PMAD. For example, symptoms of depression are listed include “Feelings of despair/hopelessness,” “anger and irritability,” and “physical symptoms (clumsiness, slowed speech, etc.).” The manual also provides a two-page self-assessment for clients, titled “Postpartum Depression Risk Assessment in Pregnancy,” which follows a check-all-that-apply format. The manual clearly states that this questionnaire is not diagnostic, explaining that the self-assessment is intended to help women be “aware of the factors that can potentially make you vulnerable to depression.” An 8-item list follows on a page titled, “Steps to Wellness,” which is cited as being adapted from Jane Honikman’s guide. The list is introduced as “a systematic approach to help women who have given birth, miscarried, or adopted and who are encountering problems related to these major life changes.” The list is as follows: “1. Education, 2. Sleep, 3. Nutrition, 4. Exercise and time for yourself, 5. Nonjudgmental sharing, 6. Emotional support, 7. Practical support, 8. Referrals to resources.” These steps are not expanded upon or described. The postpartum doula is encouraged to use these steps “as a guide toward the support she can provide” and to “as a list of suggestions” for the family. The following three pages largely replicate the birth doula manual pages titled, “Postpartum Mood and Anxiety Disorders: What Can Birth Doulas Do?” in that they highlight
the scope of the postpartum doula’s practice relative to PMADs (e.g., no diagnosing or treating), identify potential behaviors of concern, and offer suggestions for specific steps postpartum doulas can take to help (e.g., have referral resources on hand, validate, normalize, maximize maternal sleep and nutrition, help parents prioritize tasks, assist in gathering social support, and offer praise). “Behaviors of concern” (p. 114) that do not overlap with those in the birth doula manual are as follows:

- Despondent in reacting to their baby
- Is hyper-vigilant about diaper care
- Is overly concerned with cleanliness
- High need to feel in control; perfectionistic tendencies
- Low self-esteem; feels they are a bad parent, can’t do anything right; feels that their baby doesn’t like them

As with the birth doula manual, postpartum doulas are then introduced to the “Unhappiness after Childbirth” self-assessment tool (p. 116).

Finally, the postpartum doula manual offers a five-page section about loss and grief. These pages are titled, “Loss and Grief in the Childbearing Year” (p. 133-134), “The Doula’s Role When Supporting a Grieving Family” (p. 135-136), and “Responding to Grieving Families” (p. 137). These pages orient the postpartum doula to events and processes that may elicit feelings of grief or loss (e.g., pregnancy loss, traumatic birth, chronic child health conditions, loss of identity or peer group). Each of these is briefly described and normalized, and doulas are encouraged to offer support in the following ways: listen; offer touch; offer to take photographs; remind the family to eat, drink, and rest; offer resources and referrals; accompany parents to appointments and services as requested; show one’s own sadness; use the baby’s name when
speaking; use person-centered language (e.g., “baby with Down’s syndrome” versus “Down’s syndrome baby”); support siblings; write down as much as is remembered about the birth; and rely on own support networks for self-care. This is followed by a page of concrete suggestions of what to say and what not to say (e.g., “This must be hard for you” versus “You’re young, you can have others”), as well as a brief list of remembrances that a doula can offer a family (e.g., donation to memorial fund).

**Benefits of Postpartum Doulas**

Very few studies have investigated the benefits of postpartum doula support. At the time of writing, only one RCT has evaluated the benefits of postpartum doula services. Gjerdingen et al. (2013) compared postpartum doula services to peer telephone support. Women who scored in the moderate to severe ranges on a depression screener were randomly assigned to either a postpartum doula group (24 hours of services over six weeks, delivered by a certified postpartum doula recruited from DONA or CAPPA), a telephone support group (3 months of phone support at the time and frequency of the mother’s choosing, delivered by women who had themselves recovered from PPD), or a control group (mailed a PPD brochure and resource list). Postpartum doulas and peer telephone supporters all received a half-day training in PPD diagnosis and treatment, suicidal ideation, and techniques for supporting women with PPD. Data was likely adversely impacted by small sample size (39 women) and allocation bias, as the doula group began with a significantly higher number of women with a history of depression and who were currently depressed. At six-month follow-up, however, the postpartum doula group showed greater improvements in stated health and depression scores than those of other groups to a clinically significant degree. Potential explanations posited by the authors include the practical support offered by postpartum doulas (which may be functionally validating), the in-person
nature of the work, and the level of training in general postpartum care. Although this study offers support for the benefits of postpartum doulas, these professionals received additional training in maternal mental health. Conclusions about the benefits of postpartum doulas who go through the typical certification process therefore cannot be drawn.

**The Community Doula**

Whereas birth doulas and postpartum doulas are typically privately employed, hired directly by families, the community doula is typically employed by a state- or federally-funded program that serves at-risk families. This model, which was developed in Chicago in the late 1990’s, integrates doulas into home-visiting programs with the aim of improving maternal and newborn health outcomes (Hans et al., 2018). Community doulas are community health workers who train in pregnancy, childbirth, lactation counseling, and newborn care. These services are delivered throughout the second half of pregnancy (in-home), during labor and birth (at the hospital/birth site), and for six weeks after birth (in-home). Community doulas serve populations who are at risk for poor health outcomes, and their clientele are largely low-income or young mothers. They are typically from – or have deep connections to – the communities they serve, positioning them to provide care from a place of racial, ethnic, socioeconomic, linguistic, and cultural understanding.

**Community Doula Training & Certification**

Doula training for community health workers is largely similar to those described above for birth and postpartum doulas. Critical differences lie in the philosophical underpinnings of the approach (e.g., incorporating education about birth inequities). Numerous agencies offer community doula trainings. HealthConnect One – a Chicago-based organization, founded in 1986, that strives to achieve maternal health equity nationwide – will be used as an example here
because of its size and scope. HealthConnect One offers doula training and collaborates with grassroots community organizations across the country (e.g., maternal and child health specialists, social service organizations) to replicate their community-based doula program. Their Holistic Birth Doula Training meets the requirements for the DONA in-person training towards certification. In addition to the components standard to birth doula training, the community-based training is presented through a health equity framework and offers an introduction to the principles of trauma-informed care (e.g., taking past trauma into account and fostering safety, choice, and empowerment) (HealthConnect One, 2019).

**Benefits of Community Doulas**

To date, three randomized trials have evaluated the benefits of community doula programs. Hans et al. (2013) evaluated the impact of community doula services on parenting behaviors and attitudes in a sample of young, low-income Chicago mothers (N = 248). Video recordings of mother-infant interactions at 4, 12, and 24 months, as well as parent self-report measures, showed that mothers in the doula group showed more positive interactions with their infants, were more likely to respond to infant distress at 4 months, and endorsed more child-centered parenting values. Their infants were less likely to present as distressed during the filmed interactions. The authors found, however, that most positive effects faded over time, suggesting that integrating doulas into home-visiting programs on a longer-term basis may be beneficial (e.g., beyond three months postpartum). Edwards et al. (2013) looked at breastfeeding outcomes for this same sample of Chicago mothers. Findings showed that compared to those in the control group, mothers who received doula services were significantly more likely to attempt breastfeeding, to breastfeed longer, and to wait to introduce complementary foods until after 4 months.
In 2018, Hans and colleagues conducted an RCT to investigate the impact of community doula services on birth outcomes, maternal and infant health after birth, and newborn care behaviors. In this study, a doula and home visitor both provided services during pregnancy, the doula provided continuous support during labor and birth, and the doula provided six weeks of postpartum services. The home visitor continued in their role after six weeks. Compared to mothers in the control group (who received case management services), mothers in the intervention group were more likely to attend childbirth preparation classes, were less likely to use epidurals and other pain medication during labor, were more likely to initiate breastfeeding, were more likely to put infants to sleep on their backs (in keeping with SIDS prevention guidelines), and were more likely to use car seats at 3 weeks. No differences were found in birthweight or rates of Cesarean section (C-section), prematurity, or PPD. As is evident from these three studies, community doulas have the potential to make a meaningful impact on health and psychosocial outcomes of at-risk mothers and babies.

The Reach of the Doula: Changing Demographics

As reviewed here, research supporting the benefits of birth doulas, postpartum doulas, and community doulas has led to increased awareness about the public health benefits of doula services. Birth doulas and postpartum doulas, however, are largely privately employed and paid for out-of-pocket. In New York City, the average cost of a privately hired birth doula is $1,200 (Strauss et al., 2014). At the time of writing, four states allow reimbursement for Doula services through the Medicaid program – Minnesota, Oregon, New Jersey, and Indiana – and numerous others have introduced similar bills (Chen et al., 2020). Doula care coverage is not routine among private insurance companies, yet some offer reimbursement for birth doula services provided by a certified doula. Considering the cost savings associated with the health benefits of
birth doulas (estimated at $646,271,408 per year for Medicaid and $1,731,722,089 for private insurance), advocates have called for mandated Medicaid and private insurance coverage of doula services across the U.S. (Overdue: Medicaid and Private Insurance Coverage of Doula Care to Strengthen Maternal and Infant Health, 2016). Public health experts have called for state Medicaid coverage of doula services for the better part of the last decade, emphasizing the cost savings associated with reduced medical intervention (Kozhimannil et al., 2013; Kozhimannil & Hardeman, 2016). The March of Dimes echoed this sentiment in their January 2019 position statement on doulas and birth outcomes (Doulas and Birth Outcomes, 2019).

Barriers preventing low-income, ethnic minority populations from utilizing doula services have included cost, lack of services, and lack of information about services (Thomas et al., 2017). Nationally, women on Medicaid were 50% less likely to know about doulas compared to women with private insurance (DeClerq et al., 2013). Most doulas are White, upper-middle-class women, which has negative repercussions for the availability – and cultural sensitivity – of doulas in diverse communities (Lantz et al., 2005).

Although private insurance and Medicaid coverage of doula services is not yet a widespread reality, some legislators have made efforts to address these barriers and to promote the usage of doula services by high-risk mothers. In New Jersey, one million dollars was recently allocated to fund doula services for expectant mothers on Medicaid (State of New Jersey Department of Human Services, 2019). Another such example is the By My Side Birth Support Program (established 2010), which offers free doula services through the Healthy Start Brooklyn initiative, which is part of the NYC Department of Health & Mental Hygiene (Thomas et al., 2017). Women qualify for services if they meet eligibility requirements for the Women, Infants, and Children nutrition program (WIC) and if they live in one of four Brooklyn communities with
disproportionately poor health outcomes. The program blends the private and community doula models, hiring DONA-trained birth doulas as independent subcontractors to complete three prenatal visits, continuous labor and birth support, and four postpartum visits. At prenatal visits, doulas also screen for depression, food insecurity, intimate partner violence, and medical risk factors. Considering that this is outside the scope of traditional practice, doulas receive additional training and resource guides relevant to these topics. In the program’s first five years, 489 infants were born to women enrolled in the program, and 84.7% of those births were attended by doulas. Qualitative data and semi-structured follow-up interviews with clients revealed that the program is highly valued by clients, as evidenced by low attrition rates and strong, positive feedback. Although a causal relationship could not be determined because of self-selection and other potential bias, program participants showed lower rates of prematurity and low birthweight relative to rates in their communities. The By My Side program may be seen as an additional, innovative model for bringing doula access to under-served populations by blending private and community doula approaches.

**Perinatal Mood and Anxiety Disorders**

PMADs may emerge during pregnancy or within the year after childbirth. These include perinatal anxiety, perinatal obsessive-compulsive disorder, perinatal post-traumatic stress disorder, and perinatal depression (Vesga-Lopez et al., 2008). Overall prevalence estimates range from 20 to 25%, and prevalence rates for low-SES families are estimated to fall between 25 and 40% (Willis et al., 2018). PPD is the most commonly experienced PMAD and is the most well-represented in the literature. PMADs may come with high rates of comorbidity as well. Evidence suggests that mothers with PPD have around a 50% comorbidity rate with clinically significant anxiety (Ross et al., 2003). Although research on comorbidity is limited by the paucity of
assessment measures validated for perinatal populations, studies have shown that the most commonly used PPD measure – the EPDS – contains three items that also reliably assess for anxiety (Brouwers et al., 2001; Ross et al., 2003). Untreated PMADs are estimated to cost the U.S. $14 billion per birth cohort (during the span of conception to age five) due to factors such as reduced maternal economic productivity and increased preterm births (Luca et al., 2020).

Little research exists about the transdiagnostic symptoms and processes of emotional difficulties in the postpartum period. Coates et al. (2014, 2015) interviewed 17 women in the UK who reported experiencing “emotional problems” in the year after childbirth. In their 2014 analysis, the researchers identified common themes: experiencing unwelcome emotions (distancing and avoiding of emotions, birth-related distress, guilt and self-blame, and difficulties with breastfeeding), relationships in the healthcare system (uncared for in the healthcare system, unknown in the healthcare system, and positive experiences), adjustment to new role demands (adjustment to the unknown, overwhelming responsibility, inexperience), and importance of social support (needing and seeking support, action to help move on). In their 2015 analysis, the researchers identified common symptoms of distress, which were endorsed at the following frequencies: tearful (82%), anxious (65%), stressed (47%), isolated and lonely (41%), angry (41%), overthinking (35%), feeling low (35%), panicky (35%), flashbacks/intrusions/nightmares (29%), frustration (29%), and worried and scared (29%). Although many of these categories appear to overlap (e.g., “anxious” and “worried and scared”), they offer some insight into the transdiagnostic symptoms of PMADs.

While these symptoms focus on the mother, mother-infant interaction has also shown to be adversely impacted by a variety of PMADs. As described below (see “Public Health Impact”), depressed mothers show disturbances in interactions with their infants, inadequate caregiving
practices, and problematic safety practices. Research has also shown that mothers with high
postpartum anxiety display significantly less sensitivity in their responses and significantly
reduced positive emotionality compared to mothers with low trait anxiety (Nicol-Harper et al.,
2007). This held true when mothers who scored high on depressive symptoms were removed
from analyses. Tester-Jones et al. (2017) found that regardless of depressive symptomatology,
rumination in mothers causally reduced their sensitivity in interactions with their infants. This
has implications across PMADs, as elevated levels of rumination have been shown to be present
across numerous mood and anxiety disorders (Ehring & Watkins, 2008).

Although the full spectrum of PMADs is relevant to new families and the professionals
who serve them, PPD will be discussed in greater detail here because it is the most researched
and therefore best understood of the PMADs. Its prevalence in the literature has allowed for the
development and evaluation of numerous intervention and prevention approaches, many of
which have been adapted for use by laypeople and other health professionals. This research is
reviewed below.

**Postpartum Depression**

PPD is defined as a depressive episode during the postpartum period (O’Hara & McCabe,
2013). Although typically defined as a major depressive episode, some literature has extended
the definition to include minor depression. PPD is distinct from the “postpartum blues:” mild,
transient mood issues occurring three to five days after childbirth, with incidence rates ranging
from 40-80% (Buttner et al., 2012). The first six months after birth mark a high-risk time for
PPD. Prevalence rates in middle and high-income countries range from 13-19%, making it the
most common complication of childbirth (O’Hara & McCabe, 2013). PPD symptomatology
mimics that of major depression (e.g., anhedonia, low mood, hopelessness, thoughts of death,
and disturbances in sleep, appetite, energy levels, and ability to concentrate). Risk factors for PPD may be seen as falling into four categories: environmental stressors; social support; recent and ongoing depression and anxiety symptoms; and personality disturbance. Specific risk factors include current symptoms of depression, anxiety or depression during pregnancy, low self-esteem, postpartum blues, stressful life events, a poor relationship with one’s significant other, poor social support, neuroticism, unwanted pregnancy, and single motherhood (O’Hara & McCabe, 2013). PPD is most often assessed using the EPDS, the Center for Epidemiological Studies Depression Scale (CES-D), or the Structured Clinical Interview for DSM-IV or DSM-5 (SCID).

Viewed in the context of these risk factors, low socio-economic status (SES) may be seen as a critical demographic component, as low SES limits access to the social and environmental resources that buffer women from PPD. Poverty may present challenges such as intimate partner violence, unintended pregnancies, stressful working conditions, and limited social support (US Institute of Medicine, 2007). Both low SES and Black ethnicity have been shown to increase the risk of exposure to adverse life events (Brady & Matthews, 2002), and racial minorities in the U.S. are more likely to be of low SES than White Americans (Chetty et al., 2020). Guintivano et al. (2018) found that multiple exposures to adverse life events significantly predicted the presence of PPD in a sample of ethnic minority, low-SES women. Notably, these women were three times more likely to develop PPD. Premature birth has been shown to nearly double one’s likelihood of developing PPD (Vigod et al., 2010), and the preterm birth rate among non-Hispanic Black women was 44% higher than that of all other women in 2015 (Martin et al., 2017). Low SES has also been associated with an increased risk of preterm birth (Kramer et al., 2000). Women of low SES and ethnic minority status are therefore uniquely vulnerable to PPD.
**Public Health Impact**

PPD adversely impacts maternal functioning, parenting behaviors, infant wellbeing, and child development, making it a public health concern. Findings of O’Hara and McCabe (2013), who reviewed the PPD literature from middle- and high-income countries, are described here. With regards to mothers, PPD has been associated with recurrent depressive episodes, increased negative emotionality and decreased positive emotionality, cognitive biases toward negative perceptions of themselves and their infants, increased self-focus, decreased work performance and productivity, and decreased general quality of life. Parenting behaviors suffer because of PPD as well. Women with depressive symptoms are less likely to attend well-child visits, use home safety devices, and complete immunizations. They are significantly more likely to discontinue breastfeeding 4-16 weeks after giving birth, and maternal depression has been associated with a lack of adherence to safe sleep guidelines: putting infants to sleep in the prone position and co-sleeping (Chung et al., 2004; Field, 2010). Indeed, maternal depression has been independently associated with a near-five-fold increase in SIDS (Howard et al., 2007). Women who meet diagnostic criteria for PPD are more likely to neglect and abuse their children, and they have significantly more thoughts of harming their infants (Field, 2010).

PPD also adversely affects mother-infant interactions. As reviewed by Field (2010), depressed mothers of 3-month-old infants have been shown to be more irritable and hostile, to be less engaged, to display less emotion and warmth, and to exhibit lower rates of play. Disturbances in interaction due to depression have been shown to be cross-cultural and present across socio-economic brackets. Depressed mothers touch babies less often and in a less affectionate manner, they show less vocal sensitivity (e.g., less repetition, less infant-directed speech, more negative tone, and fewer references to infants’ behavior), and they engage their
infants in fewer enrichment activities (e.g., games, reading, singing songs). For instance, Herrera and colleagues (2004) found that even mildly depressed mothers showed more negative touch (e.g., controlling, restraining, or directing their infant) and less developmentally sensitive speech than non-depressed mothers. The literature refers to a reduced sensitivity and responsiveness in depressed mothers’ interactions with their infants, with two typical styles identified: an intrusive, controlling, or over-stimulating style and a withdrawn, passive, or under-stimulating style.

The negative impacts of PPD continue through childhood and even adolescence, with children of mothers with PPD showing an increased risk of developing internalizing symptoms and disorders (i.e., depression and anxiety), inadequate social skills and emotion regulation skills, insecure attachment, and delayed development in linguistic and cognitive domains (Junge et al., 2017; Stein et al., 2014). As reviewed by O’Hara & McCabe (2013), PPD and/or depression beyond the postpartum period are also associated with the following: poorer growth and cardiovascular functioning, higher rates of gastrointestinal infections, and higher rates of lower respiratory tract infections. This finding is significant because PPD is likely to be associated with recurrent depressive episodes (Cooper et al., 2003; Josefsson & Sydsjö, 2007; Nylen et al., 2010). Indeed, maternal depression is an item on the Adverse Childhood Experiences questionnaire, for which a high score has been negatively correlated with long-term health and psychological outcomes through adulthood (Felitti et al., 1998).

In light of the evidence that PPD adversely affects two generations, the perinatal period seems a rich area for intervention to improve physical, psychological, and developmental outcomes. Considering PPD’s relevance to low-SES and ethnic minority populations, intervening to treat or prevent the disorder is also relevant to breaking cycles of poverty in the US.
Treatment of Postpartum Depression

To date, three approaches to treating PPD have been extensively studied and proven effective: psychopharmacological intervention (e.g., SSRIs), psychological intervention (e.g., therapy), and psychosocial intervention (e.g., peer support, non-directive counseling) (Dennis & Hodnett, 2007; O’Hara & McCabe, 2013). Each of these approaches is described below.

As per O’Hara and McCabe’s 2013 review, there is little evidence to suggest that medication works better than therapy in treating PPD. RCTs have largely compared pharmacological treatments to cognitive behavioral therapy (CBT), and results point to significant improvements in both conditions (e.g., Misri et al., 2004). Barriers to pursuing a pharmacological approach to PPD include a lack of accessible treatment, concerns about breastmilk transmission, and concerns about side effects (Dennis & Hodnett, 2007).

Empirically supported therapy interventions include individual and group interpersonal psychotherapy (IPT), individual and group CBT, and individual psychodynamic therapy (Cuijpers, Brännmark, & van Straten, 2008; Sockol, Epperson, & Barber, 2011). These treatments are usually brief, lasting 6-12 sessions, with general counseling typically lasting eight sessions. Meta-analyses show a medium effect size for psychological treatment of PPD, which is comparable to treatment effect sizes for major depression. Barriers to pursuing therapy include stigma, a lack of childcare, a lack of accessible treatment, time constraints, and reluctance to travel to regular appointments (Dennis & Chung-Lee, 2006). Additional barriers to services that may be particularly relevant to mothers of low SES include costs of transportation, lack of paid family leave, and PMADs themselves (as reviewed by Hall, Shahidullah, & Lassen, 2019).

Psychosocial interventions for PPD include peer support and non-directive counseling. These are typically unstructured and non-manualized, and those delivering the services range
from health professionals to women with a past history of PPD. A Cochrane systematic review of published and unpublished data (Dennis & Hodnett, 2007) found that both psychological and psychosocial interventions decreased the likelihood of experiencing depressive symptoms compared to usual care (variously defined). Data from one unpublished RCT of 595 postpartum women in the UK revealed no significant difference in the degree of improvement between non-directive counseling and individual CBT, both provided in women’s homes by health visitors.

One example of psychosocial treatment approaches is the Listening Visits intervention, which is an empirically-supported, brief counseling intervention that targets PPD (Holden et al., 1989). Listening Visits (LVs) were developed in the UK for delivery by “health visitors:” public health nurses who specialize in primary care, both from the office of a general practitioner and through home visits. The two core components to LVs are empathic listening and collaborative problem-solving, with the primary focus being a) the mother’s relationship with her infant, and b) the practical problems she may be experiencing. Although non-directive, each of approximately six visits follows a prescribed sequence: greeting, debriefing about the previous visit, seeking updates on current areas of concern, addressing the most pressing concerns through listening and problem-solving, and summarizing the visit to provide closure. European clinical trials have provided substantial evidence for the efficacy of LVs, and the British National Institute for Clinical Excellence recommends LVs as an evidence-based treatment for mild to moderate PPD (Cooper et al., 2003; Holden et al., 1989; Morrell et al., 2009; National Collaborating Center for Mental Health, 2007). Open trials and feasibility trials of LVs in the U.S. have shown significant declines in depressive symptoms, although they are limited by small sample sizes (Segre et al., 2010; Segre et al., 2013).
O’Hara and McCabe (2013) highlight two unique aspects of both psychological and psychosocial PPD treatment trials (relative to depression treatment trials): that services are often conducted in a woman’s home instead of in an office or clinic, and that services are delivered by a range of professionals (including health visitor nurses, child health nurses, case managers, and professionally trained therapists). They note that other healthcare professionals “seem to perform well with modest training and certainly represent a cost-effective alternative to doctoral-level psychotherapists” (O’Hara & McCabe, 2013, p. 394).

**Adapting Treatment for Difficult-to-Reach, High-Risk Mothers**

Research supports increased therapy retention rates when impoverished, ethnic minority patients receive services bolstered by case management (Miranda et al., 2003). In a large RCT evaluating CBT with case management, antidepressant medication, and community mental health services, therapy and medication were found to significantly reduce depressive symptoms (Miranda et al., 2003). Enhanced IPT-Brief is an adaptation of IPT that is similarly sensitive to this population’s need for enhanced services. The treatment targets depression before and after birth. Additions include a motivational interviewing session for engagement, daycare and transportation services, and case management. In a 2009 RCT, women receiving this treatment showed significant reductions in depressive symptoms – and associated increases in social adjustment – compared to women receiving enhanced usual care (Grote et al., 2009). In both these trials, therapy was delivered by doctoral- or masters-level clinicians.

Although these models have successfully reached low SES and ethnic minority women, it is unclear whether such approaches would be feasible on a large scale and outside the context of funded research trials. Segre and colleagues (2010) therefore conducted a preliminary assessment of the efficacy of LVs in an urban, Midwestern Healthy Start program. Six sessions of up to one
hour were delivered by home visitors with bachelor’s degrees, all of whom had attended a perinatal depression screening workshop and an LV training. Although the study’s sample size was small, participants exhibited statistically significant improvements in depression severity, with improvements sustained at three-month follow-up. Although not targeted to low-SES minority mothers, a preliminary open trial evaluating the delivery of LVs in a NICU setting (Segre et al., 2013) is relevant in light of the high rates of prematurity in this population, as referenced previously. In this study, sessions occurred every 2-3 days and were delivered by a nurse who had attended a workshop about perinatal depression (4 hours) and about LV skills (4 hours). Most women receiving LVs in the NICU exhibited significant improvements in depressive symptoms, anxiety symptoms, and quality of life measures over time.

This study was followed by a multi-site RCT comparing LVs to wait-list controls for low-SES minority mothers (Segre et al., 2015). LVs were delivered at participants’ usual point-of-care (e.g., home visits, OB/GYN offices) by case managers, a nurse, and a physician’s assistant who had received training in PPD (7 hours) and LVs (7 hours). Compared to women receiving standard care, those receiving LVs experienced significant improvements in number of depressive symptoms, the severity thereof, and quality of life. A qualitative analysis of the attitudes of participants in the 2010 and 2015 studies revealed that low-SES, ethnic minority mothers found LVs to be an acceptable treatment (Orengo-Aguayo & Segre, 2016). Taken together, these studies indicate that LVs are an effective, sustainable, and acceptable approach to bringing PPD treatment to high-risk mothers within accessible systems of care. This holds true when LVs are delivered by a range of health and social service professionals who receive a total of 8-14 hours of training in PPD and LVs.
Prevention of Postpartum Depression

Across PPD treatment trials, participants were only eligible if they presented with elevated scores on measures of depressive symptomatology. Screening for PPD in real-world settings, however, is not universal. Although acceptable to mothers and recommended by numerous national organizations, such as the American Academy of Pediatrics, screening rates are lower than 50% (Waldrop et al., 2018). A systematic review of the literature found that the likelihood of providers using a screening tool to assess for PPD was 36% for obstetrician-gynecologists, 31% for family physicians, and 7% for pediatricians (Goldin Evans et al., 2015). Reported barriers to screening included time constraints, inadequate training, skills, or knowledge needed to screen for PPD, a perceived lack of mental health referral services, and perceived ineffectual treatment. Outside of clinical trials, PPD treatments may therefore reach a limited sector of new mothers across socioeconomic brackets. Prevention may therefore be a more beneficial approach to addressing this public health issue.

Prevention approaches can be stratified into three levels: universal, selective, and indicated (Gordon, 1983). A universal approach to prevention targets all pregnant women, whereas a selective approach targets those with known risk factors, such as being of low SES. An indicated approach to prevention targets those who present with subthreshold depressive symptoms.

A 2013 Cochrane systematic review showed that women receiving psychosocial and psychological preventive services were significantly less likely to experience PPD than those receiving standard care (Dennis & Dowswell, 2013). The authors concluded that multiple-contact, individual (as opposed to group) interventions were most successful in preventing PPD. Preventive interventions were not found to affect the following outcomes due to insufficient
evidence: maternal anxiety, mother-infant attachment, stress, marital discord, and perceived support. Support for counseling interventions – both individual and group – was later echoed by a 2019 systematic review for the U.S. Preventive Services Taskforce (O’Connor et al., 2019). This review found the largest effect sizes for CBT- and IPT-based interventions, such as the Mothers and Babies Program (CBT-informed group sessions) and the IPT-based Reach Out, Stand Strong, Essentials for New Mothers (ROSE) program – both designed for at-risk mothers. Other reviews and meta-analyses of the preventive literature highlight similar findings: that IPT trials and trials that target at-risk populations appear to hold the most promise. In their 2015 review, Werner and colleagues found that four out of seven IPT-based interventions were successful, with others showing trends toward significance. The researchers also discovered that 13 of the 17 trials found to be successful were conducted with at-risk populations. This echoes Dennis and Creedy’s (2004) finding that preventive interventions targeting high-risk mothers tended to show better effects. Select examples of PPD prevention trials are discussed below, with a focus on individual treatments.

Selective and Indicated Approaches to Postpartum Depression Prevention

In a randomized, controlled study in China, Dennis and Creedy (2004) randomized 194 first-time childbearing women into two groups, one of which received routine antenatal education (2 sessions from a midwife about childbirth and infant care) while the other received both routine antenatal education and an IPT-based psychoeducation program. This program consisted of two, 2-hour group sessions, which centered on the IPT focus areas of managing role transitions, identifying and establishing support systems, and improving communication. A follow-up phone session after birth reinforced skills learned in the group sessions. Intervention was delivered by a midwife educator with intensive training in IPT. Women in the intervention
group exhibited significantly lower EPDS scores at 6-weeks postpartum. Considering that primiparity – being a first-time mother – is one of the risk factors for PPD (O’Hara & McCabe, 2013), this treatment is considered a selective approach to PPD prevention.

An indicated approach to prevention targets those who show symptoms of an illness but do not yet meet full criteria. Two such examples are the RCTs of Chabrol et al. (2002) and Dennis et al. (2009). In a French multi-site study, 241 pregnant women were randomized into two groups, with one group receiving treatment as usual after birth and the other receiving one individual CBT-based session at 2-5 days postpartum (Chabrol et al., 2002). Mothers in the preventive intervention group were found to have significantly lower EPDS scores at follow-up. The intervention was delivered by a master’s level clinician under the supervision of a licensed mental health professional. This individual session included education about infant development and the realities of parenthood, a cognitive-behavioral component (targeting unhelpful, potentially perfectionistic beliefs and teaching problem-solving skills), and an emotional support component (empathic listening, encouragement of negative affect, and normalization of guilt or ambivalence).

In a Canadian multi-site RCT, 701 women from seven large health regions were randomized into two groups: standard postpartum care and standard care with phone support (Dennis et al., 2009). The intervention was delivered by volunteer mothers with a past history of PPD. Volunteers attended a four-hour training session, in which they learned and practiced (via role playing) skills for effective phone support, learned how and when to make referrals, and received a manual developed and piloted by the principal investigator. Women in the peer support group were found to be at half the risk of developing PPD at 12 weeks compared to those receiving standard care. No group differences were found at 24 weeks, which the authors
suggested may have been due to referral of those identified as clinically depressed at the 12-week time point (as identified by EPDS scores).

**Universal Approaches to Postpartum Depression Prevention**

Universal approaches to prevention of PPD target *all* childbearing women, regardless of risk factors or symptoms that place them at risk for PPD. In a cluster randomized trial in the UK, 767 women with EPDS scores below the clinical cutoff (i.e., not depressed at matriculation) were randomized into two groups, with one group receiving care as usual from Health Visitors and the other receiving care from Health Visitors trained in assessment of depressive symptoms, fostering warm, therapeutic relationships, and either CBT or LVs (Brugha et al., 2011). All care was delivered within general medical practices, and women were followed for 18 months after birth. Those in the latter group were found to be significantly less likely to develop PPD, providing evidence for the benefits of making systemic changes to healthcare provision in the interest of reducing the incidence of PPD.

**Doulas and Perinatal Mood and Anxiety Disorders**

Although some evidence has shown fewer symptoms of PPD in women who receive continuous support during labor, the limited scope and quality of the research on the subject (e.g., two studies, both of which deemed to be of low quality) prevent any conclusions about the impact of birth doula services on PPD (Bohren et al., 2017). Randomized, controlled research evaluating depressive symptom levels in women receiving care from birth doulas, postpartum doulas, and community doulas is warranted.

Doulas have been found to be interested in receiving more training and support around PMADs. In a qualitative study, Jensen (2018) interviewed 12 doulas who had been practicing at least a year, provided clients with at least two postpartum visits, and were certified as birth
doulas, postpartum doulas, or both. Although all those interviewed reported having received some training in PMADs through their certifying organization, nine of the 12 women (75%) reported feeling that the training was insufficient for the professional situations in which they found themselves. Every participant reported serving clients whom they perceived to be experiencing PMADs.

Jensen (2018) first asked doulas what they saw as indicators of PMADs. Perceived indicators were, in order of frequency reported: irrational fear for baby, trouble sleeping, trouble bonding, traumatic birth experience, lack of self-care, client report of experiencing emotional difficulties, verbalization of pressure to be a perfect mother, refusal to see doula or visitors, difficulty with lactation, partner sharing concerns, and irritability. Doulas’ perceived causes of PMADs were a prior PMAD, pre-existing mood disorders, sleep deprivation, and traumatic birth experience. Eight of the 12 doulas reported referring clients to therapists or support groups when they suspected a PMAD, and six reported offering reflective listening or recommending that mothers connect with Postpartum Support International, speak with their partner, or speak with their current medical provider. Five doulas reported offering literature on PMADs, and three doulas reported encouraging self-care and outdoor activities.

Many of the women interviewed reported relying on continuing education to address their perceived lack of training, as well as seeking consultation from peers (via professional community round-tables and social media groups). Some doulas reported turning to peer-reviewed journals or relying on their own experience to address PMADs. Doula-suggested topics for further training included “recognizing signs and symptoms,” “prenatal/antenatal mood disorders,” “addressing potential PMAD,” and “effective communication with partner in recognizing signs and symptoms of PMAD” (p. 24). With respect to format, doulas primarily
recommended providing PMAD education through social media platforms and continuing education workshops. Two doulas reportedly felt that trainings toward certification ought to be “more extensive and comprehensive,” and two other doulas recommended that DONA “encourage PMAD-specific continuing education” (p. 25). For example: “I feel like having something maybe in the training which specifically addresses how to handle scenarios, not extremes, of course, like bipolar disorder or whatnot, but just basic scenarios, most common scenarios, even just anxiety” (p. 25).

In their research on postpartum doulas, McComish and Visger (2009) found that doulas reported a) providing services to mothers who were depressed, b) not knowing enough about PPD, and c) needing more information and resources to better help these mothers. McComish and colleagues (2013) therefore undertook a project to develop original educational materials about PPD, intended for use by postpartum doulas and their clients. Focus groups with mothers, doulas, and doula trainers revealed that participants wanted materials to be interactive, to be flexible, and to support the development of social connections (e.g., with family, friends, or professional resources). A brochure and a smartphone app were subsequently developed. With respect to the doula’s role in helping mothers with PPD, this study has two significant limitations. Most importantly, the authors reported that the content of the brochure was based on stories of mothers in the focus group who had experienced PPD. Educational materials and suggestions for management of PPD symptoms should be developed from evidence-based clinical approaches. Secondly, the educational materials developed in this study are not specific to doulas and could be provided to mothers by any healthcare professional.
Rationale for the Present Study

PPD is a public health concern that impacts the functioning of two generations. Research has shown that it can be both treatable and preventable by laypeople or other health professionals (e.g., non-mental health professionals) who receive limited training in counseling or CBT-based interventions, with trainings as brief as four hours showing clinically significant effects for those individuals’ clients.

Doulas are embedded in systems of maternal care across socioeconomic brackets thanks to birth doula, postpartum doula, and community doula models, and systemic support for accessible doula care in low-SES neighborhoods is increasing in the U.S. Women of low SES are particularly vulnerable to PMADs, and a subset of doulas have unique, intimate access to these women in the perinatal period (e.g., community doulas, birth or postpartum doulas hired as independent contractors through state or federal programs). Initial evidence from a small, qualitative study shows that doulas would like more training in understanding, recognizing, and helping to address PMADs.

The present study seeks to build on this qualitative information by conducting a survey that spans geographic areas and doula roles to determine: a) the extensiveness of the need for emotional support in doulas’ clients, b) how skilled and comfortable doulas feel in addressing their clients’ emotional problems, c) whether a large sample of doulas would like more training in understanding, recognizing, preventing, or helping to address PMADs, and whether anxiety or depression feels more relevant to their work, d) their preferred training format and timing (e.g., before or after certification), e) whether the demographics of the doulas or their clients influence doulas’ experiences with client emotional support needs and doulas’ training needs in this area.
We hypothesize that a) doulas’ responses will reflect a desire for further training in PMADs, and b) community doulas and/or those who work primarily with at-risk mothers will express this desire at higher rates than those who work as private doulas. Should the first hypothesis be supported by the data, doulas’ responses will be used to guide development of a clinical training for doulas.
Participants

Participants in this study included birth doulas, postpartum doulas, and community doulas across the U.S. Doulas who either learned about the survey through an email sent by a colleague, through direct email recruitment by the principal investigator, or through social media postings in perinatal professional groups. Inclusion criteria were the following: 1) being at least 21 years of age and 2) having practiced as a certified doula for a total of at least two years in the U.S., regardless of current practice status. 259 individuals responded to the survey. A response rate cannot be calculated, as the exact number of doulas who received a survey invitation is unknown. Seven participants discontinued the survey after consenting to participate, leaving 252 useable responses. Sample demographic information can be found in Table 1.

Instrumentation

Participants completed the “Understanding Doulas’ Emotional Support Training Needs” survey (see Appendix A). This was a mixed-methods survey developed by the study investigator. The survey was developed to gather information about doulas’ perceptions of the frequency with which doulas encounter symptoms of perinatal emotional distress; doulas’ degree of comfort and perceived skill in addressing perinatal emotional distress; whether doulas would like more training in PMADs; which topics and formats would be most helpful for further training; whether doulas’ responses to the survey are influenced by their professional role or employment setting; and whether doulas’ responses to the survey are influenced by their clients’ demographics. The survey consisted of 48 items and included two sections: Demographics and Clients and Opinions about Emotional Support in Doula Work. Survey item response types included: multiple-choice, 4-point Likert scale, rank order, and open-ended options.
Demographic information for respondents included professional role, employment type (e.g., private doula versus employed by federal or state program), level of training in emotional support, years of experience post-certification, and racial/ethnic identity. To promote accessibility, the survey was written to be at or below an eighth-grade reading level.

Symptoms of perinatal distress included in the survey were drawn from the EPDS, qualitative research about transdiagnostic symptoms of postpartum distress, and research about the impact of PMADs on dyadic interaction. Symptoms were chosen with consideration for the challenges of identifying another’s subjective, internal experience, keeping in mind that parents may decline to disclose an internal state to a doula. Visible symptoms, such as tearfulness and low positive affect while interacting with one’s baby, were therefore emphasized. Exceptions were made when a symptom appeared in both the EPDS and Coates, Ayers, and de Visser’s qualitative research on the transdiagnostic symptoms of emotional difficulties in the postpartum period. Validation of the EPDS has primarily been within a postpartum population. Although it has been validated for antenatal depression in a number of international studies, the discrepancy in study language and methodology have precluded a conclusion about its validity in pregnant populations (Gibson et al., 2009). However, a 2017 systematic review of screening instruments for antenatal depression in low-resourced settings found that the EPDS showed high accuracy, met the review’s criteria for brevity and validity, and was preferable to other antenatal depression measures in its sensitivity/specificity balance (Chorwe-Sungani & Chipps, 2017). The EPDS was therefore taken to be an appropriate measure from which to draw in developing questions for doulas who work with families both before and after birth.

The first symptom question, which asks whether a doula has worked with a mother overwhelmed by her new role, was drawn from both the EPDS ("Things have been getting on
The second symptom question asks whether doulas have worked with mothers who have been “noticeably tearful compared to other moms.” In addition to being an item on the EPDS, this symptom was present for 82% of those experiencing emotional difficulties in Coates et al.’s work (2015). The third symptom, sleep disturbance, was drawn from the EPDS. It is also supported by Swanson, Pickett, Flynn, and Armitage’s research (2011), which showed a correlation between insomnia and both depression and generalized anxiety in a treatment-seeking perinatal population. The fourth symptom question asks whether doulas have worked with mothers who seemed to feel a lot of guilt or self-blame. This symptom was spontaneously endorsed by mothers in Coates et al.’s transdiagnostic research (2014). The question is also adapted from item #3 of the EPDS (“I have blamed myself unnecessarily when things went wrong”), which is a part of the EPDS’ validated anxiety subscale (Brouwers et al., 2001). “Noticeable anxiety and worry” constitute the fifth symptom question on the survey. This item was adapted from item #4 of the EPDS (“I have been anxious or worried for no good reason”), which is also a part of the EPDS anxiety subscale. Additionally, 65% of the sample in Coates et al.’s 2015 work spontaneously endorsed experiencing anxiety. The final two symptom questions assess for visible changes in the mother-infant dyad: low positive emotion from parents and low parental sensitivity in interactions (e.g., passive, intrusive), both which have been found in mothers experiencing a variety of PMAD symptoms (see sections on “Perinatal Mood and Anxiety Disorders” and “Postpartum Depression, Public Health Impact” in this document).

**Procedures**

The investigator asked three doulas to pilot the survey to obtain feedback about clarity, legibility, acceptability, and technological functioning of the survey questions. The survey was
tested through various email platforms (Gmail, Yahoo, Aol, Mac.com) and from different electronic devices (smartphones, desktop computers, tablets, and laptops).

Data collection took place from February 2020 to April 2020. A variety of strategies were used to disseminate the survey, with approaches ranging from targeting of national organizations to targeting small, local professional groups. Recruitment objectives were four-fold: to achieve diversity in geography, in type of doula (birth, postpartum, community), in demographics of clientele, and in type of doula employment (private, through a hospital, through a community organization). The following targeted recruitment strategies aimed to promote the greatest degree of diversity across these four categories.

**Participant Recruitment**

The investigator directly reached out to individuals through publicly accessible doula directories and large doula Facebook groups (i.e., 21,000 members nationwide) using an outreach template (see Appendix B). Doulas were also identified for participation in the survey through professional connections. For example, the investigator directly contacted perinatal professionals with whom she had worked and requested that they disseminate the survey to doulas by email using the outreach template. Outreach language incorporated principles of social exchange, such as highlighting shared group status (e.g., investigator having been trained as a doula) and emphasizing the reward of helping others by completing the survey (Blau, 1964; Homans, 1961). The investigator tracked outreach efforts through a spreadsheet with the following columns: (a) name of organization or group; (b) name/email address of potential contact, if applicable; (c) a space to indicate whether an initial request to collaborate was sent, if applicable; (d) a space to indicate whether the email template was provided for distribution to
staff or whether social media request was posted; (e) two additional spaces to indicate whether reminder emails were sent; (f) the organization or social media group’s web address.

To target community doulas, the investigator found organizations through the HealthConnect One website and through the Radical Doula website. The HealthConnect One website lists over 75 community health organizations nationwide that have undergone HealthConnect One’s community doula workshop. The Radical Doula website offers a public directory of volunteer doula groups and organizations across the U.S., most of which have the aim of supporting high-risk families who cannot afford traditional doula services. The investigator tracked these outreach efforts through a spreadsheet with the following columns: (a) name of organization; (b) location (US state); (c) name of potential contact and their role (e.g., president, director of programming, advocacy director); (d) contact’s email address; (e) a space to indicate whether an initial request to collaborate was sent; (f) a space to indicate whether the email template was provided for distribution to staff; (g) two additional spaces to indicate whether reminder emails were sent; (h) the organization’s web address. In addition to promoting a diversity of types of doulas and geographic locations thereof, this strategy also served to potentially increase trust in the survey thanks to sponsorship from a known organization (Dillman et al., 2014). The investigator contacted the relevant point-person for each organization to request collaboration, providing an email for distribution to doulas on staff to those who answered affirmatively (see Appendices B and C).

After clicking the URL provided in the email or social media request to participate, respondents were brought to the survey URL, where they encountered the consent form, which included the following: a) a description of the study, b) the purpose of the study, and c) the
benefits and risks of participation (see Appendix D). Respondents who chose to participate elected to do so by clicking an “I Agree” button.

The survey was hosted by Qualtrics, to which the investigator had access through Rutgers University. This platform allows investigators to generate surveys that are automatically optimized for web and mobile devices (e.g., can be filled out on a computer or smartphone). In an effort to reduce burden on respondents, the survey was designed to follow a branching format, whereby answering “no” to a question allowed participants to skip out of relevant follow-up questions. One question was presented per page – a strategy conducive to branching formats and skip patterns, mobile device usage, and fewer skipped questions (Dillman et al., 2014). To prevent motivated underreporting, which can occur when respondents realize that affirmative answers lead to additional questions, all filter questions were presented in a group (Kreuter et al., 2011). The “Display Logic” feature of Qualtrics was used to display only follow-up questions for the filter items that were affirmatively answered.

Research largely does not support any significant effects of prize drawings and lotteries to incentivize electronic surveys (Dillman et al., 2014). An exception to this literature, however, showed that prize draws increased completion rates and decreased the number of incomplete surveys compared to those without incentives (Bosnjak & Tuten, 2003). The present survey therefore offered participants the chance to win one of eight $25 Amazon gift cards. To keep surveys anonymous, the investigator designed two, separate surveys: the main survey and a raffle survey. The final question of the main survey routed participants to the raffle survey, which contained one question that asked for participants’ email address. These two surveys were entirely distinct within the Qualtrics platform, meaning that responses to each survey could not be traced back to each other. The examiner randomized raffle survey respondents to determine
which received a prize, and winners were emailed an Amazon gift certificate, the distribution of which only required an email address.

Analyses

Data were analyzed in SPSS statistical software. The investigator first calculated descriptive statistics, analyzed demographic characteristics of respondents, and calculated frequency and percentages of all categorical measurements. Binary logistic regression and ordinal logistic regression tests were used to investigate the relationship between demographic characteristics and survey responses (e.g., relationship between doula type and opinions about emotional support training needs). All tests were performed at the 95% confidence level ($\alpha = .05$), and Spearman’s Rho was used to identify correlations between variables – a necessary precursor for valid statistical analyses.

Responses to the survey’s open-ended question, which welcomed doulas’ reflections on their experience with the emotional support needs of new and expecting parents, were analyzed through classical content analysis (Leech & Onwuegbuzie, 2008). The 107 responses were read by two independent coders, each of whom developed a list of themes. These were then compared, a final list of ten themes was decided upon, and each response was independently coded using these ten themes. These codes were compared and discussed, and a final code was agreed upon for all sentences that were relevant to one of the ten themes. Percentages for each theme were calculated by dividing the number of comments coded in a theme by the overall number of coded statements within the 107 responses. Table 12 shows the ten themes and the response percentages for each theme.
Chapter IV: Results

Demographics and Professional Background of the Sample

There were 252 useable survey responses. As shown in Table 1, 44.8% of these participants were birth doulas, 12.3% of participants were postpartum doulas, 35.7% of participants were both birth and postpartum doulas, and 7.1% of participants were community doulas. A majority of the doulas were self-employed and hired directly by families (82.1%), whereas others identified being employed by a community organization (5.2%), employed by (or in a contractual relationship with) a hospital or birthing center (1.2%), or employed by (or in a contractual relationship with) a federal or state program (0.4%). The remainder of doulas identified their employment type as “Other” (10.7%) and described working as a volunteer doula, for a doula agency or collective, or a combination of the above roles. Most respondents had 2-5 years of experience (51.6%), followed by 6-10 years (24.6%), more than 15 years (13.5%), and 11-15 years (10.3%).

The survey also asked about the racial or ethnic identity of respondents, as well as predominant sociodemographic factors for doulas’ clients. The majority of survey respondents self-identified as being of White/European Origin (81%). Other identities of survey respondents were as follows: Black/African-American/African Origin (7.9%); Latinx/Hispanic (6%); Biracial/Multiracial (1.6%); Asian-American/Asian Origin/Pacific Islander (0.4%); Native American/Indian/Alaska Native/Indigenous (0.4%); and Other (0.4%). Most doulas identified their clients as being predominantly married or in a civil union (85.3%) or living with a partner (10.3%), whereas a minority of respondents reported that their clients were predominantly single (4.4%). The breakdown of clients’ predominant racial or ethnic identities were as follows: White/European Origin (79.4%); Black/African-American/African Origin
Those who identified themselves as birth doulas were asked follow-up questions about the number of hours spent with clients before and after the labor and birth process (combined total) and the duration of their work with a family after birth. The majority of birth doulas reported working with clients for 4-10 hours before and after their birth work (63.7%), whereas some identified working with families for more than 10 hours (25.7%) or 1-3 hours (10.6%) pre- and postnatally. Birth doulas’ postpartum work with clients typically took place over 1 month or less (78.8%), although some completed this work across 2-3 months (15%) or 4 or more months (5.3%).

Doulas were also asked whether they had pursued any additional training in emotional support. 13% of respondents reported that they had no additional training in this area. 42.5% of doulas indicated having learned more about emotional support through continuing education workshops, while 20.6% endorsed independent reading in this area. 16.3% stated that they had pursued specialized training in emotional support (e.g., through Postpartum Support International). The remaining 15.5% of doulas fell into the “Other” category. Optional qualitative descriptions of “Other” training indicated that most doulas had pursued one of the following: a combination of continuing education, independent reading, or specialized training; a graduate degree in a mental health field; or midwifery training.

**Doulas’ Experience with Mothers’ Emotional Difficulties**

As shown in Table 4, the vast majority of respondents endorsed having worked with mothers who were overwhelmed by their new role (95.6%). As with all other symptoms that follow, those who reported having seen this symptom were asked questions about the frequency
with which they encounter mothers who are overwhelmed, their perceived skill in supporting mothers who are overwhelmed, their comfort with supporting mothers who are overwhelmed, and whether they would like more training in this area. Frequency rates were: I see this very regularly (32.4%); I see this somewhat often (32.4%); I see this sometimes (28.6%); and I rarely see this (2.9%). Perceived skill levels were: somewhat skilled (49.4%); very skilled (35.3%); slightly skilled (11.2%). No doulas endorsed feeling unskilled in supporting mothers who are overwhelmed. Reported comfort levels were: very comfortable (58.1%); somewhat comfortable (32.4%); slightly comfortable (5.0%); and not at all comfortable (0.4%). 77.2% of respondents endorsed a desire for more training in this area.

Table 5 shows that most doulas endorsed having worked with mothers who were noticeably tearful (80.6%). Frequency rates were: I see this sometimes (53.2%); I see this somewhat often (26.1%); I rarely see this (9.9%); and I see this very regularly (8.9%). Perceived skill levels were: somewhat skilled (54.7%); very skilled (30.5%); slightly skilled (12.3%); and not at all skilled (0.5%). Reported comfort levels were: very comfortable (49.3%); somewhat comfortable (38.4%); and slightly comfortable (10.3%). No doulas endorsed feeling zero comfort in supporting mothers who are tearful. 81.3% of respondents endorsed a desire for more training in this area.

Doula’s self-reported experiences with maternal sleep disturbance are detailed in Table 6. Most doulas endorsed having worked with mothers who had trouble sleeping even when their baby slept (84.1%). The phrasing of this survey item likely influenced results, as birth doulas may have been disinclined to endorse this item if they only noted sleep disturbance in clients who had not yet given birth. Frequency rates were: I see this sometimes (37.7%); I see this somewhat often (27.4%); I rarely see this (12.7%); and I see this very regularly (18.4%).
Perceived skill levels were: somewhat skilled (44.8%); very skilled (28.8%); slightly skilled (19.3%); and not at all skilled (3.3%). Reported comfort levels were: very comfortable (42.5%); somewhat comfortable (37.3%); slightly comfortable (14.6%); and not at all comfortable (1.4%). 76.9% of respondents endorsed a desire for more training in this area, whereas 19.3% denied a desire for such further training.

As shown in Table 7, most doulas endorsed having worked with mothers who seemed to feel a lot of guilt or blamed themselves unnecessarily when things didn’t go as planned (78.2%). Frequency rates were: I see this sometimes (37.6%); I see this somewhat often (29.9%); I see this very regularly (15.7%); and I rarely see this (13.2%). Perceived skill levels were: somewhat skilled (50.8%); very skilled (33.0%); slightly skilled (12.2%); and not at all skilled (0.5%). Reported comfort levels were: very comfortable (47.7%); somewhat comfortable (39.1%); slightly comfortable (9.1%); and not at all comfortable (0.5%). 78.7% of respondents endorsed a desire for more training in this area.

Doula’s self-reported experiences with maternal anxiety are detailed in Table 8. Most doulas endorsed having worked with mothers who were noticeably anxious or worried compared to other moms (89.7%). Frequency rates were: I see this sometimes (38.5%); I see this somewhat often (31.9%); I see this very regularly (22.1%); and I rarely see this (3.5%). Perceived skill levels were: somewhat skilled (54.0%); very skilled (28.8%); slightly skilled (12.4%); and not at all skilled (0.9%). Reported comfort levels were: very comfortable (43.8%); somewhat comfortable (42.5%); slightly comfortable (8.4%); and not at all comfortable (1.3%). 79.6% of respondents endorsed a desire for more training in this area.

Table 9 shows that a small majority of doulas endorsed having worked with mothers who didn’t show much positive emotion when interacting with their baby (53.2%). Frequency rates
were: I rarely see this (57.5%); I see this sometimes (32.1%); I see this somewhat often (6.0%); and I see this very regularly (1.5%). Perceived skill levels were: somewhat skilled (41.8%); slightly skilled (33.6%); very skilled (12.7%); and not at all skilled (9.0%). Reported comfort levels were: somewhat comfortable (38.1%); slightly comfortable (26.1%); very comfortable (23.9%); and not at all comfortable (9.0%). 88.8% of respondents endorsed a desire for more training in this area.

As shown in Table 10, a small minority of doulas endorsed having worked with mothers who interacted with their baby too much or too little – i.e., showed passive or intrusive mother-infant interaction styles (53.2%). The following examples were provided to illustrate this concept for respondents: mothers who try to get the baby to look at them or play with them when the baby does not seem interested, mothers who don’t respond to the baby’s sounds or cries as often as other mothers, or mothers who do not touch or hold their baby as often as other moms. Frequency rates were: I see this sometimes (41.0%); I rarely see this (37.3%); I see this somewhat often (13.4%); and I see this very regularly (3.0%). Perceived skill levels were: somewhat skilled (47.8%); very skilled (16.4%); slightly skilled (26.9%); and not at all skilled (4.5%). Reported comfort levels were: somewhat comfortable (39.6%); very comfortable (28.4%); slightly comfortable (23.9%); and not at all comfortable (3.7%). 84.3% of respondents endorsed a desire for more training in this area.

The next section of the survey assessed doulas’ emotional support training preferences. 213 of the doulas who participated in the survey answered these two questions. Doulas were asked to rank-order their preferences in both training content and training format, with 1 being most relevant or helpful to their role and 6 being least relevant or helpful to their role. Results are detailed in Table 11. Mean rank order of training content topics was as follows: learning skills to
help prevent or address anxiety, learning skills to help prevent or address depression, learning more about perinatal mood disorders, understanding and intervening in mother-infant interactions, knowing when to refer a client for mental health services, and addressing grief/loss. Mean rank order of training format topics was as follows: in-person training incorporated into the doula training workshop, in-person continuing education workshop after certification, online training as one of the requirements toward certification, and online continuing education workshop after certification.

**Interaction Between Doula Characteristics and Responses to Symptom Questions**

Regression analyses were used to evaluate potential associations between respondents’ professional roles and their perceptions of their experience with each of the identified symptom areas (i.e., whether they come across a symptom in their work, how frequently, how comfortable they feel in addressing it, whether they would like more training in doing so). In addition to doula type, the influence of other professional and demographic factors were analyzed, such as years in practice, type of further training in emotional support, and the predominant racial or ethnic identity of doulas’ clients.

**Symptom: Overwhelmed**

Respondents were asked whether they had worked with clients who were overwhelmed by their new role (e.g., overwhelmed by the amount of responsibility or overwhelmed by how inexperienced they felt). Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and the following: doula type, years in practice, type of further training, client race or ethnicity, and hours worked as a birth doula; the association between symptom frequency and the following: years in practice type of further training, client race or ethnicity; the association
between comfort level in addressing the symptom and the following: years in practice and type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, years in practice, client race or ethnicity.

**Doula Type and Frequency of Symptom: Overwhelmed.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on the frequency with which doulas see mothers who are overwhelmed by their new role (using “birth and postpartum doulas” as the reference category). As with all symptom questions that follow, this question about frequency was presented only to those doulas who endorsed having seen this symptom in their work. A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 4.340, p = .631$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 232) = 3.348, p = .764$. The final model did not statistically significantly predict the dependent variable over and above the intercept-only model $\chi^2 (3) = 5.716, p = .126$. As shown in Table 13, no levels of the categorical independent variable made a statistically significant contribution to the model relative to “birth and postpartum doulas.”

**Doula Type and Comfort Level with Symptom: Overwhelmed.** An ordinal logistic regression was performed to assess the impact of doula type on comfort level in supporting mothers who are overwhelmed by their new role. The assumptions governing ordinal logistic regressions were not met; two levels of the dependent variable contained insufficient cases to run meaningful analyses. Thus, two binary logistic regressions were performed with two new, binary dependent variables: “slightly” and “somewhat comfortable” or “very comfortable,” and “somewhat comfortable” or “very comfortable.” The one respondent who endorsed being “not at
all comfortable” was excluded from analyses. Both models were found to be statistically significant. The former was therefore adopted due to its slightly higher sample size. The full model containing all predictors was statistically significant, $\chi^2 (2, N = 230) = 17.785, p = < .001$. The model as a whole explained between 7.4% (Cox and Snell $R^2$) and 10.1% (Nagelkerke $R^2$) of the variance in comfort level and correctly classified 63% of cases. As shown in Table 14, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p < .001$). Compared to those who trained as both birth and postpartum doulas, birth doulas who endorsed having worked with clients who were overwhelmed were 3.80 times more likely to endorse being “somewhat” or “slightly” comfortable addressing this symptom, controlling for other factors in the model (OR = 3.80, 95% CI = 1.97-7.29).

**Symptom: Tearfulness**

Survey respondents were also asked whether they had worked with clients who were noticeably tearful compared to other mothers. Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and hours worked as a birth doula; the association between symptom frequency and the following: years in practice, type of further training, client race or ethnicity; the association between comfort level in addressing the symptom and the following: years in practice, type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, type of further training.

**Years in Practice and Symptom: Tearfulness.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of having worked with noticeably tearful clients (using not having worked with such clients as the reference
category). The predictor variables were the following, with “More than 15 years in practice” as the reference category: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. Analyses in SPSS revealed one case with residual values higher than an absolute value of 2.5 (-2.685). Analyses were repeated with this outlier removed, and results were unable to be interpreted due to quasi-complete separation. Results are therefore not presented in a table.

**Doula Type and Symptom: Tearfulness.** A standard binary logistic regression was performed to assess the impact of doula type on the binary variable of having worked with noticeably tearful clients (using not having worked with such clients as the reference category). The predictor variables were the following, with doulas who were both birth and postpartum trained the reference category: birth doulas, postpartum doulas, and community doulas. Analyses in SPSS revealed one case with residual values higher than an absolute value of 2.5 (-2.664). When the logistic regression was repeated without this outlier, the statistical significance of the levels of the independent variable were unchanged. Results of the original logistic regression are therefore presented here. The full model containing all predictors was statistically significant, $\chi^2 (3, N = 249) = 16.093$, $p = .001$. The model as a whole explained between 6.3% (Cox and Snell $R^2$) and 10.2% (Nagelkerke $R^2$) of the variance in having worked with noticeably tearful clients and correctly classified 81.5% of cases. As shown in Table 15, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .007$). Compared to those who trained as both birth and postpartum doulas, birth doulas were 2.92 times less likely to endorse having seen noticeable tearfulness in their clients, controlling for other factors in the model (OR = 2.92, 95% CI = 1.34-6.37).

**Client Race/Ethnicity and Symptom: Tearfulness.** A standard binary logistic regression was performed to assess the impact of predominant client race/ethnicity (primarily
clients of color vs. primarily White clients) on the binary variable of having worked with noticeably tearful clients, using not having worked with such clients as the reference category. The predictor variables were created by collapsing survey responses about the predominant racial or ethnic identity of doula clients into two categories: predominantly clients of color (reference category; “Native American,” “American Indian,” “Alaska Native,” “Indigenous,” “Asian-American,” “Asian Origin,” “Pacific Islander,” “African-American,” “Black,” “African Origin,” “Latinx,” “Hispanic,” “Bi-racial,” “Multiracial,” or “Other”) and predominantly White clients (“European Origin” or “White”). The full model containing all predictors was statistically significant $\chi^2 (1, N = 249) = 6.416, p = .011$. The model as a whole explained between 2.5% (Cox and Snell $R^2$) and 4.1% (Nagelkerke $R^2$) of the variance in having worked with noticeably tearful clients and correctly classified 81.5% of cases. As shown in Table 16, primarily working with clients of color made a unique, statistically significant contribution to the model ($p = .009$). Compared to doulas who primarily work with White clients, doulas who primarily work with clients of color were 2.56 times less likely to endorse having seen noticeable tearfulness in their clients, controlling for other factors in the model (OR = 2.56, 95% CI = 1.26-5.18).

**Doula Type and Frequency of Symptom: Tearfulness.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on the frequency with which doulas see mothers who are noticeably tearful (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 4.801, p = .570$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 199) = 4.086, p = .665$. The final model did not statistically significantly predict the dependent variable over and
above the intercept-only model $\chi^2 (3) = 7.428, p = .059$. As shown in Table 17, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .035$). Of doulas who endorsed having seen noticeable tearfulness in their clients, birth doulas were 1.93 times more likely to report having seen this symptom infrequently, relative to those who identified as both birth and postpartum doulas (OR = 1.93, 95% CI = 1.05-3.56).

**Doula Type and Comfort with Symptom: Tearfulness.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on comfort level in supporting clients who are noticeably tearful (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (3) = .293, p = .961$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 232) = 3.348, p = .764$. The final model did not statistically significantly predict the dependent variable over and above the intercept-only model $\chi^2 (3) = 5.716, p = .126$. As shown in Table 18, no levels of the categorical independent variable made a statistically significant contribution to the model relative to “birth and postpartum doulas.”

**Years in Practice and Desire for Further Training in Symptom: Tearfulness.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of desire for further training in supporting mothers who are noticeably tearful (using lack of desire for further training as the reference category). The full model containing all predictors was not statistically significant, $\chi^2 (3, N = 199) = 5.685, p = .128$. The model as a whole explained between 2.8% (Cox and Snell $R^2$) and 4.7% (Nagelkerke $R^2$) of the variance in
desire for more training and correctly classified 82.9% of cases. As shown in Table 19, one level of the categorical independent variable made a unique, statistically significant contribution to the model: having 2-5 years of experience practicing as a certified doula ($p = .029$). Of doulas who endorsed working with clients who were noticeably tearful, those with 2-5 years of experience were 3.09 times more likely to endorse a desire for more training in this area than those with more than 15 years of experience, controlling for other factors in the model (Odds Ratio [OR] = 3.09, 95% Confidence Interval [CI] = 1.12-8.52).

**Client Race or Ethnicity and Desire for Further Training in Symptom: Tearfulness.**

A standard binary logistic regression was performed to assess the impact of predominant client race/ethnicity on the binary variable of desire for further training in supporting clients who are noticeably tearful (using lack of desire for further training as the reference category). The predictor variables were created by collapsing survey responses about the predominant racial or ethnic identity of doula clients into two categories: predominantly clients of color and predominantly White clients. The full model containing all predictors was not statistically significant $\chi^2 (1, N = 199) = .739, p = .390$. The model as a whole explained between 0.4% (Cox and Snell $R^2$) and 0.6% (Nagelkerke $R^2$) of the variance in desire for more training and correctly classified 82.9% of cases. As shown in Table 20, having worked with predominantly clients of color did not make a statistically significant contribution to the model relative to having worked with predominantly White clients.

**Symptom: Sleep Disturbance**

Survey respondents were also asked whether they had worked with clients who had trouble sleeping even when their baby slept. Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association
between symptom presence and the following: client race or ethnicity, hours worked as a birth doula; the association between symptom frequency and the following: doula type, years in practice, type of further training, client race or ethnicity; the association between comfort level in addressing the symptom and the following: years in practice, type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, years in practice, client race or ethnicity.

**Years in Practice and Symptom: Sleep Disturbance.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of having worked with clients who experienced sleep disturbance even when their baby slept (using not having worked with such clients as the reference category). The predictor variables included: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. Results were unable to be interpreted due to quasi-complete separation and are therefore not presented in a table.

**Doula Type and Symptom: Sleep Disturbance.** A standard binary logistic regression was performed to assess the impact of doula type on the binary variable of having worked with clients who experienced sleep disturbance even when their baby slept (using not having worked with such clients as the reference category). The predictor variables included: birth doulas, postpartum doulas, and community doulas. The full model containing all predictors was statistically significant, \( \chi^2 (3, N = 248) = 27.123, p = < .001 \). The model as a whole explained between 10.4% (Cox and Snell \( R^2 \)) and 18.4% (Nagelkerke \( R^2 \)) of the variance in having worked with clients who experienced sleep disturbance and correctly classified 85.5% of cases. As shown in Table 21, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula \( (p = < .001) \). Compared to those who trained as both birth and postpartum doulas, birth doulas were 5.95 times less likely to endorse
having seen sleep disturbance in their clients, controlling for other factors in the model (OR = 5.95, 95% CI = 2.19-16.13).

**Years in Practice and Comfort Level with Symptom: Sleep Disturbance.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on comfort level in supporting clients who experience sleep disturbance (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 2.619, p = .855$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 203) = 2.499, p = .869$. The final model did not statistically significantly predict the dependent variable over and above the intercept-only model $\chi^2 (3) = 5.296, p = .151$. As shown in Table 22, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .032$). Of doulas who endorsed having seen sleep disturbance in their clients, birth doulas were 1.91 times more likely to endorse low comfort levels in addressing this symptom, relative to those who identified as both birth and postpartum doulas (OR = 1.91, 95% CI = 1.06-3.46).

**Symptom: Guilt or Self-Blame**

Survey respondents were also asked whether they had worked with clients who either seemed to feel a lot of guilt or blamed themselves unnecessarily when things didn’t go as planned. Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and the following: doula type, years in practice, client race or ethnicity; the association between symptom frequency and the following: years in practice, type of further training, client race or
ethnicity; the association between comfort level in addressing the symptom and the following: years in practice, type of further training, client race or ethnicity; and the association between a desire for more training in addressing the symptom and the following: doula type, years in practice, type of further training, and client race or ethnicity.

**Time Spent with Clients and Symptom: Guilt or Self-Blame.** A standard binary logistic regression was performed to assess the impact of birth doulas’ time spent working with clients outside of labor (10 or fewer hours vs. more than 10 hours) on the binary variable of having worked with clients who experienced guilt or self-blame, using not having worked with such clients as the reference category. The predictor variables were created by collapsing survey responses about average total hours spent with clients both before and after labor into two categories: 10 or fewer hours (reference category; “1-3” and “4-10”) and more than 10 hours. The full model containing all predictors was statistically significant $\chi^2 (1, N = 111) = 8.388, p = .004$. The model as a whole explained between 7.3% (Cox and Snell $R^2$) and 10.7% (Nagelkerke $R^2$) of the variance in having worked with clients who experienced guilt or self-blame and correctly classified 73.9% of cases. As shown in Table 23, having averaged more than 10 hours with clients outside of labor made a unique, statistically significant contribution to the model ($p = .017$). Compared to birth doulas who spent an average of 10 or fewer hours with clients outside of labor, birth doulas who spent more than 10 hours with clients outside of labor were 6.27 times more likely to endorse having worked with clients who experienced guilt or self-blame, controlling for other factors in the model (OR = 6.27, 95% CI = 1.39-28.37).

**Doula Type and Frequency of Symptom: Guilt or Self-Blame.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on the frequency with which doulas see clients who experience guilt or self-blame (using
“birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2(6) = 8.159, p = .227$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2(6, N = 190) = 8.404, p = .210$. The final model did not statistically significantly predict the dependent variable over and above the intercept-only model $\chi^2(3) = 6.997, p = .072$. As shown in Table 24, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .049$). Of doulas who endorsed having seen guilt or self-blame in their clients, birth doulas were 1.80 times more likely to report having seen this symptom infrequently, relative to those who identified as both birth and postpartum doulas (OR = 1.80, 95% CI = 1.00-3.24).

**Doula Type and Comfort Level with Symptom: Guilt or Self-Blame.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on comfort level in supporting mothers who experience guilt or self-blame (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2(3) = 4.315, p = .229$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2(6, N = 189) = 3.045, p = .385$. The final model statistically significantly predicted the dependent variable over and above the intercept-only model $\chi^2(3) = 7.887, p = .048$. As shown in Table 25, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .006$). Of those who endorsed having seen guilt or self-blame in their clients, birth doulas were 2.43 times more likely to endorse low comfort levels in
addressing this symptom, relative to those who identified as both birth and postpartum doulas (OR = 2.43, 95% CI = 1.29-4.57).

**Symptom: Anxiety or Worry**

Survey respondents were also asked whether they had worked with clients who were noticeably anxious or worried compared to other mothers. Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and the following: doula type, client race or ethnicity; the association between symptom frequency and the following: years in practice, client race or ethnicity; the association between comfort level in addressing the symptom and the following: years in practice, type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, years in practice, type of further training, client race or ethnicity.

**Years in Practice and Symptom: Anxiety or Worry.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of having worked with clients who experienced noticeable anxiety or worry (using not having worked with such clients as the reference category). The predictor variables included: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. Analyses in SPSS revealed two cases with residual values higher than an absolute value of 2.5 (-2.590, -2.685). Analyses were repeated with these outliers removed, and results were unable to be interpreted due to quasi-complete separation. Results are therefore not presented in a table.

**Time Spent with Clients and Symptom: Anxiety or Worry.** A standard binary logistic regression was performed to assess the impact of birth doulas’ time spent working with clients outside of labor (10 or fewer hours vs. more than 10 hours) on the binary variable of having
worked with clients who experienced noticeable anxiety or worry, using not having worked with such clients as the reference category. The predictor variables were created by collapsing survey responses about average total hours spent with clients both before and after labor into two categories: 10 or fewer hours and more than 10 hours. The full model containing all predictors was statistically significant $\chi^2 (1, N = 111) = 8.801, p = .003$. The model as a whole explained between 7.6% (Cox and Snell $R^2$) and 14.3% (Nagelkerke $R^2$) of the variance in having worked with noticeably anxious clients and correctly classified 87.4% of cases. As shown in Table 26, having worked with clients for more than 10 hours before or after labor did not make a statistically significant contribution to the model relative to having worked with clients for 10 or fewer hours.

**Doula Type and Frequency of Symptom: Anxiety or Worry.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula type on the frequency with which doulas see clients who experience noticeable anxiety or worry (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 2.248, p = .896$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 217) = 2.492, p = .869$. The final model statistically significantly predicted the dependent variable over and above the intercept-only model $\chi^2 (3) = 14.663, p = .002$. As shown in Table 27, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p < .001$). Of doulas who endorsed having seen noticeable anxiety or worry in their clients, birth doulas were 2.82 times more likely to report having seen this
symptom infrequently, relative to those who identified as both birth and postpartum doulas (OR = 2.82, 95% CI = 1.59-4.99).

**Type of Further Training and Frequency of Symptom: Anxiety or Worry.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of “type of further training in emotional support” on the frequency with which doulas see clients who experience noticeable anxiety or worry (using “Other training” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (8) = 11.252, p = .188$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (8, N = 217) = 12.070 p = .148$. The final model statistically significantly predicted the dependent variable over and above the intercept-only model $\chi^2 (4) = 20.269, p = <$ .001. As shown in Table 28, two levels of the categorical independent variable made unique, statistically significant contributions to the model: having pursued independent reading about emotional support ($p = .011$) and having pursued no further training in emotional support ($p = .044$). Of doulas who endorsed having seen noticeable anxiety or worry in their clients, doulas who had pursued independent reading about emotional support were 3.074 times more likely to report having seen this symptom infrequently, relative to those who classified their type of further training as “Other” (OR = 3.074, 95% CI = 1.301-7.268). Of this same group, doulas who had not pursued any further training in emotional support were 3.72 times more likely to report having seen this symptom infrequently, relative to those who classified their type of further training as “Other” (OR = 3.72, 95% CI = 1.03-13.38).

**Doula Type and Comfort Level with Symptom: Anxiety or Worry.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of
doula type on comfort level in supporting mothers who experience noticeable anxiety or worry (using “birth and postpartum doulas” as the reference category). A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 1.878, p = .931$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 217) = 5.754, p = .451$. The final model statistically significantly predicted the dependent variable over and above the intercept-only model $\chi^2 (3) = 8.188, p = .042$. As shown in Table 29, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .005$). Of doulas who endorsed having seen noticeable anxiety or worry in their clients, birth doulas were 2.34 times more likely to endorse low comfort levels in addressing this symptom, relative to those who identified as both birth and postpartum doulas (OR = 2.34, 95% CI = 1.29-4.22).

**Symptom: Low Positive Affect in Mother-Infant Interactions**

Survey respondents were also asked whether they had worked with clients who didn’t show much positive emotion when interacting with their baby. Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and the following: client race or ethnicity, hours worked as a birth doula; the association between symptom frequency and the following: doula type, client race or ethnicity; the association between comfort level in addressing the symptom and the following: doula type, years in practice, type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, years in practice, type of further training, client race or ethnicity.
**Years in Practice and Symptom: Low Positive Affect.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of having worked with clients who show low positive affect in mother-infant interactions (using not having worked with such clients as the reference category). The predictor variables included: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. The full model containing all predictors was statistically significant, $\chi^2 (3, N = 246) = 15.293, p = .002$. The model as a whole explained between 6.0% (Cox and Snell $R^2$) and 8.1% (Nagelkerke $R^2$) of the variance in desire for more training and correctly classified 61.8% of cases. As shown in Table 30, one level of the categorical independent variable made a unique, statistically significant contribution to the model: having 2-5 years of experience practicing as a certified doula ($p = .005$). Compared to birth doulas with more than 15 years of experience, those with 2-5 years of experience were 3.39 times less likely to endorse having worked with clients who show low positive affect in mother-infant interactions, controlling for other factors in the model (Odds Ratio [OR] = .30, 95% Confidence Interval [CI] = .13-.69).

**Type of Further Training and Frequency of Symptom: Low Positive Affect.** An ordinal logistic regression was performed to assess the impact of “type of further training in emotional support” on the frequency with which doulas see clients who show low positive affect in mother-infant interactions. The assumptions governing ordinal logistic regressions were not met. A new ordinal regression was performed without the “I see this symptom very regularly” category, which was only endorsed by two doulas. The assumption of proportional odds was again violated. Separate binary logistic regressions were performed with cumulative categories of the dependent variable. These analyses revealed that odds ratios varied too widely across cumulative variables at each level of the independent variable, precluding the meaningful
interpretation of any results of the ordinal regression. Thus, a new, binary dependent variable was created: “I rarely see this” and “I see this sometimes to very regularly.”

A standard binary logistic regression was then performed to assess the impact of further training type on the binary variable of the frequency with which doulas see clients who show low positive affect in mother-infant interactions (using “I rarely see this” as the reference category). The predictor variables were the following, with “Other training type” as the reference category: specialized training, continuing education workshops, independent reading, and none. The full model containing all predictors was statistically significant, $\chi^2 (4, N = 130) = 18.143$, $p = .001$.

The model as a whole explained between 13% (Cox and Snell $R^2$) and 17.6% (Nagelkerke $R^2$) of the variance in having worked with clients who showed low positive affect in mother-infant interactions and correctly classified 68.5% of cases. As shown in Table 31, one level of the categorical independent variable made a unique, statistically significant contribution to the model: having pursued specialized training ($p = .017$). Relative to those who identified their further training as falling into the “Other” category, those who had pursued specialized training and who endorsed having seen low positive affect in mother-infant interactions were 4.76 times more likely to endorse having seen this symptom “sometimes,” “somewhat often,” or “very regularly” (as opposed to “rarely”), controlling for other factors in the model (OR = 4.76, 95% CI = 1.32-17.22).

**Doula Type and Symptom: Low Positive Affect.** A standard binary logistic regression was performed to assess the impact of doula type on the binary variable of having worked with clients who showed low positive affect in mother-infant interactions (using not having worked with such clients as the reference category). The predictor variables included: birth doulas, postpartum doulas, and community doulas. The full model containing all predictors was
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statistically significant, $\chi^2 (3, N = 246) = 17.151, p = .001$. The model as a whole explained between 6.7% (Cox and Snell $R^2$) and 9.0% (Nagelkerke $R^2$) of the variance in having worked with clients who showed low positive affect in mother-infant interactions and correctly classified 63% of cases. As shown in Table 32, one level of the categorical independent variable made a unique, statistically significant contribution to the model: being a birth doula ($p = .001$). Compared to those who trained as both birth and postpartum doulas, birth doulas were 2.70 times less likely to endorse seeing low positive affect in mother-infant interactions, controlling for other factors in the model (OR = 2.70, 95% CI = 1.51-4.81).

**Years in Practice and Frequency of Symptom: Low Positive Affect.** A cumulative odds ordinal logistic regression with proportional odds was performed to assess the impact of doula years in practice on the frequency with which doulas see clients who show low positive affect in mother-infant interactions (using “More than 15 years in practice” as the reference category). This question about frequency was presented only to those doulas who endorsed having seen this symptom in their work. A full likelihood ratio test comparing the fit of the proportional odds model to a model with varying location parameters showed that the assumption of proportional odds was met $\chi^2 (6) = 2.353, p = .885$. The Pearson goodness-of-fit test indicated that the model was a good fit to the observed data $\chi^2 (6, N = 130) = 5.850, p = .440$. The final model statistically significantly predicted the dependent variable over and above the intercept-only model $\chi^2 (3) = 8.301, p = .040$. As shown in Table 33, no levels of the categorical independent variable made a statistically significant contribution to the model relative to “More than 15 years in practice.”
Symptom: Passive or Intrusive Mother-Infant Interaction Style

Survey respondents were also asked whether they had worked with clients who interacted with their baby too much or too little (e.g., trying to get the baby to look at them or play with them when the baby does not seem interested, not responding to the baby’s sounds or cries as often as other mothers, not touching or holding their baby as often as other mothers). Some research questions were not pursued due to a lack of correlation between variables (Spearman’s correlation), including the association between symptom presence and the following: doula type, client race or ethnicity, hours worked as a birth doula; the association between symptom frequency and the following: doula type, years in practice, type of further training, client race or ethnicity; the association between comfort level in addressing the symptom and the following: years in practice, type of further training; and the association between a desire for more training in addressing the symptom and the following: doula type, client race, or ethnicity.

Years in Practice and Symptom: Passive or Intrusive Styles. A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of having worked with clients who show passive or intrusive mother-infant interaction styles (using not having worked with such clients as the reference category). The predictor variables included: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. The full model containing all predictors was statistically significant, $\chi^2 (3, N = 246) = 20.207, p = < .001$. The model as a whole explained between 7.9% (Cox and Snell $R^2$) and 10.5% (Nagelkerke $R^2$) of the variance in desire for more training and correctly classified 62.6% of cases. As shown in Table 34, one level of the categorical independent variable made a unique, statistically significant contribution to the model: having 2-5 years of experience practicing as a certified doula ($p = < .001$). Compared to birth doulas with more than 15 years of experience, those with
2-5 years of experience were 5.13 times less likely to endorse having worked with clients who show passive or intrusive mother-infant interaction styles, controlling for other factors in the model (Odds Ratio [OR] = .20, 95% Confidence Interval [CI] = .08-.48).

**Years in Practice and Desire for More Training in Symptom: Passive or Intrusive Styles.** A standard binary logistic regression was performed to assess the impact of years in practice on the binary variable of desire for further training in supporting clients who show passive or intrusive mother-infant interaction styles (using lack of desire for further training as the reference category). The predictor variables included: 2-5 years in practice, 6-10 years in practice, and 11-15 years in practice. The full model containing all predictors was not statistically significant, $\chi^2 (3, N = 127) = 4.486, p = .214$. The model as a whole explained between 3.5% (Cox and Snell $R^2$) and 6.9% (Nagelkerke $R^2$) of the variance in desire for more training and correctly classified 89% of cases. As shown in Table 35, no levels of the categorical independent variable made a statistically significant contribution to the model relative to those who had been in practice for more than 15 years.

**Qualitative Results**

Of the 252 participants, 107 doulas responded to the following statement: “We welcome any reflections on your experience with the emotional support needs of new and expecting mothers.” The most common theme was that doulas need or want more training in this area (19% of responses). For example, respondents stated that they “would like to feel more confident in how to approach and support moms with PMADs besides referring to mental health services or moms groups” and that they “would like to know much more, in general, about how to give emotional support and be even more useful to my clients in the first days and weeks postpartum.” Some requested specific tools for helping clients with emotional difficulties and
made statements such as, “I find anxiety to be a huge struggle for many of my clients and would love more tools to address it,” and, “I would love a 60 minute online module that gives me concrete things to do to support that is within a doula's scope.” Others noted having pursued additional training through continuing education or graduate degrees and remarked that they “still feel under-equipped,” “still feel like there is a tremendous amount to learn,” and are “always up for more education.” One participant added, “I feel most doulas get nothing.”

Doulas also remarked on the importance of this area of research (14% of responses). Respondents used language such as “important work,” “vital topic,” “important subject,” “under-addressed issue,” “underrated,” “invaluable,” and “vital part of service.” A self-identified doula trainer of 15 years expressed the opinion that “most doulas are ill-equipped to understand and address the emotional components of doula work.” Ten respondents expressed gratitude for the research focus in this area.

Respondents also highlighted that the current model of perinatal support in the U.S. is lacking (14%). Some spoke about the importance of prevention, noting that “it’s almost too late by the time they know they need help,” that “help should be given from the start, and it requires a fundamental change in how we support new families,” and that “it doesn’t seem as though women are being served proactively.” Respondents referenced the gaps left by models of care across disciplines: “The mental health needs of new parents are rarely addressed appropriately by healthcare professionals, and the disconnected care team (pediatricians, OBs, hospitals, work, childcare) makes it extra hard for parents to get continuity of support.” Others noted such gaps in models of perinatal support and highlighted the relevance of the doula role to addressing insufficient care. One doula stated that “mothers express that they need support daily when they’re going through a hard time, but they only receive help once or twice a month from a
mental health provider. The doula could provide support if there was more mental health support training.” Another noted that “medical professionals don’t talk about PPD enough. Typically they distribute a questionnaire that patients are fearful to answer honestly. We have a lot of work to do as Doulas to close that gap.” One doula asserted that “insurance coverage for postpartum doulas in the home could literally save lives.”

Another theme was that of families needing significant support in the perinatal period (13%). Doulas called the perinatal period a “very emotional time” and spoke to the universality of the need for emotional support: “all new parents in the U.S. are struggling;” “most families do not have enough support postpartum;” “so many new mothers experience anxiety in the postpartum fourth trimester.” One doula noted seeing an increase in the emotional support needs in clients over the past ten years. Others referenced the stigma that accompanies the need for emotional support: “As a postpartum doula, I very often am challenged by clients who need support but are embarrassed to admit it when they are bombarded with society telling them they should look and be acting a certain way.”

Numerous respondents acknowledged the importance of knowing how and when to refer clients to mental health providers or community resources (11%). Doulas called this element of their training “key” and “very important.” Specifically, respondents spoke about “knowing when to refer for professional help,” being “able to recognize what is in the range of normal and get[ting] the woman the appropriate support from professionals,” “understanding the scope of a doula’s role,” and “knowing the community resources that are available.”

Respondents also commented on doulas’ unique position to use their relationship with families to provide emotional support (9%). Numerous doulas referenced the close, intimate nature of their relationship with clients: “It can be easier to get in there and see signs/really help
and refer them since you have that close contact and intimacy;” “I try to build a level of intimacy with my clients that creates a safe space for the mom to share her fears and concerns;” “my clients regularly look to me for emotional support, as the nature of our relationship is very intimate and built upon much trust.” Doulas also highlighted their unique role relative to other health service providers who interact with families in the perinatal period. One doula noted that “We are also typically the people on the team with the least power and credibility, despite the fact that we often have the strongest relationships with the parents.” Another, in describing work with immigrant clients, stated that “It has often seemed that I am the only one in the room that has learned even a part of their stories. The providers haven’t and that makes supporting their emotional needs that much more challenging.”

Another theme identified was that of parents being unprepared for the challenges of new parenthood (7%). Similar to the theme of new and expectant parents needing significant emotional support, this lack of preparedness was often spoken of as a universal experience that cuts across demographics. For example, one respondent stated that “many moms feel unprepared. They have a beautiful nursery, but no idea how to really care for a baby. They are unaware of all of the physical, emotional, and hormonal changes they will go through.” Another noted that “the permanence of becoming a parent is overwhelming, and my wealthier clients often have more unrealistic expectations of what that change means (unrealistic sleep expectations for baby, etc.).” A self-identified birth and postpartum doula wrote, “I often hear people say that no one told them how hard it would be.”

Respondents also highlighted the importance of considering culture and identity in doula work and research (4%). This ranged from mentions of race, ethnicity, gender identity, linguistic differences, and culture. Two respondents noted the importance of using gender-neutral language
in research about new and expectant parents, suggesting terms such as “birthing parent” or “pregnant parent,” and pointing out that “not all pregnant people or people that have recently given birth identify as mothers.” Some doulas remarked upon the importance of culture and identity in training. For example, one doula stated, “Emotional support and emotional support training that takes into account the challenges that Black, Indigenous, and Birthing People of Color face in our racist birth system is necessary.” Another noted that “a big component missing in doula training is cultural sensitivity in dealing with diverse populations.”

Finally, some respondents spoke to the impact of trauma on the perinatal experience (4%). One doula noted that “it’s seemed like more interventions in the pregnancy and birth (even when necessary) may trigger or accompany a need for more emotional support.” Other traumatic experiences mentioned included “unplanned C-section delivery,” “traumatic or disappointing birth experience,” and “sexual abuse.” Respondents who wrote about the role of trauma spoke to its prevalence and suggested that providers be informed on the ways in which trauma can impact the childbirth process.
Chapter V: Discussion

This study found that in a large sample of birth, postpartum, and community doulas across the U.S., doulas perceive significant emotional support needs in their clients and overwhelmingly desire more training in addressing core symptoms of perinatal emotional distress. Respondents expressed a preference for in-person trainings in emotional support strategies, preferably incorporated into the foundational doula training workshop that is required for certification.

Extent of Client Needs for Emotional Support

The first research question posed by this study was about the extensiveness of the need for emotional support in doulas’ clients, as perceived by doulas. Survey results indicate that the need is quite significant. Approximately 80-95% of doulas reported having come across the symptoms of perinatal distress assessed by this survey, although only half of doulas reported having perceived disturbances in mother-infant interactions (e.g., low positive affect when interacting with their infants or passive/intrusive interaction styles). This lower frequency may be due to the clinical sensitivity required in assessing dyadic interaction (Appleton et al., 2013). Perceptions of affect and of the nature of interactions may also be strongly influenced by culture. Responses to the survey’s open-ended question, which welcomed doulas to reflect on their experience providing emotional support to new and expectant parents, supported quantitative data about the extent of doula clients’ needs. Three common themes were: the current model of perinatal support is lacking, families need significant emotional support in the perinatal period, and parents are unprepared for the challenges of new parenthood.
**Doula Skill and Comfort Level in Addressing Emotional Problems**

The present study also sought to determine how skilled and how comfortable doulas feel in addressing their clients’ emotional problems. The majority of doulas reported feeling relatively comfortable supporting mothers who experience symptoms of emotional distress, although less comfortable supporting mothers who show disturbances in mother-infant interaction.

**Desire for Further Training**

The third research question assessed whether a large sample of doulas desired more training in understanding, recognizing, preventing, or helping to address PMADs. Doulas largely endorsed a desire for more training in supporting women with symptoms of emotional distress – particularly in addressing problematic dyadic interaction. Doulas were also compelled to discuss their desire or need for more training in the free response section; indeed, it was the most common theme identified across responses. These data suggest that the first hypothesis of this study – that doulas’ responses would reflect a desire for further training in PMADs – was correct. In fact, survey design may have led to an underreporting of doulas’ desire for more training in each of the symptom areas. Only those who endorsed encountering a certain symptom were asked about this preference. Had all respondents been presented with questions about further training needs, particularly if those answering had no experience with the symptom in question, endorsement of desire for additional training may well have been higher.

**Further Training Preferences**

This survey also sought to assess doulas’ preferred training format, timing, and content. As summarized above, respondents expressed a clear desire for more training in addressing all symptoms assessed by this survey. Doulas were also asked to rank-order their preferences for
training content to facilitate program development. Respondents expressed preferences for learning skills to prevent or address anxiety and depression, as well as learning more about PMADs. Although specific symptom questions showed that doulas endorsed a desire for more training in supporting mother-infant interactions at the highest rates, this topic was not prioritized in rank-ordering of training preferences. This discrepancy may be due to the fact that specific symptom questions were only posed to those who endorsed having seen each symptom, whereas rank-order questions about training preferences were posed to all doulas.

With respect to emotional support training format, doulas showed a preference for an in-person module incorporated into the doula training workshop. Other formats, in order of preference, were as follows: in-person continuing education workshop after certification, online training as one of the requirements toward certification, and online continuing education workshop after certification. Doulas in the sample thus prioritized the in-person nature of training, followed by making further training in emotional support a requirement toward initial certification (as opposed to continuing education thereafter). One must consider, however, that a significant majority of data were collected prior to the outbreak of the COVID-19 pandemic in the U.S. The ensuing shift to digital learning may have long-term impacts on the culture of instruction, which may well influence the format in which future doulas prefer to be trained.

**Influence of Doula Demographics on Doula Emotional Support Experience and Needs**

The fifth research question posed by this study assessed whether the demographics of doulas or clients influenced a) doulas’ experiences with client emotional support needs, and b) doulas’ training needs in this area. Although client demographics showed little influence, doula demographics (e.g., type of doula, type of further training, years in practice) often significantly predicted doulas’ response patterns. Regression analyses performed to answer this question
revealed an overall pattern in the data: further training in emotional support and more experience working as a doula tended to increase the likelihood that doulas perceived mothers’ symptoms of emotional distress in the perinatal period. A close examination of regression results will highlight this concept.

First, birth doulas tended to be less likely to endorse having worked with clients who showed certain symptoms (tearfulness and sleep disturbance), and they were more likely to endorse seeing symptoms on an infrequent basis (tearfulness, guilt or self-blame, anxiety). We hypothesize that this may be influenced by two factors: direct experience and training. For example, birth doulas were more likely to endorse low comfort levels in addressing symptoms (being overwhelmed, sleep disturbance, anxiety). This may be influenced by the limited mental health content in birth doula training compared to postpartum doula training (i.e., 6% of training manual versus 17% of training manual). Question phrasing, however, must be considered as well: the survey asked doulas if they work with mothers who have trouble sleeping “when the baby sleeps.” This may have influenced respondents who do the majority of their work prenatally or at birth; the question ought to have been phrased to capture perinatal sleep disturbance, not postpartum sleep disturbance. This was a limitation of the present survey.

Another example to support the hypothesis above is that of birth doulas who spend more than ten hours with clients outside of labor. These birth doulas, who had more of an opportunity to have direct experiences with families before and after birth, were more likely to endorse having seen guilt or self-blame in their clients. This finding supports the idea that, although birth doulas were significantly less likely to endorse seeing a number of symptoms of perinatal emotional distress, these symptoms are likely still present during the birth doula’s time frame with families – and birth doulas who spend more time with families may be more likely to pick
up on these symptoms. This is a critical point in conceptualizing the doula’s role in preventing
perinatal depression, as a) depression during pregnancy is a risk factor for PPD, as reviewed
here, and b) approximately 25% of cases of PPD are estimated to have begun during pregnancy
(Evans et al., 2001). Birth doulas may therefore be critical players in the prevention, treatment,
and appropriate referral of cases of perinatal depression. Further training for birth doulas might
aim to raise awareness of what clients may decline to share with a short-term provider and,
accordingly, bolster doulas’ abilities to perceive or assess for certain symptom themes.

The concept of experience and training leading to increased perception of mental health
symptoms was also underscored by the “years of experience” demographic variable. Doulas with
fewer years of experience were nearly four times less likely to endorse having worked with
clients who showed low positive affect in mother-infant interactions. These doulas were also
over five times less likely to endorse having worked with clients who showed passive or
intrusive mother-infant interaction styles. Years of experience may therefore increase attunement
to dyadic signs of PMADs.

The demographic variable of “further training in emotional support” similarly supported
this pattern. Doulas who had less additional training in emotional support (i.e., none or
independent reading) endorsed lower frequency rates for noticeable anxiety or worry in their
clients. Conversely, doulas with specialized training in emotional support were nearly five times
more likely to endorse high frequency levels for clients’ low positive affect in mother-infant
interactions. Thus, those with more training in emotional support were more likely to perceive
certain symptoms of emotional distress. Further training may increase the sensitivity and
specificity of perception of client emotional distress. This finding is particularly significant when
taken with that of increased perception with years of experience: it suggests that newer cohorts
of doulas may close this gap through further training and need not wait to gain sensitivity of perception through years of experience alone.

The mechanism of this phenomenon – that further training and more experience increase the likelihood of perceiving symptoms in clients – is unknown. This was a unique aspect of the present study, as research on clinical trainings for health professionals typically examine changes in attitude, emotional support skills, and patient symptom levels, not the perception of symptoms across patients (e.g., Segre et al., 2013). It may be that further training or experience either a) increased doulas’ perception through refined observation and assessment skills, b) increased doulas’ ability to prevent or address such symptoms, or c) a combination thereof. We hypothesize that, similar to those who perceive new emotions after learning another culture’s broader emotional vocabulary, doulas with more training and experience are better able to detect symptoms of emotional distress. This would suggest that the rationale for further incorporation of mental health topics in doula training extends beyond the goal of providing evidence-based emotional support to prevent or address PMADs. Such training may also increase doulas’ ability to perceive the most common symptoms of perinatal depression and anxiety – thus refining their skill in making mental health referrals. This would allow doulas to develop the quality of their emotional support in service of public health, all while remaining within the scope of their certification.

**Influence of Client Demographics on Doula Emotional Support Experience and Needs**

Although doula demographics did influence doulas’ experiences with client emotional support needs and doulas’ training preferences, client demographics showed little influence. The study’s second hypothesis – that community doulas and/or those who work primarily with at-risk mothers would express a desire for further training in emotional support at higher rates – was
therefore not supported. This was likely due to the homogeneity of the sample. Seven percent of participants were community doulas, 4.4% of doulas reported primarily working with single mothers, and 20.7% of doulas endorsed primarily working with clients of color. These low numbers precluded many statistical analyses due to a lack of correlation between variables. Although recruitment efforts were designed to target a large number of community doulas and volunteer doulas who work with at-risk populations, the study criteria may have prevented these doulas from participating. In her open-ended response, one doula highlighted that certification is not universal and is overseen by individual training organizations, not by departments of regulatory agencies at the state level (as is the case with many other helping professions). It may be that volunteer and community doulas – even those with significant experience – are certified at lower rates, particularly considering the financial burden of certification (e.g., certification fee, cost of supporting materials, continuing education fee). Questions therefore remain about this vital component of the present study. Future research should consider eliminating current or prior certification from inclusion criteria to promote greater diversity in the sample.

One binary logistic regression did reveal the statistically significant influence of client demographics on doulas’ symptom exposure: doulas who primarily worked with clients of color were over two times less likely to endorse having seen noticeable tearfulness in their clients. This finding speaks to the cultural elements of symptoms and to the importance of cultural sensitivity in doula training. For example, the established schema of the “Strong Black Woman,” as well as African-American cultural beliefs about tears as a potential sign of weakness, may influence symptom presentation in doulas’ Black clients (Boyd-Franklin, 2003). Although the EPDS has been studied internationally, pointing to the validity of many symptom items across cultures, perceptions of mother-infant interactions may also be significantly influenced by culture. For
example, judgments about the passive or intrusive nature of interactions and the degree of positive affect therein – both studied here – may change based on norms of expression, touch, and personal space in one’s culture.

**Limitations and Future Research**

In addition to the limitations discussed above (e.g., homogeneity of sample, potential influence of survey design and question phrasing on responses, possible influence of culture on perception of parent-infant interactions), this study may have been influenced by factors such as question-order bias or social desirability bias. Survey research is also inherently subjective. This study assessed doulas’ perceptions of their own level of skill and experience. While many respondents endorsed being comfortable supporting clients who experience emotional distress, the scope of this survey precludes an objective assessment of doulas’ competency in emotional support. For example, compared to early-career doulas, those with over 15 years of experience were three times less likely to endorse wanting more training in helping tearful clients. However, it is unclear whether these doulas’ practices are aligned with – or might be enhanced by – evidence-based treatment principles.

Future research in this area should consider using “years of experience as a practicing doula” or “number of clients served” as an inclusion criteria instead of years as a certified doula. As highlighted by numerous respondents, future researchers should also consider using more inclusive language – e.g., “birthing person” instead of “mother.” The bias toward gendered language in the literature may influence researchers’ phrasing of questions, potentially leading respondents who are gender-diverse or of a sexual minority to be disinclined to engage (thus biasing the sample toward heterosexual, cis-gendered respondents).
Summary and Implications of the Present Study: Building a Clinical Training for Doulas

Doulas are uniquely situated to provide emotional support to families in the perinatal period. Current training programs for birth doulas, postpartum doulas, and community doulas do not adequately address the mental health needs of new and expectant parents. Although doulas’ services have been shown to improve health and safety outcomes, no robust research has shown their impact on symptoms of maternal depression. Doulas’ ability to provide effective emotional support – as laypeople and other health professionals have done after brief clinical trainings – thus requires additional instruction in emotional support techniques. The present study shows that, in a large sample of doulas across the U.S., the vast majority of doulas desire more training in addressing all symptoms of emotional distress studied here. They perceive an extensive need for emotional support in their clients. Respondents expressed a preference for in-person training in emotional support and for training that occurs as part of the certification process. This research also indicates that those with more years of experience, those with further training in emotional support, and those who spend more time with clients may perceive perinatal mental health symptoms at higher rates. Adapting a perinatal clinical training for doulas would therefore refine doulas’ sensitivity to clients’ mental health referral needs and build doulas’ skills in addressing and preventing common symptoms of PMADs. Considering the growing reach of doulas across demographic brackets in the U.S., incorporating further training in emotional support into doula training would serve as a universal preventive approach to addressing the significant public health issue that is PPD.

This service delivery model – called “task-shifting” or “task-sharing” – is an innovative solution to closing mental health treatment gaps, whereby lay individuals or professionals trained in other disciplines provide a service that would normally be delivered by highly trained
providers (Hoeft et al., 2018). Considering what is known about the prevalence and long-term consequences of PPD, applying task-shifting principles to prevent or mitigate the disorder is imperative. Although less is known about other PMADs and about antenatal depression, one may assume – based on research about the transdiagnostic nature of many symptoms and mechanisms of mental illness – that offering a brief clinical training to doulas would also mitigate other PMADs.

Although doulas endorsed a preference for in-person training when surveyed in early 2020, the shifting culture of instruction in the COVID-19 pandemic may change the landscape of doula education. The evidence-based “My NICU Network” program, which offers virtual, self-guided emotional support training to NICU nurses, may be an ideal program off which to model a clinical training for doulas (Hall, Mobolaji, Saxton, et al., 2019). Perinatal professionals may use the results of the present study to inform the content of such a training for doulas, thus filling a significant need – both for new families and for doulas themselves.
Appendix A:

“Understanding Doulas’ Emotional Support Training Needs” Survey

Consent Form

Demographics and Clients

1. How would you describe your professional role?
   - Birth Doula
   - Postpartum Doula
   - Birth & Postpartum Doula
   - Community Doula*

* A community health worker who has training in prenatal health, childbirth education, labor support, lactation counseling, and infant care. Services are provided through home visits during pregnancy, continuous labor support at the birth site, and home visits during the postpartum period.

If selected birth doula:
   - On average, how many hours do you work with the family a) before labor, and b) after they are home with their new baby (combined total)?
     - 1-3
     - 4-10
     - More than 10
   - Over what time period do you typically work with a family after they bring their baby home?
     - 1 month or less
     - 2-3 months
     - 4 or more months

2. How would you describe your employment?
   - Self-employed and hired directly by families
   - Employed by, or in a contractual partnership with, a hospital or birthing center
   - Employed by, or in a contractual partnership with, a federal or state program (for example, home visiting program)
   - Employed by a community organization
   - Other
3. How long have you been working as a doula since you were certified? Or, if no longer practicing, how long did you work as a doula after being certified?
   - 2-5 years
   - 6-10 years
   - 11-15 years
   - More than 15 years

4. Have you pursued any extra training in emotionally supporting mothers and families?
   - Specialized training (for example, through Postpartum Support International)
   - Continuing Education workshops
   - Independent reading
   - None
   - Other (specify): ___________________

5. Please select the marital status of most of your clients:
   - Single
   - Living with a partner
   - Married or in a civil union

6. With which racial or ethnic identity do most of your clients identify?
   - Native American / American Indian / Alaska Native / Indigenous
   - Asian-American / Asian Origin / Pacific Islander
   - African-American / Black / African Origin
   - Latinx / Hispanic
   - European Origin / White
   - Bi-racial / Multiracial
   - Other

7. With which racial or ethnic identity do you most identify? (Optional)
   - Native American / American Indian / Alaska Native / Indigenous
   - Asian-American / Asian Origin / Pacific Islander
   - African-American / Black / African Origin
   - Latinx / Hispanic
   - European Origin / White
   - Bi-racial / Multiracial
   - Other
Opinions about Emotional Support in Doula Work

The following questions are about emotional problems that new moms experience. In answering them, please think about your experiences working with mothers during pregnancy, birth, or the postpartum period as a doula.

1. Have you worked with mothers who were overwhelmed by their new role? For example, overwhelmed by the amount of responsibility or overwhelmed by how inexperienced they felt.

2. Have you worked with mothers who have been noticeably tearful compared to others moms?

3. Have you worked with mothers who have had trouble sleeping even when their baby sleeps?

4. Have you worked with mothers who seemed to feel a lot of guilt or blamed themselves unnecessarily when things didn’t go as planned?

5. Have you worked with mothers who were noticeably anxious or worried compared to other moms?

6. Have you worked with mothers who didn’t show much positive emotion when interacting with their baby?

7. Have you worked with mothers who interacted with their baby too much or too little? For example: trying to get the baby to look at them or play with them when the baby does not seem interested, not responding to the baby’s sounds or cries as often as other moms, not touching or holding their baby as often as other moms.
Branched follow-up questions to each of the filter questions endorsed (follow-ups for items not endorsed will be automatically skipped):

You said that you have worked with mothers who were noticeably anxious or worried compared to other moms.
- How often have you encountered this issue?
  - I see this very regularly
  - I see this somewhat often
  - I see this sometimes
  - I rarely see this
- How skilled, if at all, do you feel in addressing this issue?
  - Very skilled
  - Somewhat skilled
  - Slightly skilled
  - Not at all skilled
- How comfortable, if at all, are you in addressing this issue?
  - Very comfortable
  - Somewhat comfortable
  - Slightly comfortable
  - Not at all comfortable
- Would you like more training in how to address this issue?
  - Yes
  - No

8. If you were to get more training in emotional support, what areas of focus would be most helpful to you?

Please rank the following from 1 (most relevant to your work) to 6 (least relevant to your work):

_____ Learning more about mood disorders that occur during pregnancy and the postpartum period
_____ Learning skills to help prevent or address depression
_____ Learning skills to help prevent or address anxiety
_____ Understanding and intervening in mother-infant interactions
_____ Knowing when to refer a client for mental health services
_____ Addressing grief/loss

9. If doulas received more training in emotional support going forward, what format would be most helpful?
Please rank the following from 1 (most helpful) to 4 (least helpful):

_____ In-person training incorporated into the doula training workshop
_____ Online training as one of requirements before certification
_____ In-person continuing education workshop after certification
_____ Online continuing education workshop after certification

We welcome any reflections on your experience with the emotional support needs of new and expecting mothers.

Thank you for adding your voice to help us better understand the needs of doulas!

If you would like to be entered to win **one of eight $25 Amazon gift certificates**, the button below will bring you to a separate survey via an anonymous link. This survey will ask you to provide your email address and to confirm that you are not a robot. The separation of these two surveys ensures that your email address cannot be linked to any of the responses you have provided thus far. I will then assign a number to each raffle survey response and use a randomizer to select eight winners, each of whom will receive an Amazon gift certificate via email.

- Enter raffle through separate survey
- No, thanks

**Raffle Survey**

*(separate URL from main survey, distinct in Qualtrics platform)*

To be entered to win one of eight $25 gift certificates, please enter your email address: ________
Appendix B:

Email Request to Collaborate for Doula Organizations

Dear ________,

I am a former doula and current doctoral student in Clinical Psychology at Rutgers University. I am focusing on doulas for my dissertation research, and I’d like to include the voices of ___________ (community doulas, postpartum doulas, birth doulas). I found your contact information through ______ (company’s website). I’m looking to focus on their capacity to help prevent or address perinatal mental health difficulties, particularly for low-SES and ethnic minority moms. I have therefore developed a survey to evaluate the emotional support training needs and preferences of doulas. I’m interested in publishing and adding to the growing literature that supports the critical role of the doula.

I would greatly value hearing [ORGANIZATION] doulas’ perspectives. Please let me know if you might be willing to distribute the survey within your organization. If so, I will provide an email invitation that can be forwarded. The anonymous survey should take approximately 10-15 minutes to complete, and participants can enter to win one of eight $25 gift cards.

Thank you for your time and consideration,

Eleanore Hall  
Doctoral Candidate, Rutgers University of New Jersey  
DONA-Trained Birth & Postpartum Doula  
Email: eleanore.hall@rutgers.edu  
LinkedIn: linkedin.com/in/eleanorehall  
Phone: 646-942-2652
Appendix C:

Email and Social Media Invitation to Participate

Email for distribution within organization by colleague:

Dear doulas,

I am a doctoral student in Clinical Psychology at Rutgers University and a former doula. [individual at company] kindly agreed to pass this message on to you. For my dissertation research, I’m surveying doulas across the country to learn more about emotional support in their work and what training needs and preferences they might have. If you are 21 or older and have worked as a certified doula in the U.S. for at least two years, I’d like to hear your voice and learn more about what would be helpful to you.

If you choose to participate, the anonymous survey will take about 10-15 minutes and includes a consent form with more information. Upon completion, you can enter a raffle to win one of eight $25 gift cards, and your raffle entry will not be attached to your survey responses. I am available to answer any questions about the survey.

Will you please join other doulas in helping to develop research about your important role in maternal mental health? Survey link: ____________________________

Thank you for your time,

Eleanore Hall
Doctoral Candidate, Rutgers University of New Jersey
DONA-Trained Birth & Postpartum Doula
Email: eleanore.hall@rutgers.edu
LinkedIn: linkedin.com/in/eleanorehall
Phone: 646-942-2652

Email for distribution by principal investigator:

Dear [“doulas” or name of individual],

I am a doctoral student in Clinical Psychology at Rutgers University and a former doula. I came across your contact information through [company website or individual who provided contact information]. For my dissertation research, I’m surveying doulas across the country to learn more about emotional support in their work and what training needs and preferences they might have. If you are 21 or older and have worked as a certified doula in the U.S. for at least two years, I’d like to hear your voice and learn more about what would be helpful to you.

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Social Media:

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Thank you for your time,

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Phone: 646-942-2652
Appendix D:

Survey Consent Form

Rutgers University, Graduate School of Applied and Professional Psychology

Consent to Take Part in a Research Study

Understanding Doulas’ Emotional Support Training Needs

TITLE OF STUDY: *Incorporating a Clinical Component in Doula Training: A Formal Needs Assessment*

Principal Investigator: Eleanore Hall, Psy.M.

I, Eleanore Hall, am a doctoral student at the Graduate School of Applied and Professional Psychology at Rutgers University. This study is my dissertation project. The purpose of this study is to better understand a) doulas’ experiences of the emotional support needs of their clients, and b) doulas’ needs and preferences for training in emotional support. It should take about **10-15 minutes** to complete the survey.

This survey is a part of a study, and results may be published. The research is **anonymous**, meaning that you will not be asked to provide any personal information that could identify you (name, date of birth, etc.). Participation is completely **voluntary**, and you can choose to stop at any time without any penalty to you. You can also skip any questions on the survey. I anticipate no risks to participating in this study. If you choose to participate, you may enter to **win one of eight $25 Amazon gift cards**. At the end of the survey, you will see instructions on how to enter the raffle. To enter, you will be brought to a separate, second webpage and asked to enter your email address. This webpage is completely independent from the study’s survey, which means that your email address will not be connected to your responses in any way. The principal investigator will email gift certificates to the winners after the survey data collection period has ended.

If you have questions about taking part in this study, you can contact me, the Principal Investigator: Eleanore Hall, Graduate School of Applied and Professional Psychology at eleanore.hall@rutgers.edu. You can also contact my faculty advisor, Susan Forman, PhD, at sgforman@rutgers.edu.

If you have questions about your rights as a research subject, you can contact the IRB Director at: Arts and Sciences IRB (732) 235-2866 or the Rutgers Human Subjects Protection Program at (973) 972-1149 or email us at humansubjects@ored.rutgers.edu.

You may print a copy of this consent form for your records.
If you do not wish to take part in the research, please close this website address. If you would like to take part in the research, please follow the directions below:

By beginning this research, I acknowledge that I am 21 or older and have worked as a certified doula in the United States for a total of at least two years (even if not currently practicing). I have read and understood the information above, and my questions about the survey have been addressed. I agree to take part in this research, with the knowledge that I am free to withdraw my participation in the research without penalty, and I am free to skip any question without penalty. Click on the "I Agree" button if you would like to confirm your agreement to take part in this research.

I am 21 or older.

I have worked as a certified doula in the United States for at least two years, either recently or in the past.
References


https://doi.org/10.1136/bmj.a3045


https://doi.org/10.1016/j.infbeh.2006.08.005

https://doi.org/10.1037/a0020623

https://doi.org/10.1001/jama.2018.20865

https://doi.org/10.1146/annurev-clinpsy-050212-185612


Table 1

Demographic Characteristics of Participants \((N = 252)\)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>(n (%))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doula Type</strong></td>
<td></td>
</tr>
<tr>
<td>Birth doula</td>
<td>113 (44.8)</td>
</tr>
<tr>
<td>Postpartum doula</td>
<td>31 (12.3)</td>
</tr>
<tr>
<td>Birth &amp; postpartum doula</td>
<td>90 (35.7)</td>
</tr>
<tr>
<td>Community doula</td>
<td>18 (7.1)</td>
</tr>
<tr>
<td><strong>Employment Type</strong></td>
<td></td>
</tr>
<tr>
<td>Self-employed and hired directly by families</td>
<td>207 (82.1)</td>
</tr>
<tr>
<td>Employed by, or in a contractual partnership with, a hospital or birthing center</td>
<td>3 (1.2)</td>
</tr>
<tr>
<td>Employed by, or in a contractual partnership with, a federal or state program</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Employed by a community organization</td>
<td>13 (5.2)</td>
</tr>
<tr>
<td>Other (e.g., combination of the above, volunteer doula, working for a doula agency or collective)</td>
<td>27 (10.7)</td>
</tr>
<tr>
<td><strong>Years of Experience</strong></td>
<td></td>
</tr>
<tr>
<td>2-5 years</td>
<td>130 (51.6)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>62 (24.6)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>26 (10.3)</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>34 (13.5)</td>
</tr>
<tr>
<td><strong>Racial or Ethnic Identity</strong></td>
<td></td>
</tr>
<tr>
<td>White/European Origin</td>
<td>204 (81.0)</td>
</tr>
<tr>
<td>Black/African-American/African Origin</td>
<td>20 (7.9)</td>
</tr>
<tr>
<td>Latinx/Hispanic</td>
<td>15 (6.0)</td>
</tr>
<tr>
<td>Bi-racial/Multiracial</td>
<td>4 (1.6)</td>
</tr>
<tr>
<td>Asian-American/Asian Origin/Pacific Islander</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Native American/American Indian/Alaska Native/Indigenous</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td><strong>Predominant Marital Status of Clients</strong></td>
<td></td>
</tr>
<tr>
<td>Married or in a civil union</td>
<td>215 (85.3)</td>
</tr>
<tr>
<td>Living with a partner</td>
<td>26 (10.3)</td>
</tr>
</tbody>
</table>
Single 11 (4.4)

Predominant Racial or Ethnic Identity of Clients

<table>
<thead>
<tr>
<th>Racial or Ethnic Identity</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White/European Origin</td>
<td>200 (79.4)</td>
</tr>
<tr>
<td>Black/African-American/African Origin</td>
<td>16 (6.3)</td>
</tr>
<tr>
<td>Latinx/Hispanic</td>
<td>13 (5.2)</td>
</tr>
<tr>
<td>Bi-racial/Multiracial</td>
<td>13 (5.2)</td>
</tr>
<tr>
<td>Other</td>
<td>8 (3.2)</td>
</tr>
<tr>
<td>Asian-American/Asian Origin/Pacific Islander</td>
<td>2 (0.8)</td>
</tr>
<tr>
<td>Native American/American Indian/Alaska Native/Indigenous</td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.
Table 2

*Demographic Characteristics within the Sample of Birth Doulas*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hours worked with family before and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>after the labor and birth process</td>
<td>1-3 hours</td>
<td>12 (10.6)</td>
</tr>
<tr>
<td></td>
<td>4-10 hours</td>
<td>72 (63.7)</td>
</tr>
<tr>
<td></td>
<td>More than 10 hours</td>
<td>29 (25.7)</td>
</tr>
<tr>
<td>Duration of work with family after birth</td>
<td>1 month or less</td>
<td>89 (78.8)</td>
</tr>
<tr>
<td></td>
<td>2-3 months</td>
<td>17 (15.0)</td>
</tr>
<tr>
<td></td>
<td>4 or more months</td>
<td>6 (5.3)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.
Table 3

*Additional Training in Emotional Support*

<table>
<thead>
<tr>
<th>Type of Training Pursued</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing education workshops</td>
<td>107</td>
<td>(42.5)</td>
</tr>
<tr>
<td>Independent reading</td>
<td>52</td>
<td>(20.6)</td>
</tr>
<tr>
<td>Specialized training</td>
<td>41</td>
<td>(16.3)</td>
</tr>
<tr>
<td>Other (e.g., combination of the above, graduate degree in a mental health field, midwifery training)</td>
<td>39</td>
<td>(15.5)</td>
</tr>
<tr>
<td>None</td>
<td>13</td>
<td>(5.2)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.
Table 4

*Doula’s Experience with Mothers Who Are Overwhelmed*

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsed working with mothers who are overwhelmed by their new role</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>241 (95.6)</td>
</tr>
<tr>
<td>No</td>
<td>10 (4.0)</td>
</tr>
<tr>
<td>Frequency with which doulas encounter mothers who are overwhelmed by their new role&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>78 (32.4)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>78 (32.4)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>69 (28.6)</td>
</tr>
<tr>
<td>Rarely</td>
<td>7 (2.9)</td>
</tr>
<tr>
<td>Perceived skill in supporting mothers who are overwhelmed by their new role&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>85 (35.3)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>119 (49.4)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>27 (11.2)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Comfort with supporting mothers who are overwhelmed by their new role&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>140 (58.1)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>78 (32.4)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>12 (5.0)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Request more training in supporting mothers who are overwhelmed by their new role&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>186 (77.2)</td>
</tr>
<tr>
<td>No</td>
<td>45 (18.7)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

<sup>a</sup> Includes respondents (n = 241) who reported having worked with mothers who were overwhelmed by their new role.
Table 5

*Doulas’ Experience with Maternal Tearfulness*

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsed working with mothers who are noticeably tearful</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>203 (80.6)</td>
</tr>
<tr>
<td>No</td>
<td>46 (18.3)</td>
</tr>
<tr>
<td>Frequency with which doulas encounter mothers who are noticeably tearful&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>18 (8.9)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>53 (26.1)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>108 (53.2)</td>
</tr>
<tr>
<td>Rarely</td>
<td>20 (9.9)</td>
</tr>
<tr>
<td>Perceived skill in supporting mothers who are noticeably tearful&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>62 (30.5)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>111 (54.7)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>25 (12.3)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td>Comfort with supporting mothers who are noticeably tearful&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>100 (49.3)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>78 (38.4)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>21 (10.3)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Would you like more training in supporting mothers who are noticeably tearful?&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>165 (81.3)</td>
</tr>
<tr>
<td>No</td>
<td>34 (16.7)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

<sup>a</sup> Includes respondents (n = 203) who reported having worked with mothers who were noticeably tearful
Table 6

Doula’s Experience with Maternal Sleep Disturbance

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsed working with mothers who have difficulty sleeping even when their baby sleeps</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>212 (84.1)</td>
</tr>
<tr>
<td>No</td>
<td>36 (14.3)</td>
</tr>
</tbody>
</table>
| Frequency with which doulas encounter mothers who have difficulty sleeping  
| a                                                                                 |        |
| Very regularly                                                                    | 39 (18.4) |
| Somewhat often                                                                    | 58 (27.4) |
| Sometimes                                                                         | 80 (37.7) |
| Rarely                                                                            | 27 (12.7)  |
| Perceived skill in supporting mothers who have difficulty sleeping  
| a                                                                                 |        |
| Very skilled                                                                       | 61 (28.8) |
| Somewhat skilled                                                                  | 95 (44.8) |
| Slightly skilled                                                                  | 41 (19.3) |
| Not at all skilled                                                                | 7 (3.3)    |
| Comfort with supporting mothers who have difficulty sleeping  
| a                                                                                 |        |
| Very comfortable                                                                  | 90 (42.5) |
| Somewhat comfortable                                                              | 79 (37.3) |
| Slightly comfortable                                                              | 31 (14.6) |
| Not at all comfortable                                                            | 3 (1.4)    |
| Would you like more training in supporting mothers who have difficulty sleeping  
| a                                                                                 |        |
| Yes                                                                               | 163 (76.9) |
| No                                                                                | 41 (19.3)    |

Note: not all percentages add to 100 due to nonresponses.

a Includes respondents (n = 212) who reported having worked with mothers who had difficulty sleeping
### Table 7

*Doulas’ Experience with Maternal Guilt or Self-Blame*

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endorsed working with mothers who experience a lot of guilt or self-blame</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>197 (78.2)</td>
</tr>
<tr>
<td>No</td>
<td>51 (20.2)</td>
</tr>
<tr>
<td><strong>Frequency with which doulas encounter mothers who experience a lot of guilt or</strong></td>
<td></td>
</tr>
<tr>
<td>self-blame&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>31 (15.7)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>59 (29.9)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>74 (37.6)</td>
</tr>
<tr>
<td>Rarely</td>
<td>26 (13.2)</td>
</tr>
<tr>
<td><strong>Perceived skill in supporting mothers who experience a lot of guilt or self-</strong></td>
<td></td>
</tr>
<tr>
<td>blame&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>65 (33.0)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>100 (50.8)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>24 (12.2)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td><strong>Comfort with supporting mothers who experience a lot of guilt or self-blame&lt;sup&gt;a&lt;/sup&gt;</strong></td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>94 (47.7)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>77 (39.1)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>18 (9.1)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>1 (0.5)</td>
</tr>
<tr>
<td><strong>Request more training in supporting mothers who experience a lot of guilt or</strong></td>
<td></td>
</tr>
<tr>
<td>self-blame&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>155 (78.7)</td>
</tr>
<tr>
<td>No</td>
<td>35 (17.8)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

<sup>a</sup> Includes respondents (n = 197) who reported having worked with mothers who experienced guilt or self-blame.
Table 8

*Doula’s Experience with Maternal Anxiety or Worry*

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n  (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endorsed working with mothers who are noticeably anxious or worried</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>226 (89.7)</td>
</tr>
<tr>
<td>No</td>
<td>22 (8.7)</td>
</tr>
<tr>
<td><strong>Frequency with which doulas encounter mothers who are noticeably anxious or worried</strong></td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>50 (22.1)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>72 (31.9)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>87 (38.5)</td>
</tr>
<tr>
<td>Rarely</td>
<td>8 (3.5)</td>
</tr>
<tr>
<td><strong>Perceived skill in supporting mothers who are noticeably anxious or worried</strong></td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>65 (28.8)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>122 (54.0)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>28 (12.4)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>2 (0.9)</td>
</tr>
<tr>
<td><strong>Comfort with supporting mothers who are noticeably anxious or worried</strong></td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>99 (43.8)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>96 (42.5)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>19 (8.4)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>3 (1.3)</td>
</tr>
<tr>
<td><strong>Request more training in supporting mothers who are noticeably anxious or worried?</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>180 (79.6)</td>
</tr>
<tr>
<td>No</td>
<td>37 (16.4)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

*Includes respondents (n = 226) who reported having worked with mothers who were noticeably anxious or worried*
### Table 9

**Doulas’ Experience with Mothers Who Show Low Positive Affect in Mother-Infant Interactions**

<table>
<thead>
<tr>
<th>Experience/Opinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsed working with mothers who show low positive affect in mother-infant interactions</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>134 (53.2)</td>
</tr>
<tr>
<td>No</td>
<td>112 (44.4)</td>
</tr>
<tr>
<td>Frequency with which doulas encounter mothers who show low positive affect in mother-infant interactions&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>2 (1.5)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>8 (6.0)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>43 (32.1)</td>
</tr>
<tr>
<td>Rarely</td>
<td>77 (57.5)</td>
</tr>
<tr>
<td>Perceived skill in supporting mothers who show low positive affect in mother-infant interactions&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>17 (12.7)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>56 (41.8)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>45 (33.6)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>12 (9.0)</td>
</tr>
<tr>
<td>Comfort with supporting mothers who show low positive affect in mother-infant interactions&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>32 (23.9)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>51 (38.1)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>35 (26.1)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>12 (9.0)</td>
</tr>
<tr>
<td>Would you like more training in supporting mothers who show low positive affect in mother-infant interactions?&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>119 (88.8)</td>
</tr>
<tr>
<td>No</td>
<td>11 (8.2)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

<sup>a</sup> Includes respondents (n = 134) who reported having worked with mothers who show low positive affect in mother-infant interactions.
Table 10

*Doulas’ Experience with Passive or Intrusive Mother-Infant Interaction Styles*

<table>
<thead>
<tr>
<th>Experience/Oppinion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endorsed working with mothers who show passive or intrusive mother-infant interaction styles</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>134 (53.2)</td>
</tr>
<tr>
<td>No</td>
<td>112 (44.4)</td>
</tr>
<tr>
<td>Frequency with which doulas encounter mothers who show passive or intrusive mother-infant interaction styles&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very regularly</td>
<td>4 (3.0)</td>
</tr>
<tr>
<td>Somewhat often</td>
<td>18 (13.4)</td>
</tr>
<tr>
<td>Sometimes</td>
<td>55 (41.0)</td>
</tr>
<tr>
<td>Rarely</td>
<td>50 (37.3)</td>
</tr>
<tr>
<td>Perceived skill in supporting mothers who show passive or intrusive mother-infant interaction styles&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very skilled</td>
<td>22 (16.4)</td>
</tr>
<tr>
<td>Somewhat skilled</td>
<td>64 (47.8)</td>
</tr>
<tr>
<td>Slightly skilled</td>
<td>36 (26.9)</td>
</tr>
<tr>
<td>Not at all skilled</td>
<td>6 (4.5)</td>
</tr>
<tr>
<td>Comfort with supporting mothers who show passive or intrusive mother-infant interaction styles&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Very comfortable</td>
<td>38 (28.4)</td>
</tr>
<tr>
<td>Somewhat comfortable</td>
<td>53 (39.6)</td>
</tr>
<tr>
<td>Slightly comfortable</td>
<td>32 (23.9)</td>
</tr>
<tr>
<td>Not at all comfortable</td>
<td>5 (3.7)</td>
</tr>
<tr>
<td>Would you like more training in supporting mothers who show passive or intrusive mother-infant interaction styles&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>113 (84.3)</td>
</tr>
<tr>
<td>No</td>
<td>14 (10.4)</td>
</tr>
</tbody>
</table>

Note: not all percentages add to 100 due to nonresponses.

<sup>a</sup> Includes respondents (n = 134) who reported having worked with mothers who show passive or intrusive mother-infant interaction styles.
Table 11

*Emotional Support Training Preferences (N = 213)*

<table>
<thead>
<tr>
<th>Training Content</th>
<th>Mean ranking from 1 (most relevant) to 6 (least relevant)</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning skills to help prevent or address anxiety</td>
<td>2.55</td>
<td>1.364</td>
</tr>
<tr>
<td>Learning skills to help prevent or address depression</td>
<td>2.85</td>
<td>1.254</td>
</tr>
<tr>
<td>Learning more about perinatal mood disorders</td>
<td>3.00</td>
<td>1.742</td>
</tr>
<tr>
<td>Understanding and intervening in mother-infant interactions</td>
<td>4.04</td>
<td>1.598</td>
</tr>
<tr>
<td>Knowing when to refer a client for mental health services</td>
<td>4.19</td>
<td>1.603</td>
</tr>
<tr>
<td>Addressing grief/loss</td>
<td>4.37</td>
<td>1.704</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Format</th>
<th>Mean ranking from 1 (most helpful) to 4 (least helpful)</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person training incorporated into the doula training workshop</td>
<td>2.00</td>
<td>1.088</td>
</tr>
<tr>
<td>In-person continuing education workshop after certification</td>
<td>2.38</td>
<td>1.099</td>
</tr>
<tr>
<td>Online training as one of the requirements toward certification</td>
<td>2.77</td>
<td>1.047</td>
</tr>
<tr>
<td>Online continuing education workshop after certification</td>
<td>2.85</td>
<td>1.040</td>
</tr>
</tbody>
</table>
Table 12

Qualitative Coding Themes and Response Percentages

<table>
<thead>
<tr>
<th>Theme</th>
<th>Response %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doulas need or want more training in this area</td>
<td>19</td>
</tr>
<tr>
<td>This research is important</td>
<td>14</td>
</tr>
<tr>
<td>The current model of perinatal support is lacking</td>
<td>14</td>
</tr>
<tr>
<td>Families need significant emotional support in the perinatal period</td>
<td>13</td>
</tr>
<tr>
<td>It is important that doulas know how and when to refer clients to mental health providers or community resources</td>
<td>11</td>
</tr>
<tr>
<td>Doulas are in a unique position to use their relationship with families to provide emotional support</td>
<td>9</td>
</tr>
<tr>
<td>Parents are unprepared for the challenges of new parenthood</td>
<td>7</td>
</tr>
<tr>
<td>It is important to consider culture and identity in doula work and research</td>
<td>4</td>
</tr>
<tr>
<td>Trauma impacts the perinatal experience</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 13

*Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients Who Are Overwhelmed by Their New Role*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.526</td>
<td>.2730</td>
<td>3.705</td>
<td>1</td>
<td>.054</td>
<td>1.691</td>
<td>.990 - 2.888</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>-.153</td>
<td>.3898</td>
<td>.155</td>
<td>1</td>
<td>.694</td>
<td>.858</td>
<td>.399 - 1.841</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.060</td>
<td>-1.046</td>
<td>.014</td>
<td>1</td>
<td>.906</td>
<td>.942</td>
<td>.351 - 2.528</td>
</tr>
</tbody>
</table>
Table 14

*Logistic Regression Predicting Comfort Level in Supporting Clients Who Are Overwhelmed by Their New Role*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>$B$</th>
<th>S.E.</th>
<th>Wald</th>
<th>$df$</th>
<th>$p$</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>-1.334</td>
<td>.333</td>
<td>16.087</td>
<td>1</td>
<td>.000</td>
<td>.263</td>
<td>.137 .506</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>-.639</td>
<td>.461</td>
<td>1.920</td>
<td>1</td>
<td>.166</td>
<td>.528</td>
<td>.214 1.303</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.985</td>
<td>.571</td>
<td>2.982</td>
<td>1</td>
<td>.084</td>
<td>.373</td>
<td>.122 1.142</td>
</tr>
</tbody>
</table>
Table 15

*Logistic Regression Predicting Likelihood of Having Seen Noticeable Tearfulness in Clients*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>-1.074</td>
<td>.398</td>
<td>7.280</td>
<td>1</td>
<td>.007</td>
<td>.342</td>
<td>.157</td>
<td>.745</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>1.334</td>
<td>1.071</td>
<td>1.554</td>
<td>1</td>
<td>.213</td>
<td>3.797</td>
<td>.466</td>
<td>30.954</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-1.111</td>
<td>.624</td>
<td>3.170</td>
<td>1</td>
<td>.075</td>
<td>.329</td>
<td>.097</td>
<td>1.119</td>
</tr>
</tbody>
</table>
## Table 16

**Logistic Regression Predicting Likelihood of Having Seen Noticeable Tearfulness in Clients**

<table>
<thead>
<tr>
<th>Predominant client Race/Ethnicity</th>
<th>$B$</th>
<th>$S.E.$</th>
<th>Wald</th>
<th>$df$</th>
<th>$p$</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients of color</td>
<td>-.940</td>
<td>.361</td>
<td>6.77</td>
<td>1</td>
<td>.009</td>
<td>.391</td>
<td>.193</td>
<td>.793</td>
</tr>
</tbody>
</table>

95.0% C.I. for Odds Ratio
Table 17

Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients Who Are Noticeably Tearful

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.657</td>
<td>.3121</td>
<td>4.434</td>
<td>1</td>
<td>.035</td>
<td>1.929</td>
<td>1.047, 3.556</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>-.073</td>
<td>.4125</td>
<td>.031</td>
<td>1</td>
<td>.859</td>
<td>.930</td>
<td>.414, 2.086</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.517</td>
<td>.5785</td>
<td>.617</td>
<td>1</td>
<td>.372</td>
<td>.597</td>
<td>.192, 1.854</td>
</tr>
</tbody>
</table>
Table 18

*Ordinal Logistic Regression Predicting Doula Comfort Level in Supporting Clients Who Are Noticeably Tearful*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.526</td>
<td>.2730</td>
<td>3.705</td>
<td>1</td>
<td>.054</td>
<td>1.691</td>
<td>.990 - 2.888</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>-.153</td>
<td>.3898</td>
<td>.155</td>
<td>1</td>
<td>.694</td>
<td>.858</td>
<td>.399 - 1.841</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.060</td>
<td>.5036</td>
<td>.014</td>
<td>1</td>
<td>.906</td>
<td>.942</td>
<td>.351 - 2.528</td>
</tr>
</tbody>
</table>
Table 19

Logistic Regression Predicting Likelihood of Desire for More Training in Supporting Clients Who Are Noticeably Tearful

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5 Years</td>
<td>1.129</td>
<td>.517</td>
<td>4.766</td>
<td>1</td>
<td>.029</td>
<td>3.091</td>
<td>1.122</td>
<td>8.515</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>.361</td>
<td>.511</td>
<td>.500</td>
<td>1</td>
<td>.479</td>
<td>1.435</td>
<td>.527</td>
<td>3.903</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>.908</td>
<td>.735</td>
<td>1.524</td>
<td>1</td>
<td>.217</td>
<td>2.478</td>
<td>.587</td>
<td>10.471</td>
</tr>
</tbody>
</table>
Table 20

*Logistic Regression Predicting Likelihood of Desire for More Training in Supporting Clients Who Are Noticeably Tearful*

<table>
<thead>
<tr>
<th>Predominant client Race/Ethnicity</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients of color</td>
<td>-.470</td>
<td>.570</td>
<td>.678</td>
<td>1</td>
<td>.410</td>
<td>.625</td>
<td>.205 1.912</td>
</tr>
</tbody>
</table>
Table 21

*Logistic Regression Predicting Likelihood of Having Seen Sleep Disturbance in Clients*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>-1.782</td>
<td>.509</td>
<td>12.280</td>
<td>1</td>
<td>.000</td>
<td>.168</td>
<td>.062</td>
<td>.456</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>18.382</td>
<td>7218.870</td>
<td>.000</td>
<td>1</td>
<td>.998</td>
<td>96159216.8</td>
<td>.000</td>
<td>.</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.806</td>
<td>.882</td>
<td>.835</td>
<td>1</td>
<td>.361</td>
<td>.446</td>
<td>.079</td>
<td>2.517</td>
</tr>
</tbody>
</table>
Table 22

*Ordinal Logistic Regression Predicting Comfort Level in Supporting Clients Who Experience Sleep Disturbance*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.649</td>
<td>.3019</td>
<td>4.618</td>
<td>1</td>
<td>.032</td>
<td>1.913</td>
<td>1.059 - 3.457</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>.467</td>
<td>.4095</td>
<td>1.298</td>
<td>1</td>
<td>.255</td>
<td>1.595</td>
<td>.715 - 3.558</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.022</td>
<td>.5425</td>
<td>.002</td>
<td>1</td>
<td>.968</td>
<td>.979</td>
<td>.338 - 2.834</td>
</tr>
</tbody>
</table>
Table 23

*Logistic Regression Predicting Likelihood of Having Worked With Clients Who Experience Guilt or Self-Blame*

<table>
<thead>
<tr>
<th>Average number of hours spent with clients outside of labor</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10 hours</td>
<td>1.835</td>
<td>.770</td>
<td>5.678</td>
<td>1</td>
<td>.017</td>
<td>6.268</td>
<td>1.385</td>
<td>28.366</td>
</tr>
</tbody>
</table>
Table 24

*Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients Who Experience Guilt or Self-Blame*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.589</td>
<td>.2987</td>
<td>3.889</td>
<td>1</td>
<td>.049</td>
<td>1.802</td>
<td>1.004</td>
<td>3.236</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>-.353</td>
<td>.4289</td>
<td>.679</td>
<td>1</td>
<td>.410</td>
<td>.702</td>
<td>.303</td>
<td>1.628</td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.022</td>
<td>.5482</td>
<td>.002</td>
<td>1</td>
<td>.968</td>
<td>.979</td>
<td>.334</td>
<td>2.865</td>
</tr>
</tbody>
</table>
Table 25

*Ordinal Logistic Regression Predicting Comfort Level in Supporting Clients Who Experience Guilt or Self-Blame*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.888</td>
<td>.3225</td>
<td>7.573</td>
<td>1</td>
<td>.006</td>
<td>2.429</td>
<td>1.291 4.571</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>.558</td>
<td>.4601</td>
<td>1.469</td>
<td>1</td>
<td>.226</td>
<td>1.746</td>
<td>.709 4.304</td>
</tr>
<tr>
<td>Community Doula</td>
<td>.688</td>
<td>.5824</td>
<td>1.396</td>
<td>1</td>
<td>.237</td>
<td>1.990</td>
<td>.636 6.232</td>
</tr>
</tbody>
</table>
Table 26

*Logistic Regression Predicting Likelihood of Having Worked with Clients Who Experienced Noticeable Anxiety or Worry*

<table>
<thead>
<tr>
<th>Average number of hours spent with clients outside of labor</th>
<th>$B$</th>
<th>$S.E.$</th>
<th>Wald</th>
<th>df</th>
<th>$p$</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10 hours</td>
<td>19.608</td>
<td>7595.757</td>
<td>.000</td>
<td>1</td>
<td>.998</td>
<td>327777504</td>
<td>.000</td>
<td>.</td>
</tr>
</tbody>
</table>
Table 27

*Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients Who Experience Noticeable Anxiety or Worry*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>1.035</td>
<td>.2916</td>
<td>12.606</td>
<td>1</td>
<td>.000</td>
<td>2.816</td>
<td>1.590</td>
<td>4.986</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>.136</td>
<td>.3987</td>
<td>.117</td>
<td>1</td>
<td>.733</td>
<td>1.146</td>
<td>.525</td>
<td>2.503</td>
</tr>
<tr>
<td>Community Doula</td>
<td>.145</td>
<td>.4906</td>
<td>.087</td>
<td>1</td>
<td>.768</td>
<td>1.156</td>
<td>.442</td>
<td>3.024</td>
</tr>
</tbody>
</table>
Table 28

*Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients who Experience Noticeable Anxiety or Worry*

<table>
<thead>
<tr>
<th>Type of Further Training in Emotional Support</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized Training</td>
<td>-.615</td>
<td>.4324</td>
<td>2.020</td>
<td>1</td>
<td>.155</td>
<td>.541</td>
<td>.232 - 1.262</td>
</tr>
<tr>
<td>Continuing Education Workshops</td>
<td>.237</td>
<td>.3615</td>
<td>.429</td>
<td>1</td>
<td>.513</td>
<td>1.267</td>
<td>.624 - 2.574</td>
</tr>
<tr>
<td>Independent Reading</td>
<td>1.123</td>
<td>.4390</td>
<td>6.547</td>
<td>1</td>
<td>.011</td>
<td>3.074</td>
<td>1.301 - 7.268</td>
</tr>
<tr>
<td>None</td>
<td>1.314</td>
<td>.6532</td>
<td>4.045</td>
<td>1</td>
<td>.044</td>
<td>3.720</td>
<td>1.034 - 13.383</td>
</tr>
</tbody>
</table>
Table 29

*Ordinal Logistic Regression Predicting Comfort Level in Supporting Clients Who Experience Noticeable Anxiety or Worry*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>$B$</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>$p$</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>.849</td>
<td>.3016</td>
<td>7.921</td>
<td>1</td>
<td>.005</td>
<td>2.337</td>
<td>1.294 4.221</td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>.443</td>
<td>.4214</td>
<td>1.104</td>
<td>1</td>
<td>.293</td>
<td>1.557</td>
<td>.682 3.556</td>
</tr>
<tr>
<td>Community Doula</td>
<td>.465</td>
<td>.5167</td>
<td>.811</td>
<td>1</td>
<td>.368</td>
<td>1.592</td>
<td>.578 4.384</td>
</tr>
</tbody>
</table>
Table 30

*Logistic Regression Predicting Likelihood of Having Worked with Clients Who Show Low Positive Affect in Mother-Infant Interactions*

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5 Years</td>
<td>-1.221</td>
<td>.432</td>
<td>8.000</td>
<td>1</td>
<td>.005</td>
<td>.295</td>
<td>.126</td>
<td>.687</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>-.220</td>
<td>.479</td>
<td>.212</td>
<td>1</td>
<td>.647</td>
<td>.802</td>
<td>.314</td>
<td>.2049</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>-.533</td>
<td>.567</td>
<td>.884</td>
<td>1</td>
<td>.347</td>
<td>.587</td>
<td>.193</td>
<td>1.783</td>
</tr>
</tbody>
</table>
Table 31

Logistic Regression Predicting Frequency with Which Doulas See Clients Who Show Low Positive Affect in Mother-Infant Interaction

<table>
<thead>
<tr>
<th>Type of Further Training in Emotional Support</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized Training</td>
<td>1.560</td>
<td>.656</td>
<td>5.658</td>
<td>1</td>
<td>.017</td>
<td>4.760</td>
<td>1.316 – 17.216</td>
</tr>
<tr>
<td>Continuing Education Workshops</td>
<td>-.4111</td>
<td>.503</td>
<td>.666</td>
<td>1</td>
<td>.414</td>
<td>.663</td>
<td>.247 – 1.778</td>
</tr>
<tr>
<td>Independent Reading</td>
<td>-1.050</td>
<td>.696</td>
<td>2.277</td>
<td>1</td>
<td>.131</td>
<td>.350</td>
<td>.090 – 1.368</td>
</tr>
<tr>
<td>None</td>
<td>.336</td>
<td>.819</td>
<td>.169</td>
<td>1</td>
<td>.681</td>
<td>1.400</td>
<td>.281 – 6.976</td>
</tr>
</tbody>
</table>
Table 32

*Logistic Regression Predicting Likelihood of Having Worked with Clients Who Show Low Positive Affect in Mother-Infant Interactions*

<table>
<thead>
<tr>
<th>Doula Type</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Doula</td>
<td>-.992</td>
<td>.295</td>
<td>11.290</td>
<td>1</td>
<td>.001</td>
<td>.371</td>
<td>.208</td>
<td>.661</td>
<td></td>
</tr>
<tr>
<td>Postpartum Doula</td>
<td>.403</td>
<td>.469</td>
<td>.736</td>
<td>1</td>
<td>.391</td>
<td>1.496</td>
<td>.596</td>
<td>3.752</td>
<td></td>
</tr>
<tr>
<td>Community Doula</td>
<td>-.252</td>
<td>.541</td>
<td>.218</td>
<td>1</td>
<td>.641</td>
<td>.777</td>
<td>.269</td>
<td>2.243</td>
<td></td>
</tr>
</tbody>
</table>
Table 33

*Ordinal Logistic Regression Predicting Frequency with Which Doulas See Clients Who Show Low Positive Affect in Mother-Infant Interactions*

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5 Years</td>
<td>-.908</td>
<td>.5201</td>
<td>3.047</td>
<td>1</td>
<td>.081</td>
<td>.403</td>
<td>.146, 1.118</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>.216</td>
<td>.5661</td>
<td>.145</td>
<td>1</td>
<td>.703</td>
<td>1.241</td>
<td>.409, 3.763</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>-.018</td>
<td>.7012</td>
<td>.001</td>
<td>1</td>
<td>.979</td>
<td>.982</td>
<td>.248, 3.880</td>
</tr>
</tbody>
</table>
Table 34

Logistic Regression Predicting Likelihood of Having Worked with Clients Who Show Passive or Intrusive Mother-Infant Interaction Styles

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>$B$</th>
<th>S.E.</th>
<th>Wald</th>
<th>$df$</th>
<th>$p$</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
<th>95.0% C.I. for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5 Years</td>
<td>-1.632</td>
<td>.462</td>
<td>12.458</td>
<td>1</td>
<td>.000</td>
<td>.195</td>
<td>.079</td>
<td>.484</td>
<td></td>
</tr>
<tr>
<td>6-10 Years</td>
<td>-.920</td>
<td>.498</td>
<td>3.409</td>
<td>1</td>
<td>.065</td>
<td>.398</td>
<td>.150</td>
<td>1.058</td>
<td></td>
</tr>
<tr>
<td>11-15 Years</td>
<td>-.368</td>
<td>.616</td>
<td>.356</td>
<td>1</td>
<td>.551</td>
<td>.692</td>
<td>.207</td>
<td>2.316</td>
<td></td>
</tr>
</tbody>
</table>
Table 35

*Logistic Regression Predicting Likelihood of Desire for More Training in Supporting Clients Who Show Passive or Intrusive Mother-Infant Interaction Styles*

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Odds Ratio</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5 Years</td>
<td>1.471</td>
<td>.781</td>
<td>3.544</td>
<td>1</td>
<td>.060</td>
<td>4.352</td>
<td>.941</td>
<td>20.117</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>1.117</td>
<td>.787</td>
<td>2.015</td>
<td>1</td>
<td>.156</td>
<td>3.056</td>
<td>.654</td>
<td>14.285</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>.329</td>
<td>.810</td>
<td>.165</td>
<td>1</td>
<td>.685</td>
<td>1.389</td>
<td>.284</td>
<td>6.790</td>
</tr>
</tbody>
</table>