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MANTRAM FOR MAMAS: A PILOT STUDY FOR POSTPARTUM WOMEN

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Hahn School of Nursing and Health Science

DOCTOR OF PHILOSOPHY IN NURSING

MANTRAM FOR MAMAS: A PILOT STUDY FOR POSTPARTUM WOMEN

By

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Abstract

Objective: This pilot study launched an online Mantram Repetition Program (oMRP) using a virtual health portal that aimed to explore online portal accessibility, oMRP acceptance, and overall interface satisfaction among a sample of postpartum women.

Background: Postpartum depression remains one of the most common and severe childbirth complications, affecting more than 13% of women during the first three months after childbirth. Cognitive or behavioral talk therapy sessions and medication are the most frequently recommended treatments to alleviate symptoms. Although effective, women tend not to enroll or adhere to these modalities, suggesting they need alternative treatment plans. A possible alternative, mirroring the adoption of online platforms and patient portals in many areas of healthcare delivery, is to examine if an online treatment method is acceptable for women in the postpartum period.

Methods: To explore whether newly postpartum women would log on, navigate the portal, accept the virtual program, and enjoy the overall experience, participants were invited to access four oMRP learning modules through a HIPAA-compliant portal during a 30-day study period. Participants provided sociodemographic data and completed satisfaction surveys throughout the study. Questions from the Technology Acceptance Model (TAM) and the Client Satisfaction Questionnaire (CSQ-8), in combination with open-ended questions, were used to evaluate participant acceptance and satisfaction with the technology, portal, and program.

Results: Among this sample of seven women, five completed the program in its entirety, shared their satisfaction, and even expressed gratitude for the program. The women accepted the technology as indicated by a 6.0 mean TAM score (out of a possible 7.0)

and had moderate to high levels of program satisfaction indicated by a 27 mean CSQ score (out of a possible 32). The qualitative and quantitative results indicated that the pilot study positively impacted its participants.

Conclusion: The oMRP for postpartum women has the potential to be a patient-centered modality to treat postpartum symptoms and support overall well-being. This study provided a foundational empirical understanding of the acceptability and use of the oMRP interface, resulting in recommendations for future research, interface design, and clinical implementation.

Keywords: mantram, mantram repetition program, maternal mental health, postpartum, women's health, postpartum mental health, technology acceptance model, patient portal, virtual education program

Dedication

This work is dedicated to all women in the transition of motherhood and to the hope that the support they need is coming.

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I wish to acknowledge all of the support, encouragement, and guidance I have received from all of the faculty and staff at the Hahn School of Nursing throughout my academic journey. Their collective desire and efforts toward my academic success were a constant over the years. I also wish to extend my deepest gratitude to all my dissertation committee members, especially Dr. Bush, for sticking by my side through the many twists and turns of this process and for fostering my personal, professional, and academic growth. It is on your shoulders I stand as I launch into this new chapter of my career.

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My gratitude also goes to my colleagues and mentors along this path who provided guidance and support during the research process and to Dr. Jill Bormann for passing on her knowledge and expertise in her mantram work.

I would also like to thank the postpartum women for their willingness to take part in the study and for their vulnerability and authenticity which will aid in building a better future for maternal wellbeing.

Lastly, I would like to acknowledge the Howell Foundation and the Irene S. Palmer Research foundation for the financial support of this research, granting the best opportunity for success.

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CHAPTER 1

Introduction

She realized that all along within her she contained the power to save herself.

And so, she did.

—Meggan Watterson (2021)

The birth of a child leads to a time of great transition and brings well-documented challenges to the woman and her family. The arrival of a newborn results in the birth of a new mother as well. Her body, mind, and spirit are altered and transformed with every delivery. The transition into motherhood is a complex phenomenon for a woman, whether she is delivering her first baby or adjusting to a new dynamic as her family grows. There are instances when the growing family thrives as these new challenges and major life changes are effortlessly embraced. This time can be full of awe and joy, as well as exhaustion, healing, fear, anxiety, and doubt. A range of these emotions is a normal reaction to the dramatic physiologic changes that occur after delivery and are to be expected for most women.

According to extensive research conducted by Cheryl Beck, this mix of emotions, including crying, irritability, or a general dip in mood, is described as postpartum blues and can affect up to 75% of all postpartum women (Beck, 2006). Beck also describes postpartum blues as requiring support and reassurance, but no formal or interventive treatment is needed as the woman's body heals and adjusts; the blues tend to fade away. This information about postpartum blues has been widely disseminated to the public through healthcare providers, community organizations, mental health campaigns, and health websites. However, there are also instances in which the postpartum period brings

a storm of darkness and burnout over the woman and her family. Similar feelings of postpartum blues can persist and intensify over time while the new mother is overpowered by depressive symptoms and emotions that do not fade away. The diagnosis of postpartum depression (PPD) is a serious mood disorder Beck has described as “a thief that steals motherhood” (p. 40) and has remained one of the most common and serious complications of childbirth for decades (Beck, 2006; Liu, et al., 2023; O’Hara & McCabe, 2013).

Background

A meta-analysis by O’Hara and Swain (1996) found nonpsychotic PPD was prevalent in 13% of 12,810 total participants across 59 studies that met the inclusion criteria. Horowitz and Goodman (2005) discussed their investigations and found PPD affected 10% to 20% of women in the United States, and negatively influenced maternal, infant, and family health. The United States Centers for Disease Control and Prevention (CDC) released a report estimating PPD prevalence at 13%, calculated from data collected on 32,000 women screened throughout the United States in 2018 (Bauman et al., 2020). Based on these studies, the prevalence of women reporting symptoms of PPD has not changed from 1996 to 2018. The consistency of the statistics and lack of improvement in ameliorating this situation prompt the need to offer postpartum women better support and skills.

While therapy and medications are offered routinely to postpartum women, new mothers have been reported to prefer alternative and non-pharmacological treatment plans (Dimidjian et al., 2016). Nguyen’s (2017) systematic review showcased the need for further research and credible evidence to provide empirically sound alternative

options for postpartum women. The author acknowledges more studies will be needed to offer an evidence-based alternative for those adverse to traditional treatment modalities (Nguyen, 2017).

Mantram repetition is an evidenced-based alternative coping strategy with the potential to impact and support women's transition into motherhood. Mantram repetition is the simple practice of silently repeating a sacred word or phrase multiple times during the day to cross over the chatter of the mind and elicit a calming effect throughout the body. A mantram (or mantra) is chosen from an ancient religious tradition (i.e., Christianity, Buddhism, Islam, Judaism, and Hinduism). For example, when Mahatma Gandhi practiced his mantram repetition, he used Rama, the name of a Hindu god, meaning eternal joy within (Bormann et al., 2005).

The Mantram Repetition Program (MRP) is an empirically tested intervention adapted from the original work and teachings of Eknath Eswaran. The MRP has further developed in the United States Veterans Health Administration (VHA) healthcare system with robust empirical findings (Bormann, et al., 2006; Bormann, et al., 2007; Bormann et al., 2009; Bormann, et al., 2012; Bormann et al., 2013; Bormann et al., 2014; Leary et al., 2018). Bormann and colleagues (2006, 2007, 2009, 2012, 2013, 2014, 2018, 2019) initially saw a need for better support and coping tools to offer the veteran population and those supporting them as they suffer from post-traumatic stress disorder after deployment. She began teaching mantram repetition at the VHA in Southern California and has been disseminating her empirical findings for almost 20 years. One of the first mantram repetition studies found the practice significantly reduced symptoms of stress and anxiety and improved quality of life and spiritual well-being in a randomized

controlled trial (Bormann, et al., 2006). The MRP is free to use with open access online and portable as it can be practiced anywhere, at any time. There are three main principles that compose the MRP: (a) choosing and using a mantram, (b) slowing down the mind, and (c) focusing all attention on the mantram. The practice can be taught to reduce stress and to remain present amidst the routine hassles of a typical day.

Although not specifically used with postpartum women, the three-pillared program has been taught in a variety of ways to meet the needs of varying populations such as: homeless women (Weinrich et al., 2016), couples before labor and delivery (Hunter et al., 2011), nurses (Bormann, 2014; Bormann, et al., 2006; Leary et al., 2018), and family caregivers (Bormann et al., 2009), all using different modalities, suggesting its adaptability over time. Bormann et al.'s study in 2009 showed significant results with a strong effect on improving depressive symptoms. Using a similar virtual design and mantram videos as this pilot study, Kostovich et al. (2021) identified significant improvements in the participants' sense of peace.

Practicing the techniques of the MRP allows the mind to pause, moving into relaxation by disengaging with unwanted thoughts, visions, or emotions captivating one's attention at any moment. It is a tool the mind can utilize to center and focus on one chosen word or phrase to slow down and move into one-pointed attention. Intentionally weaving the mantram repetition into daily activities is a recommended way to start practicing, such as, while making coffee, going for a walk, waiting in line, changing a diaper, or falling asleep. With strong and consistent evidence, this simple, easy-to-learn practice of silently repeating a sacred word or phrase anywhere and anytime offers a potential tool for postpartum women.

As technology continues to rapidly advance and integrate with healthcare, a cyber platform emerged as the ideal stage to deliver postpartum women the resources and care they need. Traditional healthcare models for receiving care and visiting with providers are actively transitioning to online platforms and patient portals. The anticipated benefits of improved health outcomes, increased healthcare communication, reduced costs, and enhanced patient management are some of the motivations for this transition (Portz et al., 2019). This pilot study will follow this trend and provide online education modules designed for optimal patient engagement and self-care. There will be no need for a prescription or provider referral to enroll in the program and women will be able to explore this healing relaxation modality to support their nervous system while not interfering with their daily activities. Combining these activities and resources into an online version of the MRP, the new online mantram repetition program (oMRP) is designed and modified specifically for the wellbeing and support of postpartum women in the transition after delivery.

Research Purpose and Aims

The purpose of this pilot study is to investigate an oMRP for postpartum women using an online portal. The study's aims are:

Aim 1. To explore the accessibility of the online portal.

Question 1. Can the women log on and navigate the portal?

Aim 2. To explore the participants' acceptance of the oMRP.

Question 2. Do the women accept the virtual program?

Aim 3. To explore the participants' satisfaction with the overall interface.

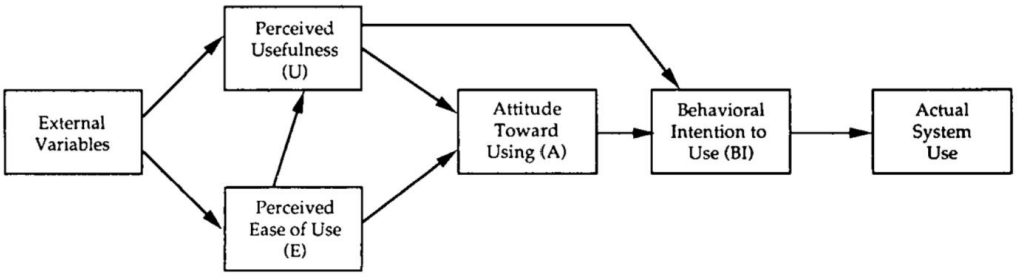
Question 3. Did they enjoy the experience?

Conceptual Model

The conceptual model for this research will outline and explore the data obtained in this study, providing rigor to the research, and facilitating the exploration of the aims of this study. The technology acceptance model (TAM) was chosen as the information systems theory that provides the framework for how users come to accept and use the technology piloted in this study. The theory suggests a person's intent to use technology (acceptance of technology) and usage behavior (actual use) are predicated by the person's perceptions of the specific technology's usefulness (benefit from technology use) and ease of use (Davis et al., 1989). Simply put, users are more likely to adopt new technology with a high-quality user experience design (i.e., usable, useful, desirable, and credible), as depicted in Figure 1. The TAM reveals that perceptions of usefulness and ease of use are facilitated by external variables including individual differences, system characteristics, social influences, and changing conditions (Davis et al., 1989). Some of these external variables were captured using a sociodemographic survey of the participants.

Figure 1

Technology Acceptance Model



Note. Adapted from "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," by F. D. Davis, R. P. Bagozzi, & P. R. Warshaw, 1989, *Management Science, 35*(8), pp. 982-1003. https://doi.org/10.1287/mnsc.35.8.982

In a systematic review, Rahimi et al. (2018) examined several robust measures developed over the past 30 years and detailed evidence of various technologies and their fit with user tasks. The authors report the best-known of these is the TAM. Rahimi et al. (2018) also noted the TAM is one of the most popular research models to explore individual users' acceptance of information systems and technology. Their review identified three main information and communication technology (ICT) application areas for the TAM in health services: telemedicine, electronic health records (EHR), and mobile applications, all of which are relevant to this study. The TAM framework has been applied in numerous studies testing user acceptance of information technology and will provide this study's technical acceptance structure.

Theoretical Framework

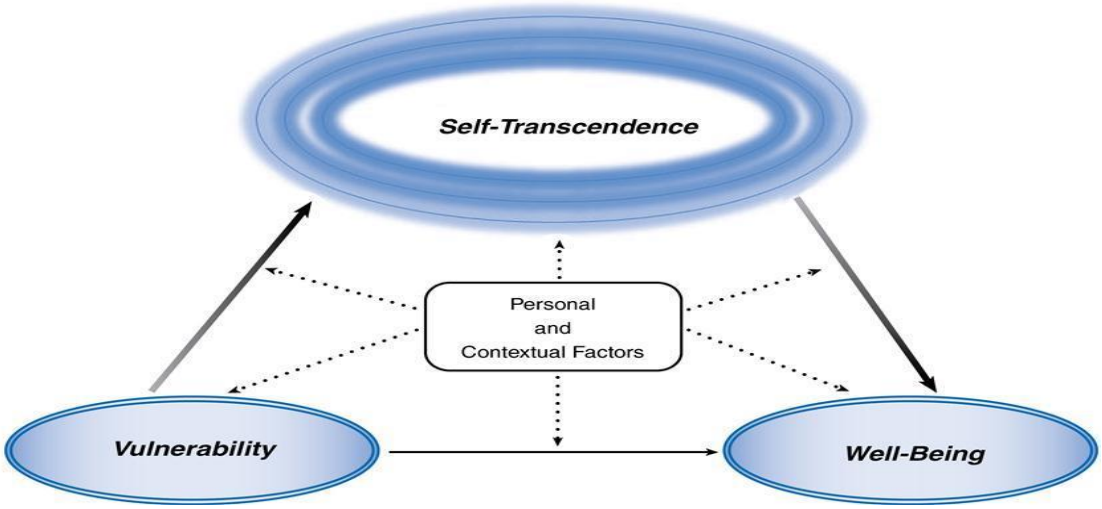
The self-transcendence theory by Pamela Reed (1991, 2013) underpins the motivations for this work and provides the needed theoretical framework to bring cohesion among all of the parts of this study. Self-transcendence is described in a rigorous concept analysis as a quality ingrained deep within every human being and can

be the spark that ignites personal transformation providing a sense of well-being and improved quality of life (Teixeira, 2008). This theory was conceived to be a framework for inquiry and practice relating to the promotion of well-being during difficult life circumstances (Reed, 2013). The transition into motherhood is a pivotal life event. Becoming a mother involves the surrender of a familiar current reality to make room to welcome a new and unknown reality (Mercer, 2004). The process of self-transcendence speaks to one's own capacity to move through this event, to expand and evolve into a newfound sense of well-being and inner peace while integrating the new reality.

Reed (2013) explained her midrange theory in three central interconnected concepts of self-transcendence, vulnerability, and well-being facilitated by personal and contextual factors. Figure 2 depicts the four relationships that exist among the concepts in the theory. There is a relationship between the experience of vulnerability and self-transcendence that is somewhat elusive and requires qualitative description rather than quantitative measurement. The second, more direct relationship is between self-transcendence and well-being, and is positive in nature. Reed has found the third relationship as one where self-transcendence tends to be the mediator between vulnerability and well-being. Lastly, personal and contextual factors also have an important role in the healing process and can include age, gender, health status, and family support, which may influence the process of self-transcendence as it relates to well-being. These factors can enhance or diminish the strength of the key variables and their relationships in this model (Reed, 2013).

Figure 2

Reed's Self Transcendence Theory



Note. Adapted from "Theory of Self-Transcendence," by P. G. Reed, in M. J. Smith & P. R. Liehr (Eds.), 2013, *Middle Range Theory for Nursing*, pp. 109-140. Springer.

Vulnerability is created by changes in physical, emotional, or spiritual health affecting one's sense of well-being and one's ability to expand personal boundaries, both intra- and interpersonally (Reed, 2013). The birth of a newborn baby marks a complex health-related event for a woman. Their identity is in flux causing her capacity to take on motherhood to be in question along with the success of this new role. Motherhood is a deeply vulnerable time in a woman's life, making the awareness of her fragility, mortality, or identity more intense (Mercer, 2004). That awareness is what can trigger human vulnerability leading down the path of self-transcendence if so desired.

Reed's self-transcendence theory also has informed practices that promote well-being. Some intrapersonal strategies have been studied to help the person expand inward and make room to integrate loss in all its diverse experiences. Meditation, prayer, visualization, life review, structured reminiscence, self-reflection, and journaling are the

techniques of self-transcendence that nurses can guide and facilitate (Acton & Wright, 2000; McGee, 2000; Stinson & Kirk, 2006). Nurses, as holistic practitioners, must assess a person's total wellness. Familiarity with the concept of self-transcendence can aid in appropriate nurse-patient interactions as well as interventions. Self-transcendence is a dynamic process that broadens a person's life perspectives and can help a person adapt to life circumstances, overcome uncertainty, find relief from suffering, and enhance well-being (Coward & Reed, 1996). Acclimating to a new reality, a new baby, and a new dynamic, the theory of self-transcendence can be the underlying structure for the women that participate in this study.

In conclusion, the proposal of this work targeted an urgent need for a vulnerable population with an evidence-based alternative solution. Mantram repetition can offer a way, like a stepping stone, for the women enrolled in this study, to transcend through the delicate time of the postpartum period. This study is lifted up and strengthened by a body of research examined and explained in the next chapter.

CHAPTER 2

Review of the Literature

> *Being present to people in crisis is a privilege that humbles me. In the dark of night when they are alone many individuals find they are confronted with their mortality.*
>
> —Joellen Koerner (2003)

No matter how blissful or traumatic the birth experience is for women, becoming a mother and the transition into the postpartum phase involves a steep learning curve. The transition into motherhood is a dynamic process, as Frese and Nguyen (2022) discussed while investigating the theories of Reva Rubin (1967) and her student Ramona Mercer (2004). Rubin and Mercer spent most of their nursing research careers exploring, describing, and publishing on this process of becoming a mother and its transition. Mercer (2004) found establishing a maternal identity contributes to a woman's psychosocial development. This transition, infused with inherent vulnerability, is simultaneously delicate and complex.

There is a national movement in the United States toward greater awareness and efforts to identify women at risk or suffering from psychosocial and mental health issues during pregnancy or in the yearlong postpartum period after delivery (2020Mom Task Force Summary, 2017; American College of Obstetricians and Gynecologists [ACOG], 2018a, 2019; California Assembly Bill 3032, 2018). This review of literature will showcase what is known about the burdens of the postpartum period, how mantram repetition has supported other groups and might be a support to women in this period, and the role of technology as a potentially acceptable medium to deliver this support. A

critical analysis of existing theoretical and empirical work highlights the urgent need for this pilot study to fill a detrimental gap in the care of postpartum women.

Postpartum

An awareness of maternal mental health not only supports the postpartum transition of women but also encourages the overall well-being of the family. Connelly et al. (2013) reported that in a sample of mothers receiving perinatal services, those who screened positive for depressive symptoms also indicated a potential marker for a constellation of health risks. Undiagnosed depressive symptoms can adversely affect the mother-infant relationship and lead to long-term emotional problems for the child (Connelly et al., 2013). Because women are rarely experiencing isolated issues, it is critical to identify co-occurring problems. In a sample of 1,868 economically and racially diverse pregnant women, one in five screened positive for depressive symptoms, and an additional one-third (32.6%) reported one or more psychosocial issues (i.e., depression, intimate partner violence, or a substance use problem; Connelly et al., 2013). This study collected and analyzed data using the Edinburgh Postpartum Depression Screen (EPDS), one of the most widely used instruments to measure depressive symptoms with the postpartum population. The ACOG (2018a) currently recommends all practitioners use the EPDS or one of several other validated screening tools consistently with all women during pregnancy and postpartum, as they acknowledge the potentially harmful effects of varying degrees of mood and anxiety disorders on a family. In addition to screening, the schedule and frequency of care recommendations are being discussed by ACOG to optimize the health of women and infants. In 2018, ACOG updated its opinion and encourage postpartum care to become an ongoing process, rather than a single encounter,

with services and support tailored to each woman's individual needs. It is recommended that all women have contact with their obstetrician–gynecologists or other obstetric care providers within the first 3 weeks postpartum, rather than once at 6 weeks (ACOG, 2018b). Peahl and Howell (2021) also looked at the evolution of obstetric care and found scheduled visits during pregnancy and postpartum have not changed in almost a century (Peahl & Howell, 2021). Offering more resources to postpartum women between visits, using a technological portal to navigate independently, will generate new knowledge and bridge this gap in an antiquated system.

Recently, new legislation passed in California to enforce the recommendation to screen all women using the EPDS upon admission to the hospital and before delivery to obtain a baseline depression score and involve social work practitioners or other resources during their hospital stay, if warranted (California Assembly Bill 3032, 2018). While the screening of women has been appropriately mandated and encouraged, treatment recommendations are left for the family to initiate or look to mental health care providers through a referral. This screening process, however, relies mainly on the discretion of individual healthcare organizations, as well as frontline clinicians. Nurses are well-positioned to provide guidance about maternal mental health, detect the presence of symptoms, and help women obtain mental health evaluation and appropriate treatment right from the bedside (Horowitz & Goodman, 2005).

In a 2018 report by the CDC, the organization highlighted the provider's role in discussing symptoms, screening, and facilitating treatment plans for women across the United States. There was strong encouragement and recommendation to screen for and manage symptoms and to put appropriate treatment in place for the benefit of both the

mother and child (Bauman et al., 2020).

Throughout the transition to motherhood, prenatal and postpartum health information is a powerful resource. Guerra-Reyes et al. (2017) discussed the need for medical providers to disseminate more postpartum mental and sexual health information to patients as the lack of information on these topics were the most common. In a sample of 77 postpartum women with children four years old or younger living in a community in Indiana, a statistically significant gap in the prevalence of health information for mental health was discovered along with the topic of sexuality issues. Although this result is based on a small sample of clients, the inadequate focus on mental health in postpartum care is consistent with broader trends (Guerra-Reyes et al., 2017; Peahl & Howell, 2021; Slomian et al., 2019).

Through numerous quantitative and qualitative studies with women of various cultures with evidence, Beck (2001, 2002, 2006) alerted clinicians that PPD is a mood disorder of global concern. Depression, distress, and a negative sense of well-being are likely to have a profound effect on the postpartum phase (Beck, 2004; Connelly, 2013). There have been many experiments to mitigate this problem; however, women tend not to enroll or adhere to traditional modalities of care during the postpartum period and prefer alternative treatment plans (Dimidjian et al., 2016). Stigma, beliefs that prevent treatment, inconveniences around childcare, and time away from their newborns have found to be barriers for women (Sampson et al., 2017; Smith & Kipnis, 2012).

Kleiman and Wenzel (2017) demonstrated the main approach to treating postpartum women is helping them feel safe and supported and meeting their deepest emotions without judgement. This approach facilitates physical and emotional well-

being. Although it was identified the women needed treatment, Kleiman and Wenzel (2017) faced some challenges when taking this approach, such as the women frequently did not want to attend traditional therapy and desired alternative approaches; they go on to clearly articulate the need to fill a substantial gap in evidence-based care for childbearing women and find solutions for this population. This is where mantram repetition can provide personalized and alternative support for the emotional well-being of these women.

A systematic review by Nguyen (2017) explored a variety of complementary and alternative medicine (CAM) therapies for postpartum women. This review included 27 randomized control trials from over 10 countries and involving over 3,800 women. Sample sizes ranged from 14 to 771 participants. Some of the CAM methods Nguyen discussed included acupuncture, bright light therapy, journaling, and vinyasa yoga. Nguyen pointed out clinicians should carefully consider all kinds of treatment modalities for each woman's individualized plan of care. The studies that used internet or telephone approaches all showed efficacy in their interventions, highlighting these modes of delivery for education and counseling can be valid solutions to increasing access to health care (Nguyen, 2017). This systematic review showcased the need for further research and credible evidence to provide empirically sound alternative options for postpartum women. Nguyen acknowledged more studies are needed, especially in alternative treatments, to establish standard therapy for postpartum women and offer an evidence-based alternative for those averse to routine cognitive behavioral therapy or psychopharmacology.

While many studies on alternative therapies for postpartum women have used well-designed rigorous scientific methods and often yielded statistically significant results, the main limitation is their overall credibility in the implementation across the general population. Most limitations revolve around a new mother's challenges to attend or commit to different therapies or programs due to time constraints and the need to organize childcare (Dennis et al., 2019). Moreover, some women may have limited access to treatment due to a lack of transportation, geographical distance, or the unavailability of a trained provider in their area (Dennis et al., 2019). A universal approach may never be the solution for the complexity the postpartum phase presents; however, evidence suggests mantram repetition does positively benefit mental and psychosocial health and wellbeing in various groups, those with chronic illnesses, and healthy individuals (Hulett, et al. 2023).

Mantram Repetition

As a mental health nurse, Dr. Bormann was first introduced to mantram repetition in 1988 when she was given a book to read, written by Sri Eknath Easwaran. In the book, *Strength in the Storm*, Eknath Easwaran (2013) provided context for what Dr. Bormann would later study as the MRP using it as an intervention. Learning to stabilize the mind amidst stressful circumstances is an innate and attainable skill set described in Easwaran's books and later in the program. As a great spiritual teacher, Easwaran outlined an eight-point program to master finding peace and calm in the mind, using the mantram as a tool to begin accessing one's internal emotional resources. Oman et al. (2008) summarizes the eight steps:

1. Passage Meditation: Silent repetition of memorized inspirational passages from

the world's great religions, such as the 23rd Psalm, the Prayer of Saint Francis, or the Discourse on Good Will of the Buddha's Sutta Nipata. Practiced seated, with eyes closed for a half-hour each morning.

2. Repetition of a Holy Word or Mantram: Silent repetition at times other than meditation of a single chosen Holy Name, hallowed phrase, or mantram from a major religious tradition.
3. Slowing Down: Setting priorities and reducing the stress and friction caused by hurry.
4. Focused/One-pointed Attention: Giving full concentration to the matter at hand.
5. Training the Senses: Overcoming conditioned habits and learning to enjoy what is beneficial.
6. Putting Others First: Gaining freedom from selfishness and separateness and finding joy in helping others.
7. Spiritual Association: Spending time regularly with others following the eight-point program or mutual inspiration and support.
8. Inspirational Reading: Drawing inspiration from writings by and about great spiritual figures and from religious scriptures. (Oman et al., 2008)

Easwaran (2009, 2013) believed all individuals have a unique contribution to give to the world, regardless of occupation, career path, or lifestyle. Incorporating these practices fortifies individuals' ability to bring thoughts under control and enabling them to make the fullest contribution to life. The development and application of a meditative program from these steps that is consistent with one's culture can be valuable to control and overcome stress and build resilience and hope (Oman et al., 2008).

A pilot study conducted by Bormann et al. (2005) examined at the efficacy of frequent repetitions of a chosen mantram—building upon and teaching only Steps 2, 3, and 4 of Easwaran's teachings known as MRP—on the stress, quality of life, and spiritual well-being of a convenience sample of outpatient veterans from the U.S. Department of Veteran Affairs (VA) in southern California. Of the 101 participants who consented to join the five 90-minute in-person classes delivered over 4 weeks, only 62 completed both pre- and post-tests, and 50 participants had perfect attendance. This intervention differs from other forms of meditation or mindfulness practices in that the methodology of Bormann and colleagues' (2014) permitted the chosen mantram to be repeated throughout the day or night, even while engaging in other activities, making it more portable and convenient than other modalities. The first hypothesis of the one-group pretest-posttest pilot was the persons completing the mantram course would demonstrate a significant decrease in perceived stress, state and trait anxiety, state and trait anger, and posttraumatic stress (PTSD) symptoms scores. The second hypothesis was the participants would demonstrate a significant increase ($p < .05$) in quality-of-life enjoyment and satisfaction and spiritual well-being scores from pre- to post-intervention. Repeated measures ANOVA tests were performed and there were four large effects ranging from .19 to .39, and the second hypothesis was supported with all effects identified by partial eta squared values as large as a .23 to .42 range. These findings provide promising preliminary support of the feasibility and acceptability of frequent silent mantram repetition as a holistic mind, body, and spirit coping skill.

Hunter et al. (2009) conducted a study assessing satisfaction and use of the MRP for expecting couples with childbirth-related fears. Their mixed methods experimental

design included a control group of ten participants and an intervention group of 20 participants drawn from a sample of expectant mothers and partners. The control group only attended the Red Cross childbirth classes and the intervention group attended three weekly in-person 2-hour mantram sessions in addition to the Red Cross childbirth classes. Baseline data was collected at 6 weeks post-delivery and semi-structured interviews were conducted at 6 months to evaluate overall experience and satisfaction of the intervention. There was a high attrition rate with reports of scheduling conflicts, feeling overwhelmed, or being too busy at the end of pregnancy to attend. Out of the 20 participants in the intervention group, only eight completed the intervention and at 6 weeks post-delivery, two reported medium satisfaction and six reported high satisfaction. Mantram repetition helped with some labor pains and uncertainty around childbirth. The participants made some recommendations on the delivery of the intervention and Hunter et al. (2009) incorporated that information in the limitations discussed at the end of the article. The authors noted future approaches should allow ample time to recruit participants and to teach and practice the mantram.

Bormann et al. (2017) conducted a study on an online MRP and the spiritual well-being and mindfulness of 54 healthcare workers for the VA in southern California. The participants enrolled in six 50-minute online seminar sessions delivered over 3 months. Internet surveys were given pre-, post-delivery, and 3 months following the intervention to see if increased spiritual well-being was a protective factor in reducing psychological distress. Out of the 54 participants, 39 had complete data. Even with moderate levels of mindfulness at baseline, Pearson R correlation tests between mindfulness and spiritual well-being variables still indicated statistically significant improvements ($p < .001$). This

study indicated an internet delivered MRP with a small sample size still had enough statistical power to establish a change in these variables and successfully improve these healthcare workers' overall quality of life. However, some limitations of this study were the lack of a control group and the randomization of participants, potentially impacting the validity. In addition, having a single instructor or expert conducting each MRP session might affect the success of other studies with different instructors.

Another online MRP study conducted more recently by Kostovich et al. (2021) used a pre- and post-test with a group of registered nurses (RN) caring for veterans in an acute care setting. The RNs were asked to complete four asynchronous computer learning modules on their own time over 2 months, with instruction to practice new MRP techniques between sessions. The RNs were also offered two live, synchronous virtual feedback sessions with an MRP expert. Of the 35 enrolled RNs, only 15 (41%) participated in the study. Of the 15, nearly all completed all four modules. However, the live sessions were the most difficult for the nurses, with only 66% of the cohort attending both sessions. The study's objectives were to examine the efficacy of an internet based MRP and the impact of the MRP on the care the nurses provided. The participating RNs reported the asynchronous format was helpful but also problematic due to the need to log onto the VA computer to access them. There were increases pre-and post-intervention on all three subscales of the Functional Assessment of Chronic Illness Therapy - Spiritual Well-Being (FACIT-SP), but only the peace subscale was statistically significant, increasing from 11.87 (SD = 2.44) to 13.14 (SD = 2.14; p = .03). Nurse satisfaction was assessed using the Client Satisfaction Survey (CSQ-8). The CSQ-8 is a unidimensional 8-item measure of client satisfaction with services using a four-point Likert-type scale

typically utilized in MRP studies. This study was an encouraging empirical development as Kostovich et al. (2021) saw significant improvements in a small sample using a technology based design. Poor attendance for synchronous sessions, difficulty accessing online modules from home, and the need to recruit a larger sample, are some limitations to this study and essential considerations for further research.

Despite differences in sample populations, settings, designs, delivery methods, and reported measures, the commonalities across the studies reviewed found evidence that silent mantram repetition is acceptable to diverse adult populations and offers positive mental and psychosocial health benefits. Nurses are the critical link in quality patient care and have also played an essential role in the education and delivery of the MRP over the years (Hulett et al., 2023; Smith & Kipnis, 2012).

Technology

Understanding the acceptance and integration of technology into clinical care is an important consideration in evaluating interventions. An article published by Rahimi et al. (2018) discussed research on the use of technology acceptance model (TAM) in health information systems development and implementation regarding application areas and model extensions after its initial introduction. An electronic literature search supplemented by citation searches yielded 492 references. Upon eliminating duplicates and applying inclusion and exclusion criteria, 134 articles were retained. These articles were appraised and divided into three categories according to the research topic: studies using the original TAM, studies using an extended TAM, and acceptance model comparisons including the TAM (Rahimi et al., 2018). The review identified three primary ICT application areas for the TAM in health services: telemedicine, EHRs, and

mobile applications. Most of the reviewed articles reported extensions of the original TAM, suggesting no optimal TAM version for use in health services has been established. Although the results of the review indicated continuous progress, there are still areas that can be expanded and improved to increase the predictive performance of the TAM (Rahimi et al., 2018).

Using the TAM as a framework will provide the structure to later evaluate, present, and disseminate findings regarding the acceptance of the technology piloted in this study. In conjunction with the TAM, the CSQ-8 captured data on acceptance in a different light. The items for the CSQ-8 were selected and empirically constructed based on ratings by mental health professionals (Larsen et al., 1979). Together the two instruments provided a well-rounded view of the data collected during the online mantram repetition program (oMRP).

In a recent study, Portz et al. (2019) made a strong case for why online patient health portals, with an interactive interface for the user to look at information based on their questions, are becoming more integrated into the healthcare system at large. As Portz et al. (2019) discussed, accessing personal health information, using telehealth communication features, and interfacing with healthcare providers through secure websites is rising and growing in the patient market. Portz et al. (2019) used the TAM to look at an older population's use and acceptance of a Colorado-based Kaiser Permanente electronic health portal. They designed a qualitative approach to better understand better how the participants used the portal and why they did or did not use it as they described. Exploring how the portal was valuable and usable was also a study objective, as was learning how the opinions expressed influenced the participants' intent to use the portal.

Portz et al. (2019) recruited and maintained 24 participants, primarily White women, averaging 78 years old. They were divided into six focus groups for 90-minute semi-structured discussions to capture their opinions and experience. Demographic and technology utilization surveys were also collected, and qualitative data were transcribed verbatim and analyzed using the framework of TAM. The analysis team used codes to analyze the transcribed meetings and developed themes that emerged from the data. Portz et al. (2019) found perceived ease of use was impacted by participants' levels of computer anxiety and computer self-efficacy, and participants described the benefits and drawbacks regarding perceived usefulness of the portal. In this study everyone did not prefer patient portals; for example, nonusers preferred face-to-face contact. Portz et al. (2019) suggest promoting perceived benefits such as improving communication, saving time, and increasing access to personal information may improve intent to use electronic patient portals.

Another qualitative project used structured interviews with nine parents to examine perceptions of the EHR and an associated patient portal in treating their child's autism spectrum disorder (Bush et al., 2016). The research team analyzed the data that emerged from the parent interviews and identified six complementary themes: familiarity and exposure to the EHR, changing experience of care, portal use, patient/EHR/portal interaction, interoperability, and mother as care coordinator (Bush et al., 2016). In general, parents' perceptions of the EHR were positive, but the patient portal was not fully accepted as a modality to improve or support personal health engagement. Bush et al. (2016) concluded the article by discussing the need for further research and functionality to increase portal registration and integration in patient care.

Another study conducted by Wieland et al. (2017) surveyed 100 postpartum participants, 95% of whom reported routine internet use, and 56% reported using the internet to search for health information. Most participants had never heard of a patient portal, yet 92% believed that the portal functions were essential. Many features of a web-based patient portal could potentially help future pregnant women manage their interactions with the healthcare system; however, it is unclear whether pregnant women with limited resources have the skills or interest required for portal adoption. In Wieland et al.'s (2017) study of postpartum patients in a safety net hospital, they aimed to identify if patients have the technical resources and skills to access a portal, gain insight into their interest in health information, and the perceived utility of portal features and potential barriers to adoption. The research team designed a structured questionnaire to collect demographic information from postpartum patients and measure their use of technology and the internet, self-reported literacy, interest in health information, awareness of portal functions, and perceived barriers to use. The questionnaire was administered in person to women in an inpatient setting. At the conclusion of this article, Wieland et al. (2017) encouraged healthcare systems and portal developers to consider ways of tailoring a portal to address the specific health needs of a maternity population, including those in safety net settings. Pregnancy marks the start of an acute episode of care in which active engagement with the healthcare system can influence outcomes (Wieland et al., 2017).

The evolution of virtual healthcare is happening worldwide, revolutionizing the quality, collection, and management of clinical data in health systems, particularly in low- and middle-income countries (Usmanova et al., 2020). In India, a collaborative study between Johns Hopkins University in Maryland researchers and an affiliate campus

in New Delhi, India, conducted a content analysis of qualitative in-depth interviews using the Technology Acceptance Model 3 (TAM-3). The study was designed to explore the perspectives of providers and health managers in Madhya Pradesh and Rajasthan, India using the Alliance for Saving Mothers and Newborns (ASMAN) platform, a package of mobile health technologies to support management during the peripartum period (Usmanova et al., 2020). The authors stated the ASMAN program has aimed to reduce early maternal and newborn mortality by building the capacity of providers and introducing technology to improve quality of care in the peripartum period. From each of the four pilot study facilities comprising this initiative from June 2017 through May 2020, one medical officer, one labor room supervisor, and two staff nurses were recruited to participate in the study for a total of 48 in-depth interviews, guided by the recommendation that approximately 12 in-depth interviews per facility would be required to reach data saturation. The respondents uniformly found ASMAN easy to use and felt it improved quality of care, reduced referral rates, ensured timely referral when needed, and aided reporting requirements (Usmanova et al., 2020). The TAM-3 version captured many determinants of reported respondent use behavior, including shifting workflow and job performance. However, some barriers of the ASMAN digital platform were reported (Usmanova et al. 2020). The fluctuations in acceptability and use affected the long-term impact, sustainability, and scalability of ASMAN and similar mobile health interventions.

A systematic review and meta-analysis by Singla et al. (2021) examined the relevant implementation process and effectiveness of counseling interventions delivered by non-specialist providers for perinatal depression and anxiety in high-income countries, including Australia, United Kingdom, and the United States. Singla et al. (2021) found

high heterogeneity among the 46 trials (18,321 participants) in the systematic review and the meta-analysis of 44 trials (18,101 participants). The majority of interventions were implemented and conducted by nurses and midwives, with delivery methods varying across in-person, telephone, and online modalities. Compared with the control groups, interventions delivered by non-specialists (i.e., lay counselors, nurses, midwives, and teachers with no formal training in counseling) were associated with lower depressive and anxiety symptoms for both preventive and treatment interventions. Compared with controls, counseling interventions were associated with lower depressive symptoms (*SMD* = 0.24, *95% CI* 0.14 to 0.34, 43 trials, $I^2 = 81\%$). At the conclusion of the article, Singla et al. (2021) recommended additional studies to assess digital interventions and ensure the reporting of implementation processes to inform the optimal delivery and scale-up of these services, paving the way for this proposal.

In conclusion, the review of the literature in the areas of postpartum, mantram repetition, and technology show this proposed study is innovative and will creatively meets a need in the care of postpartum women to build a foundation for further research. Over 20 years of research shows 13% of childbearing women are likely to report depressive symptoms after delivery despite the advances in healthcare and technology (Bauman et al., 2020; Beck, 2001; O'Hara & Swain, 1996). Mantram repetition in the form of a three-part program has been empirically studied with rigor and has emerged as a credible tool. Patient portals and electronic health care delivery systems are on the rise and becoming more prevalent in society. These overlapping truths prompted the development of this pilot study for postpartum women to learn and engage at their own pace and participate in the program to support a vulnerable transition in their lives.

CHAPTER 3

Methods

> *Full concentration brings relaxation and joy. The mantram is that which enables us to cross the sea of the mind. The sea is a perfect symbol for the mind. It is in constant motion; there is calm one day and storm the next.*
>
> —Eknath Easwaran, The Mantram Handbook (2009)

This pilot study explored online portal accessibility, online mantram repetition program (oMRP) acceptance, and overall interface satisfaction among a sample of seven women. The oMRP was supported by the review of the literature to be a patient-centered modality for overall maternal wellbeing and postpartum mental health that was applied to the novel population of postpartum women in this study. The detailed components and protocol of this pilot study are illustrated in this chapter.

Research Design

Study Setting

The study took place online with women recruited from a community birth center in southern California that averages 13-14 births per month. The center specializes in midwifery services including: waterbirth, natural birth, family-centered birth, contraception, and gynecologic services. The care at the birth center is provided by licensed, board-certified nurse-midwives to give women high quality choices, satisfying experiences, and healthy outcomes of their natural, physiologic births. The birth center is nationally accredited, holds California licensure, and is contracted with entities such as Medi-Cal, Tricare, and many private insurance companies, resulting in a heterogenous patient population mix.

Study Sample

The goal was to recruit approximately 10 women who were currently receiving care from the birth center who had given birth to a healthy newborn in the past 3 months. The participants needed to speak and read English, as the study's video modules were only available in English at the time. A participant needed to be at least 18 years of age with internet access. If they were transferred out of the birth center to a hospital for delivery, but were still seen for postpartum care at the birth center, they met the criteria to participate in the study.

Telehealth Portal

The online study was hosted by a Health Insurance Portability and Accountability Act (HIPAA) compliant telehealth portal called *Healthie*. The *Healthie* portal facilitated the study protocol and could be accessed via computer or mobile app. During study analysis, confidentiality of the participants and their information was not only be ensured through the structures of the HIPAA compliant internet portal, but also with deidentification of data extracted from the portal using unique participant numbers.

Recruitment

All midwives, labor assistants, and office staff were guided through a detailed presentation by the principal investigator at their monthly staff meeting in September of 2022. The presentation explained the study purpose and aims, an overview of the study protocol, and the role of the birth center in recruitment efforts. At the launch of the study, a framed flyer (Appendix A), approved by the principal investigator's academic institutional review board (IRB), was given to be displayed at the front desk and waiting area to attract women to the study as well as explain the inclusion criteria and benefits of

participation. Small IRB approved brochure cards (Appendix B) were also given to the staff to be distributed during postpartum visits, lactation support groups each Thursday, and were made available at the front desk and waiting area.

Postpartum visits were typically scheduled for women receiving care at the birth center between the first and second day after delivery, again if the new mother needed to be seen at the 2-week mark after delivery, and again for their 6-week check-up appointment. All midwives and staff were instructed to mention the study during one or all of these routinely scheduled visits (most notably at the 6-week follow-up). Staff in charge of coordinating lactation support groups on Thursdays were also encouraged to recruit participants as well as the staff responsible for checking women in and out of the center. The brochure had a QR code for the women to scan, which linked the user directly to the *Healthie* portal using their smartphone. The primary investigator communicated with the leadership team at the birth center, by email and drop in visits, throughout the study period to support recruitment efforts.

Study Protocol

Within the facilitator's portal view, once a woman had successfully scanned the QR code and created an account on *Healthie*, she was added to the Mantram for Mamas Program client list. An automated email was sent to the principal investigator when a client had successfully signed in and when the new participant had completed all of the intake flow designed for this program.

Intake Flow

The intake flow on the *Healthie* portal consisted of four features with an estimated time investment of about 10 minutes to complete. First, a welcome note

appeared after the first log-on and stated: “Welcome! You are now enrolled in the Mantram for Mamas Program! Before we get started, please complete the following documents explaining this research study and help us get to know you better. The intake process should only take about 10 minutes! Thank you for joining! Feel free to reach out with any questions!” Next, the participant was prompted to read and sign an informed consent (Appendix C) approved by the IRB. Once the participant agreed and met the criteria, the third step was for the participant to review and sign the HIPAA agreement (Appendix D); this was a pre-written template from the *Healthie* website required for all clients using the site. The last step was to capture the participant’s sociodemographic data through a survey on the *Healthie* portal and that remains in the client file. Table 1 lists the items of the sociodemographic survey designed by the principal investigator.

Table 1

Sociodemographic Survey Items

Question	**Format**
Age	Free text numeric field
Ethnicity	Please select one: • Hispanic or Latino or Spanish Origin • Not Hispanic or Latino or Spanish Origin
Race	Please select all that apply: • American Indian or Alaska Native • Asian / Pacific Islander • Black or African American • Hispanic or Latino or Spanish Origin • White • Prefer not to answer • Other – open free text

Question	Format
Educational background	Please select one: • Less than high school • High school/GED • Some college • Bachelor's degree • Master's degree or PhD
Current working experience	Please select one: • Full-time (30 or more hours/week) • Part-time (29 or fewer hours/week) • Currently not working • Student • Retired • Self-employed
Annual net household income	Please select one: • Less than $25,000 • $25,000 to $50,000 • $50,000 to $100,000 • $100,000 to $150,000 • More than $150,000
Marital Status	Please select one: • Single • In a relationship • Domestic partner • Married • Divorced • Widowed
Number of pregnancies	Free text numeric field
Current number of children	Free text numeric field
Average physical activity per week during pregnancy	Please select one: • None • one time • two times • three times • four times • More than four times

Question	Format
Average screen time per day (use of email, internet, social media, etc.)	Please select one: • Less than 1 hour • 1 to 2 hours • 2 to 3 hours • 3 to 4 hours • more than 4 hours
Type of device you will use to access *Healthie*.	Please select all that apply: • Cell phone • Smartphone • Tablet • Computer
About how much sleep do you get a day now that you have a newborn (in hours)?	Open numeric field
Importance of spiritual/religious beliefs	Please select one: • 0 Not at all important • 1 Not very important • 2 Somewhat important • 3 Very important
History of using spiritual or well-being practices	Please select one: • Yes • No
If yes, what are they?	Open text field

Once the intake flow was completed, the participant was enrolled and prompted to begin the program on the client dashboard. A secure chat message was sent to the participant at this time to orient the participant to the program tab on their dashboard.

Mantram for Mamas Program

There were four learning modules in this program. Each module included an embedded *YouTube* video, mantram module questions, and a supplemental handout (Appendix E) as a resource. It was estimated that participants would spend 10-15 minutes engaging in each module for a total commitment of 40-60 minutes over 10 days. The videos were structured in the program to be watched in subsequent order; future videos

were locked and spaced apart by 3 days. The four videos chosen for this study were the product of a collaboration between Dr. Jill Bormann and *PsychArmor,* a nonprofit organization. PsychArmor specializes in creating and disseminating free educational videos, courses, and materials on mental health, caregiving, financial wellness, service member transition, and more. PsychArmor reached out to Dr. Bormann to refine and condense the MRP into four free educational videos to spread the practice of mantram repetition and help people. These videos were currently free and available on YouTube and the PsychArmor website (PsychArmor, 2020a, 2020b, 2020c, 2020d). The open-ended questions at the end of each video were written for this pilot study. In Table 2 the details of each video are outlined as well as the questions they will answer.

Table 2

Mantram for Mamas Program

MRP Module Outline	Description and Objectives
Module 1: Available day one, after intake flow. Video: How to choose and use a mantram. Duration: 14 minutes, 22 seconds. https://www.youtube.com/watch?v=4MezFg-T3TI Questions (open text field): 1. Could you complete this module in one sitting? 2. Was the information easy to understand? 3. Is the information interesting to you? 4. How is it going so far?	**Module 1:** In the first module, the video narrated by Dr. Jill Bormann will review the four condensed sessions of the MRP that will teach a set of portable and spiritually based skills for managing negative thoughts and feelings. The video will discuss how using a mantram can help one manage life's daily hassles and live in the present moment. One of the main objectives of this first video is to learn these meditation-based tools for emotional regulation that are easy to implement in a busy routine and can be exercised frequently. A first step for this self-care practice is dispelling doubt about using a mantram.
Module 2: Available day four, after Module 1 completed. Video: Mantram repetition and slowing down. Duration: 10 minutes, 40 seconds. https://www.youtube.com/watch?v=26zNrurlArI Questions (open text field): 1. Could you complete this module in one sitting? 2. Was the information easy to understand? 3. Is the information interesting to you? 4. How many times today have you used your mantram since you last logged on? 5. How is it going so far?	**Module 2:** The second video has three main objectives. The first is to describe the relationships among the stress response, mantram repetition, and relaxation response. The second is to explain ways of using mantra repetition to regulate emotions and train attention while slowing down to stay in the present moment. The third is to identify the benefits of slowing down versus being on automatic pilot for stress reduction and symptom management, including more on how to use this tool.

MRP Module Outline	Description and Objectives
Module 3: Available day seven, after Modules 1 and 2 have been completed. Video: Mantram repetition and one-pointed attention. Duration: 8 minutes, 39 seconds. https://www.youtube.com/watch?v=UqHQ1D1Nzj4 Questions (open text field): 1. Could you complete this module in one sitting? 2. Was the information easy to understand? 3. Is the information interesting to you? 4. How many times today have you used your mantram since you last logged on? 5. How is it going so far?	**Module 3:** In the third video, Dr. Jill Bormann identifies ways to use a mantram to improve concentration and do one thing at a time. She demonstrates one-pointed attention and slowing down and how these concepts complement one's ability to make healthy choices. She also describes the benefits of one-pointed attention for multitasking to alleviate stress and reduce caregiver burden.
Module 4: Available day ten, after all modules have been completed. Video: Mantram repetition—Putting it all together. Duration: 8 minutes, 15 seconds. https://www.youtube.com/watch?v=G06e2r7cmFk Questions (open text field): 1. Could you complete this module in one sitting? 2. Was the information easy to understand? 3. Is the information interesting to you? 4. How many times today have you used your mantram since you last logged on?	**Module 4:** Finally, the fourth video ties everything together and reviews the concepts from the previous three sessions. The objectives for the last video are to discuss how slowing down, and one-pointed attention complement each other when used in tandem with mantram repetition, as well as describe ways to keep practicing and using the mantram to improve self-care and caregiving moving forward.

The final survey was the last activity the participants completed and included parts of the TAM instrument, the Client Satisfaction Questionnaire (CSQ-8), and open-ended questions written for this study (see Table 3). The TAM information technology framework is used to understand users' adoption and use of emerging technologies (Davis et al., 1989). The first 12 items from the TAM instrument address the participant's perceived usefulness and ease of use of the piloted technology. The TAM model implies that if a technological application is expected to be easy to use, the more likely it is that it will be considered helpful for the user, stimulating the acceptance of the technology. From a practical point of view, TAM is helpful to estimate the potential demand for new information technology products (Davis, 1989). By understanding the degree to which technology is practical and easy to operate by consumers, practitioners can use TAM to facilitate the acceptance of technology and design consumer-oriented information technology (IT) products. For this study, the six questions asked about perceived usefulness referred to the degree to which the participant believed that using this health portal would enhance her ability to complete the oMRP, according to the logic of Davis (1989). The six questions asked about the perceived ease of use referred to the degree to which the participant believed that using the health portal would be free of effort. Items 13-20 consisted of the CSQ-8 instrument, which has been used in several MRP research studies to explore participant satisfaction. The CSQ-8 has a documented reliability factor, measured by Cronbach's alpha, ranging from α = .83 to α = .94 and a validity factor of 0.8 on average (Larsen et al.,1979; Kostovich et al., 2021). While addressing several elements contributing to service satisfaction, the CSQ-8 has no subscales and yields a single score measuring a single dimension of overall satisfaction (Larsen et al., 1979). An

overall score is calculated by summing the participants' item rating score for each scale item. For the CSQ-8 version, scores range from 8 to 32, with higher values indicating higher satisfaction. Scoring is categorized as low (8 to 20), medium (21 to 26), and high (27 to 32) satisfaction. The final four questions written for this study gathered general feedback from participants at the end of the study experience. The survey had 24 questions and took approximately 10 minutes to complete.

Table 3

Final Survey Questions

Question	Format
TAM Perceived Usefulness:	**Select one:**
1. Using the *Healthie* portal enabled me to accomplish the online Mantram Repetition Program (oMRP) more quickly.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
2. Using the *Healthie* portal improved my performance in the oMRP.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
3. Using the *Healthie* portal increased my productivity in the oMRP.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
4. Using the *Healthie* portal enhanced my effectiveness in the oMRP.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
5. Using the *Healthie* portal made it easier to do the oMRP.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree

Question	Format
6. I have found the *Healthie* portal useful in completing the oMRP.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
TAM Perceived Ease of Use:	**Select One:**
7. Learning to operate the *Healthie* portal has been easy for me.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
8. I would find it easy to log into *Healthie* to do what I needed to do.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
9. My interactions with the health portal were clear and understandable.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
10. I found *Healthie* to be flexible to interact with.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree

Question	Format
11. It would be easy for me to become skillful at navigating the *Healthie* portal.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
12. I find *Healthie* easy to use.	1 Strongly Disagree 2 Disagree 3 Somewhat Disagree 4 Neutral 5 Somewhat Agree 6 Agree 7 Strongly Agree
CSQ-8:	**Select One:**
13. How would you rate the quality of the oMRP?	4 Excellent 3 Good 2 Fair 1 Poor
14. Did you receive the type of help you wanted from the oMRP?	1 No, definitely not 2 No, not really 3 Yes, generally 4 Yes, definitely
15. To what extent has the oMRP met your needs at this time in your life?	4 Almost all of my needs have been met 3 Most of my needs have been met 2 Only a few of my needs have been met 1 None of my needs have been met
16. I would recommend another new mama to take the oMRP.	1 No, definitely not 2 No, not really 3 Yes, generally 4 Yes, definitely
17. How satisfied were you with the amount of help the oMRP provided?	1 Quite dissatisfied 2 Indifferent or mildly dissatisfied 3 Mostly satisfied 4 Very satisfied
18. Has the oMRP helped you deal more effectively with problems that arise in your daily life?	4 Yes, a great deal 3 Yes, somewhat 2 No, it didn't help 1 No, it seemed to make things worse

Question	Format
19. Overall, how satisfied are you with the oMRP?	4 Very satisfied 3 Mostly satisfied 2 Indifferent or mildly dissatisfied 1 Quite dissatisfied
20. Would you take the Mantram for Mamas oMRP again?	1 No, definitely not 2 No, not really 3 Yes, generally 4 Yes, definitely
Open-ended Questions:	
21. Why did you enroll in Mantram for Mamas study?	Free text field
22. How would you improve this oMRP?	Free text field
23. Did you encounter any challenges using the *Healthie* portal?	Free text field
24. What did you enjoy the most about the portal and program?	Free text field

Study Variables

Other data points included tracking recruitment outreach and attrition numbers by using the number of recruitment materials as a denominator and enrollment numbers in the numerator to calculate study uptake. Participant log-in attempts, length of time participants spent in the oMRP, and mantram learning module activity and completion were tracked by running client and program reports in *Healthie.* Participant portal profiles were cataloged within the *Healthie* portal and protected by a unique participant number. All the variables used in this study are listed in Table 4.

Table 4

Study Variables

Variable	Level
Sociodemographic:	
• Age	Continuous
• Ethnicity	Categorical
• Race	Categorical
• Education	Categorical
• Working experience	Categorical
• Household income	Categorical
• Marital status	Categorical
• Number of pregnancies	Continuous
• Number of children	Continuous
• Physical activity	Categorical
• Average screen time	Categorical
• Type of device	Categorical
• Average sleeping hours	Categorical
• Spiritual/religious beliefs	Categorical
• History of using spiritual or well-being practices	Categorical
Module Completion:	
• Number of participants who completed modules	
• Number of modules completed per participant	
Module Questions:	
• Could you complete this module in one sitting?	
• Was the information easy to understand?	
• Is the information interesting to you?	
• How many times today have you used your mantram since you last logged on?	
• How is it going so far?	
Final Questions:	
TAM Perceived Usefulness:	
• Using the *Healthie* portal enabled me to accomplish the online Mantram Repetition Program (oMRP) more quickly	
• Using the *Healthie* portal improved my performance in the oMRP	
• Using the *Healthie* portal increased my productivity in the oMRP	
• Using the *Healthie* portal enhanced my effectiveness in the oMRP	
• Using the *Healthie* portal made it easier to do the oMRP	
• I have found the *Healthie* portal useful in completing the oMRP	

Variable
TAM Perceived Ease of Use: • Learning to operate the *Healthie* portal has been easy for me • I found it easy to log into *Healthie* to do what I needed • My interactions with the health portal were clear and understandable • I found *Healthie* to be flexible to interact with • It would be easy for me to become skillful at navigating the *Healthie* portal • I find *Healthie* easy to use
CSQ-8: • I was satisfied with the quality of the oMRP • I received the type of help I wanted from the oMRP • This oMRP has met my needs at this time in my life • I would recommend another new mama to take the oMRP • I was satisfied with the amount of help the oMRP provided • The oMRP has helped me deal more effectively with problems that arise in my daily life • Overall, how satisfied are you with the oMRP? • Would you take the Mantram for Mamas oMRP again?
Open-ended Questions: • What was the main reason you enrolled in Mantram for Mamas study? • How would you improve this oMRP? • Did you encounter any challenges using the *Healthie* portal? • What did you enjoy the most about the portal and program?
Other Data: • Recruitment outreach and attrition facilitated by the birth center/principal investigator • Participant log-in attempts tracked by *Healthie* reports • Participant portal profiles cataloged in the *Healthie* portal • Mantram Learning Module activity and completion tracked by *Healthie* reports • Length of time the participant spends in the oMRP as tracked by *Healthie* reports

Risks and Benefits

The most significant risks of this study were associated with the confidentiality of data and potential participant burnout or fatigue. The burdens of giving time and energy to complete this educational program and answering questions with a newborn at home were considered. Another concern was to mitigate any possible risk of a compromise in the confidentiality of any personal information or information collected from participant surveys, which would not only have decreased participants' trust in the research process

but would have had regulatory implications. To reduce possible risk, participants in the research study received unique identifiers. Names and identifying information were stored in a secure location separate from research data. Research data only contained unique identifiers, not personal identifying information. The link between names and unique numeric identifiers was available only to members of the research team. All data collected was stored in a secure area of USD per the protocol. It was also clear to participants that they could drop out of the study at any time if they felt overwhelmed. Additional resources for postpartum support was made available to the participants in the consent document that was accessible at any time during the study.

Each participant received a $25 gift card via e-mail as a token of gratitude for signing up to participate in this study. They were also entered into a drawing for the chance to win one special gift of a ritual kit containing a rose quartz crystal, a scented candle, and a goddess oracle deck valued at about $80.

Learning to use and repeat a mantram has been found to help heal illnesses and overcome psychological and emotional difficulties (Hulette et al., 2023). This silent repetition has improved overall well-being and elicited a profound sense of peace (Bormann et al., 2014). The women who participated in this program had the opportunity to improve their ability to cope with the daily hassles of ordinary life; decrease some of their stress, anxiety, and overwhelm. This program facilitated the use of portable skills to increase attention and help relaxation. The program benefits of learning a new mindfulness strategy to meet the needs of these new mothers outweighed the potential risks of breached confidentiality and participant fatigue.

Data Collection Plan

All data collected within the *Healthie* portal remained within the program and associated with the participant profile, which was HIPAA compliant and protected. When the data collected within *Healthie* was taken out of the website, it was with a unique participant identifier and all personal identifiers removed. Only the study team and regulatory entities had access to study records as needed. If records are requested in the future, they will not be released without consent except as required by law. The study results have been and will continue to be presented and published anonymously.

Data Analysis Plan

The Statistical Package for the Social Sciences (SPSS 28) and Microsoft Excel was used for deidentified quantitative data analysis. Descriptive statistics including frequencies and means helped to describe participant characteristics. Inferential statistics were not needed due to the small sample size. Additional anonymous patient profiles were created using qualitative data describing individual experiences and reactions to the use of the program. These profiles were reviewed to examine themes for convergent and divergent experiences.

Protection of Human Subjects

Permission was obtained to conduct the study from the University of San Diego IRB (Appendix F). Data collection did not begin until IRB approval was received. All members of the research team were certified with the proper training to conduct this study and ensure its participants' safety. When eligible participants agreed to proceed, a consent procedure was conducted and included information about the study's purpose, methodology, data collection procedures, and assurance of protection of the subjects'

anonymity and confidentiality. Consent information also included a statement noting participation was entirely voluntary and withdrawal was possible at any time. Potential participants were informed that the data instruments would be deidentified, coded, and then destroyed to protect anonymity and confidentiality. Individual responses were known only to the study investigator for data analysis purposes; identifiable individual responses were not reported in the study. A copy of the form was provided to the participant digitally with an option to download a hard copy for their records.

Ethical Considerations

Participants were aware of all study phases, time requirements, and potential self-incurred technology charges resulting from potential cellular or internet data usage and charges. The informed consent also provided contact information for various resources for extra mental health support in case of emergency or if needed at any point during the study.

Study Limitations

Due to the pilot design of the study, there is only one recruitment site, and while the clientele is somewhat diverse at the birth center, the study is based on the utilization of a convenience sample of participants. Additionally, the projected size of the study sample will limit the statistical power of the results. The principal investigator is not based at the birth center; non-study staff are helping to recruit for the study, which limits the consistent nature and volume of recruitment activity. Lastly, given that mantram repetition has never been studied in this population, we are unsure if these postpartum women will have the time or the inclination to learn mantram and use it, let alone if they will enjoy the practice or find it beneficial, even useful.

CHAPTER 4

Results

Rise sister rise. Rise for you, rise for me. When you rise first, you rise for she.

—Rebecca Campbell (2016)

The online mantram repetition program (oMRP), also known as the Mantram for Mama's program, began on November 1, 2022, after receiving Institutional Review Board (IRB) approval. The study ran for three months until February 1, 2023. The first participant registered for the study in mid-November. Five women signed up in November, one woman in December, and one woman in January (18% response rate). Seven women signed up for the study; five completed the components of the online instructional modules and related questions. Both the qualitative and quantitative data collected throughout this study are presented in this chapter.

After a potential participant became familiar with one of three recruitment modalities at the birth center (sitting in the waiting room with their newborn, in an exam room with their midwife, or at a lactation support group), a QR code on the brochure directed potential participants to the *Healthie* portal login page. Seven participants created an account. The participants ranged in age from 31 to 42. Most were married or in a relationship and all had at least some higher education. More than half of the participants reported that this was their first birth. Most were employed. All seven participants completed the intake flow and received a gift card for enrolling in the study. The key demographics of the participants are summarized in Table 5.

Table 5

Demographics of Participants (N = 7)

Characteristic	***M***	***Range***
Age (years)	34	31-42
	n	***%***
Ethnicity		
Hispanic	2	29
Non-Hispanic	5	71
Race		
White	4	57
Mixed race	1	14
Other	2	29
Education		
Some college	2	29
College graduate	1	14
Post-graduate	4	57
Work		
Employed	5	71
Not employed	2	29
Income		
Less than $25,000	2	29
$25,000 - $50,000	1	14
$50,000 - $100,000	1	14
$100,000 - $150,000	1	14
Greater than $150,000	2	29

Characteristic	***n***	***%***
Marital Status		
Single	2	29
In a relationship	2	29
Married	3	42
Current Number of Children		
One	4	57
Two	2	29
Three	1	14
Importance of Spiritual/Religious Beliefs		
Very important	2	29
Somewhat important	3	42
Not very important	2	29

Note. M = mean.

In response to the questions asked after watching each mantram educational video, the five participants who completed the modules responded affirmatively that they could complete the modules in one sitting; the information was easy to understand, and the information in the four modules was interesting to them. Specific participant activity on the *Healthie* portal, including login frequency, days enrolled in the program, and participant pattern of learning module access is presented in Table 6.

Table 6

Healthie Portal Activity (N = 7)

Characteristic	***M***	***SD***
Days enrolled in the program (*n* = 5)	19.4	13-32
	n	***%***
Number of times participants logged on to *Healthie*		
2	3	43
3	1	14
4	2	29
6	1	14
Mantram Program		
Completed	5	71
Not attempted	2	29
Module 1 completed in one sitting (*n* = 5)	2	40
Module 2 completed in one sitting (*n* = 5)	4	80
Module 3 completed in one sitting (*n* = 5)	4	80
Module 4 completed in one sitting (*n* = 5)	4	80

Note. M = mean.

An additional open-ended question asked the participants to explain in their own words how the program was going so far. Responses ranged from concise, “good”, “great”, “fine”, or “going well”, to more explanatory such as, “I recognize I need to work on slowing down”, or “I'm beyond stressed I need to slow down and write my mantram down around my house.” Other responses indicated participants’ efforts to incorporate the practice into their daily activities with comments such as, “Still working on making it a habit”, “It's a process to retrain my brain”, or “I am enjoying it and attempting (*sic*) to

put things in practice.” Some women openly admitted they forgot to use their mantram, saying, “I forget it but I am getting better” or “I keep forgetting.” One participant used the open-ended question after module 3 to share: “I used my mantram yesterday when I started having intrusive ruminating thoughts about my birth experience after hearing about a friends (*sic*) easy labor. It helped settle my thoughts and saved me from spiraling down a self-pity rabbit hole! (*sic*)” The final question asked how often the participant had used their mantram since the last time they logged on. The results of this question are displayed in Table 7. By the end of module 4, 80% of the participants reported using their mantram at least once a day.

Table 7

Frequency of Self-Reported Mantram Practice (N = 5)

Characteristic	***n***
How many times have you used your mantram since you last logged on?	5
Module 2	
None	0
Infrequently	2
Daily	2
Multiple times per day	1
Module 3	
None	0
Infrequently	3
Daily	1
Multiple times per day	1

Characteristic	***n***
Module 4	
None	1
Infrequently	0
Daily	2
Multiple times per day	2

The summaries outlined below of each participant's study experience are based on their responses to the demographic survey and the open-ended questions at the end of each module and the final survey.

Participant 1 was a mother of three in her early 40s, of mixed race and single when she began the study in mid-November 2022. She reported having some college education, was not currently working outside the home, slept three hours a day, and religious/spiritual practices were essential to her. Additionally, she reported exercising two times a week and engaging in approximately one hour of daily screen time. After completing the intake flow, she did not log into the portal again. There was no response to two secure messages from the principal investigator or two auto-generated reminder emails sent through the portal.

Participant 2 responded to a recruitment flyer received at a lactation support group gathering in mid-November 2022. She was a first-time mom in her mid-thirties. She was married and on maternity leave from a full-time job. She reported exercising about four times a week and engaged in three to four hours of screen time a day. She estimated getting approximately seven hours of sleep and selected cell phone as the device she would use to participate in the study. She categorized spiritual

beliefs/practices as not very important to her, but she had practiced in the past by going to church until she was 18 years old and was now meditating here and there. A *Healthie* generated report shows Participant 2 logged on four times to the portal throughout the study and sent six messages to the primary investigator. She completed all four modules and the final survey. When asked in an open-ended question in the last survey why she decided to participate in the study, she wrote, "I had a traumatic birth experience that left me with some PTSD and anxiety symptoms (*sic*). The baby blues + chronic exhaustion were not kind! I wanted something that would help me get through times of intrusive negative thoughts about my birth experience. (*sic*)" When answering questions about the *Healthie* portal, she said it had some bugs that interrupted the program. When asked if she would change or improve anything about the program, she said, "YES - modules would not load and also this final survey wouldn't work on phone (not really working on web either (*sic*)." She responded, "I liked the online course!" when asked what she enjoyed most about the portal and program.

Participant 3 was also a first-time mother. Although she registered in mid-November, she completed the intake documents early in December 2022 after a few auto-generated portal reminders. She was in her mid-thirties, self-identified as Middle Eastern, was married, and was not currently working outside the home. She reported exercising three times a week and spent about four hours of screen time daily. For this program, she selected cell phone as her preferred method to access the portal. She reported getting six to seven hours of sleep. Holistic practices such as prayer and meditation were important to her and were part of her routine. Participant 3's report counted six logins to the platform and no initiated correspondence with the primary investigator while using the

program, although the investigator sent three secure messages all marked as “seen”. She received two automatic reminder emails indicating new modules were available and one notification through the portal to start the program. She began the first module in early December after completing her intake information. When she finished the program 15 days later, she shared that she joined the program to try something new that would support her postpartum mental health. Participant 3 had no constructive responds to the exit survey questions asking how the program might be improved and if she encountered any challenges. In the final open-ended question, her replies, “easy to follow, low time commitment” indicated what she enjoyed most about the program.

Participant 4 signed up and completed her intake flow in mid-November. She was a single mother of two with a college education, identified as white, and worked full-time. She reported exercising four times a week, four hours of screen time a day, and an average of five hours of sleep. She planned to use her phone and computer to participate in the study. Participant 4 reported that religious and spiritual practices were very important. She was currently involved in some practices. Participant 4 started Module 1 in late November and finished the program mid-December. She stated the main reason for enrolling in the program was, “I needed help slowing down and giving myself time and space.” When asked how to improve the online program, she said, “I wouldn't it was great (sic)”. She explained she did not encounter any problems during the program, and when asked what she enjoyed the most, she replied, “It was easy to understand and not complicated.”

Participant 5 enrolled after having her second baby, was married, worked full-time, identified as Hispanic, and had a postgraduate degree. She reported being

physically active about four times a week, spending three to four hours of daily screen time, and getting an average of six hours of sleep a night. She selected her phone as her preferred access medium. She reported her spiritual beliefs as important to her and was using meditation, prayer, and mindfulness at the time of the study. Participant 5 completed the first module on the day she enrolled and completed the intake flow in late November 2022. She logged in four times over the next three weeks. Her reasons for enrolling in the program were, “To learn and practice new skills.” When asked how to improve the program, she said, “Maybe more activities.” Regarding any challenges encountered in the program, she replied, “just access to videos at first but it got better.” And lastly, the most enjoyable part for participant 5 was “the practice.”

Participant 6 completed the intake flow at the beginning of December 2022 and never logged in to the portal, despite several prompts reminding her to start the program. She reported being a first-time mom in her early 30s and identified as white. She reported having a postgraduate degree, was self-employed, and in a committed relationship. She said she exercised four times a week, reported three to four hours of screen time daily, and slept six to eight hours daily. Participant 6 reported practicing meditation, yoga, and listening to spiritual music as beliefs important to her.

Participant 7 signed up and completed her intake flow in mid-January 2023. In her 30s, this was her first full-term pregnancy after several miscarriages. She reported being part of a committed relationship, identified as white and Hispanic, had a bachelor’s degree, and was self-employed. She reported some physical activity four times a week, spending about four hours of screen time daily, and sleeping an average of seven hours each day. She indicated her smartphone would be her preferred access to the program.

She reported that spiritual and religious beliefs were not very important to her. Participant 7 completed the program in 13 days. In the final survey, Participant 7 shared her reason for enrolling in the study: “To learn ways to feel grounded when dealing with the changes that come with becoming a mother for the first time.” When asked how to improve the online program, she said, “I think it’s great as is.” She said she did not encounter any problems during the program, and when asked what she enjoyed the most, she replied, “Easy to use and understand.”

As part of the oMRP final survey, the participants answered the twelve-item Technology Acceptance Model instrument (Davis, 1989) and the eight-item Client Satisfaction Questionnaire (Attkisson & Zwick, 1982). The mean scores for the questions regarding ease of use were slightly higher than the questions for the perceived usefulness of 6.3 and 5.7 respectively. The overall TAM mean score of 6 indicates a high level of acceptance from this small sample. This is especially noteworthy as there was one technical issue during the study. The primary investigator learned that the Mantram for Mama’s Program would not load correctly on the *Healthie* portal for some participants using an Apple iPhone due to the 16.1 IOS update. This information did not come from the portal but from a secure chat message from a participant. The only response by the *Healthie* IT team was, “We apologize for this inconvenience. We are currently seeing an issue with programs loading on Apple mobile devices. At this time, we recommend using the desktop version of *Healthie* to access these modules. We have discovered this is related to a bug on Apple’s end. Once we have more information, we will update you.” The primary investigator sent secure correspondence (Appendix G) to all participants to switch to a desktop or laptop if possible. Comparatively, the CSQ-8 was also self-

administered at the end of the program with inquiries about participants' opinions and conclusions about the overall program experience. For this study, two participants scored medium satisfaction, while the remaining three scored high. The final totals yielded overall scores from the TAM and CSQ-8 reflected positive results and the open-ended questions validated the positive sentiments about the program. These results are shown in Table 8.

Table 8

Final Survey Data (N = 7)

Technology Acceptance Model Questions	***n***	***%***
Perceived Usefulness		
1. Using the *Healthie* portal enabled me to accomplish the oMRP more quickly		
5 Slightly likely	3	60
6 Quite likely	1	20
7 Extremely likely	1	20
2. Using the *Healthie* portal improved my performance in the oMRP		
4 Neither likely or unlikely	1	20
5 Slightly likely	2	40
6 Quite likely	1	20
7 Extremely likely	1	20
3. Using the *Healthie* portal increased my productivity in the oMRP		
5 Slightly likely	2	40
6 Quite likely	2	40
7 Extremely likely	1	20

Technology Acceptance Model Questions	***n***	***%***
4. Using the *Healthie* portal enhanced my effectiveness in the oMRP		
4 Neither likely or unlikely	1	20
5 Slightly likely	2	40
6 Quite likely	1	20
7 Extremely likely	1	20
5. Using the *Healthie* portal made it easier to do the oMRP		
5 Slightly likely	2	40
6 Quite likely	1	20
7 Extremely likely	2	40
6. I would find the *Healthie* portal useful in completing the oMRP		
5 Slightly likely	1	20
6 Quite likely	2	40
7 Extremely likely	2	40
Perceived Usefulness		
1. Learning to operate the *Healthie* portal has been easy for me		
6 Quite likely	2	40
7 Extremely likely	3	60
2. I would find it easy to log into *Healthie* to do what I needed to do		
5 Slightly likely	1	20
6 Quite likely	2	40
7 Extremely likely	2	40
3. My interactions with the health portal were clear and understandable		
6 Quite likely	3	60
7 Extremely likely	2	40

Technology Acceptance Model Questions	***n***	***%***
4. I found *Healthie* to be flexible to interact with		
5 Slightly likely	1	20
6 Quite likely	2	40
7 Extremely likely	2	40
5. It would be easy for me to become skillful at navigating the *Healthie* portal		
5 Slightly likely	1	20
6 Quite likely	2	40
7 Extremely likely	2	40
6. I find *Healthie* easy to use		
5 Slightly likely	1	20
6 Quite likely	2	40
7 Extremely likely	2	40
	M	***SD***
TAM Overall Score	6.0	5.2-7.0
Client Satisfaction Questionnaire – 8	***n***	***%***
1. How would you rate the quality of the oMRP?		
3 Mostly satisfied	2	40
4 Very satisfied	3	60
2. Did you receive the type of help you wanted from the oMRP?		
3 Mostly satisfied	2	40
4 Very satisfied	3	60
3. To what extent has the oMRP met your needs at this time in your life?		
2 Indifferent or mildly dissatisfied	1	20
3 Mostly satisfied	3	60
4 Very satisfied	1	20

Client Satisfaction Questionnaire – 8	***n***	***%***
4. I would recommend another new mama to take the oMRP.		
1 Quite dissatisfied	1	20
3 Mostly satisfied	2	40
4 Very satisfied	2	40
5. How satisfied were you by the amount of help the oMRP provided?		
2 Indifferent or mildly dissatisfied	1	20
3 Mostly satisfied	1	20
4 Very satisfied	3	60
6. Has the oMRP helped you deal more effectively with problems that arise in your daily life?		
3 Mostly satisfied	2	40
4 Very satisfied	3	60
7. In an overall sense, how satisfied are you with the oMRP?		
3 Mostly satisfied	2	40
4 Very satisfied	3	60
8. Would you take the Mantram for Mamas oMRP again?		
2 Indifferent or mildly dissatisfied	1	20
3 Mostly satisfied	2	40
4 Very satisfied	2	40
	M	***SD***
CSQ-8 Overall Score	27	21-31
CSQ-8 Range		
Low (8 – 20)	0	0
Medium (21 – 26)	2	40
High (27 – 32)	3	60

Note. M = mean. Technology Acceptance Model (TAM) is a 7-point Likert scale from Strongly Disagree (1-point) to Strongly Agree (7-points). Client Satisfaction Questionnaire – 8 (CSQ-8) is a 4-point Likert scale from Quite dissatisfied (1-point) to Very dissatisfied (4-points).

In conclusion, this pilot study set out to launch an oMRP for postpartum women using an online portal. The accessibility of the online portal was explored by capturing login and usage data from the *Healthie* portal and by posing the TAM questions. These questions gave us insight into the participants' acceptance of the oMRP as well as the participants' satisfaction with the overall interface through the opened-ended questions throughout the program and the CSQ-8 at the end. The small sample size contributed to the relative homogeneity of the socio-demographic data. Including each participant's experience through the brief online self-paced program provided some granularity and a qualitative sense of the experience. While each participant shared a slightly different reason for joining the program, all were open to something new to help support their postpartum journey. Their collective voice emphatically provides the 'why' behind this research.

CHAPTER 5

Discussion

Let yourself be silently drawn by the strange pull of what you love.

—Rumi

Research has shown that the prevalence of maternal mental health issues after birth is approximately 13%, similar to the rate noted in 1996 by O'Hara et al., with rates as high as 23.5% in certain parts of the United States (Bauman et al., 2020). Maternal mental health is a crucial topic not limited to these mothers and families but also affects society. Women lift communities; mothers nurture and educate their children, teaching values and forming critical relationships. To support these women and their children while promoting maternal mental wellness and overall well-being, especially during the vulnerable first months of motherhood, an electronic, independent, asynchronous, self-taught mantram program was tested.

The pilot study investigated an online Mantram Repetition Program (oMRP) for postpartum women using an online portal. The study explored whether postpartum women would log on, navigate the portal, accept the virtual program, and enjoy the overall experience. The technology acceptance model (TAM) provided the study's conceptual framework. Additionally, the Client Satisfaction Questionnaire – 8 (CSQ-8) and open-ended questions provided several opportunities for the participants to share their experiences and evaluate the program's applicability.

Among this sample of seven women, five completed the program in its entirety, shared their satisfaction, and even expressed gratitude for the program. As indicated by a 6.0 mean TAM score (out of a possible 7.0) and 27 mean CSQ score (out of a possible

32), the women accepted the technology. They had moderate to high levels of satisfaction with the program. The participants communicated numerous qualitative measures of success to the principal investigator. One participant shared privately that she made her New Year's resolution to slow down and be more present after finishing the program because she now had the behavioral tools to address this goal. Another participant wrote via the portal's secure chat messaging application after completing the study, "Thank you so much! I'm so glad I had the opportunity to be able to do the program! It has helped me." The qualitative and quantitative results indicated that the pilot study positively impacted its participants.

Mantram repetition has had significant clinical success as a reliable, portable, easy-to-implement, and inexpensive strategy, proving ideal for promoting health and well-being. Mantram repetition studied for decades has showcased significant improvement in studied measures such as post-traumatic stress symptoms and spiritual well-being among varying sample sizes and populations (Bormann, et al., 2013; Bormann et al., 2017). This pilot study was the first documented investigation to teach newly postpartum women mantram repetition through this online program. There were early concerns that the participants would not be able to complete the study because of lack of time, sleeplessness, or the competition of a newborn for the participants' attention. However, the results of this small sample demonstrate the interest, ease of use, and overall satisfaction with such a program. These results encourage and promote future research in the education and use of mantram repetition for postpartum women.

It is essential to examine the study findings while considering the methodological limitations. The generalizability of the conclusions was reduced given the small sample

size, absence of a control group, and implementation at a single-site Southern California birth center. Given the birth center's existing focus on a holistic healthcare approach, the recruited participants may have already been more receptive toward the oMRP alternative health modality. Future studies would place the primary investigator in person and through multiple clinical situations to recruit participants and ensure their eligibility for the study.

In hindsight, more quantitative questions could have been asked to verify that participants met the inclusion criteria while providing more specific information. For example, birth date and delivery type data would have been requested as part of IRB approval and obtained in the demographic survey. Without the baby's date of birth, the primary investigator could not calculate the weeks postpartum of each participant, which could have contributed to the high completion rate. Additionally, open-ended qualitative questions could be edited and refined to encourage longer answers than the current questions designed to elicit brief responses from tired and busy new mothers.

One technical difficulty encountered during this study suggested that future studies reach out to participants about their ease of navigating the portal after each module to catch any technological problems or challenges sooner. It is noteworthy that despite the participants experiencing log-on challenges, the TAM scores for perceived usefulness and especially ease of use were still high, with an overall score mean of 6.0 out of 7.0. Nevertheless, the research team could benefit from more control over the technology interface in future studies.

Continued research on the etiology, prevention, and treatments for maternal mental health conditions is in critical demand. The pilot work performed in this study

suggests that the use of self-paced technology in which women engage in their own time and at their convenience is one modality that deserves further investigation. Since there was no need for a referral or prescription to learn this technique, numerous vulnerable populations could be included. The automation of this program and technology could also be easily scaled to a larger group/multi-location, especially as it was possible to embed the curriculum in a HIPAA-compliant, easy-to-use health portal, ensuring participant safety and anonymity.

Another future element to explore would incorporate a cost analysis of labor, technology programs, and time data examining the return on investment for the overall costs associated with this care model. A comparison with traditional care (or lack of care) in the current health system for this cost analysis could further propel this program's widespread use. With low cost and high impact, mantram repetition could become a standard offering for postpartum care.

To reach that goal, recommendations for future studies include larger sample sizes with more time for recruitment and enrollment, extending the period for participants to engage in the program, and documenting additional follow-up after completion. These enhanced metrics would provide for the long-term effects of the oMRP studied. Finally, subsequent studies could focus on more specific variables throughout the oMRP, such as depressive symptoms, reported stress, post-traumatic stress, or spiritual well-being evaluated by standardized clinical and mental health instruments. The numerous hours of screen time, sleep, and exercise the women reported were unexpected findings, guiding future study conception and applicable methodology.

In summary, this pilot study's tailored design of nonpharmacologic and self-regulated education produced foundational data that can serve as a building block to generate further support for maternal mental health. With no known adverse effects, this program has the advantage of potentially being safer for new mothers than many other therapies. Presented as education, the program may also help lessen the stigma associated with receiving mental health treatment. The overlap of satisfaction with the oMRP and acceptance of the technology used to deliver this modality suggests that this program may be helpful to new mothers in their postpartum transition. These study findings provide preliminary support that mantram repetition is feasible and acceptable in a sample of postpartum women, suggesting its potential to support postpartum women.

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Appendix A

Study Flyer

******Participants are needed in a Research Study******

Hi Mamas!

I am seeking postpartum women receiving care at Best Start Birth Center, ages **18** and older, who delivered in the **past 3 months** to try a new **online** program meditation program. This program is only in **English** at this time. You will need access to the internet for this program.

This program IS for you if:

- You want to improve your ability to cope with daily hassles of ordinary life
- You would like to decrease your stress and anxiety
- You are feeling overwhelmed
- You could use some portable skills to increase attention and relaxation

You will learn some new strategies to calm the mind using an evidence-based practice called **Mantram Repetition.** There are 4 online classes that will walk you through how to choose and use a Mantram, how to slow down, and learn how to point your attention towards one thing at a time. Along the way, you will be asked some questions to get **your feedback** with a Final Survey to conclude the program that was designed *to better support new parents and maternal mental health!* We are asking time investment of **90 minutes** maximum to complete the entire program and you will have access for one month! As a token of gratitude for signing up for the study, you will receive a **$25 gift card** and *a chance to win a special gift*!

Interested? Please, take a brochure to get started on the HealthiePortal!

Healthie

Questions? Feel free to contact me or my advisor:
Ritamarie Smedile, MSN, RN, PhD(c) - Doctoral Student
University of San Diego, Hahn School of Nursing and Health Science
Email: rsmedile@sandiego.edu
Advisor: Ruth Bush, PhD rbush@sandiego.edu

Appendix B

Study Brochure

Study Logo:

Special gift:

Appendix C

Consent Form

Telehealth Informed Consent

*

Mantram for Mamas: A Pilot Study for Postpartum Women

RESEARCH STUDY TELEHEALTH INFORMED CONSENT

Hello,

My name is Ritamarie Smedile. I am a student in the PhD Program at the Hahn School of Nursing at the University of San Diego, here in California. I am conducting a research study to try a new technology to support postpartum women, and I would be thrilled for you to participate.

The purpose of this study is to explore if postpartum women find this online portal useful and easy to use. We will also try to understand if the online Mantram Repetition Program (oMRP) was accepted and helpful for the women involved, and finally, we will consider the overall satisfaction of this technology experience.

Learning how to use and repeat a mantram this way has been studied for almost 20 years. This repetition has been shown to improve overall well-being and create a sense of peace and relaxation for a variety of people.

You are being asked to participate because you recently delivered a baby within the past 3 months with the support of Best Start Birth Center, and this program was designed for you and the big transition you are in!

If you decide to proceed, you will be asked to complete the following:

1. Review and sign this consent to participate in the Mantram for Mamas Study

2. Sign a Health Insurance Portability and Accountability Act (HIPAA) Agreement form. This form will automatically appear once you have reviewed and signed this consent. It will explain how using this website, all of your private information is protected and respected. It only takes a few minutes to read and review. Once the consent and HIPAA agreement are signed the next task will appear.

3. Answer a few questions about yourself to help us get to know you (such as age, marital status, number of children, etc.). These questions should only take about 5 minutes to answer. This information is private and will only be used for this study.

4. Start the Program! Once the 2 forms and demographic questions are completed you will find that you are automatically enrolled in the Mantram for Mamas Program. You will be asked to complete all 4 learning modules and follow-up questions. You will be provided with extra resources to help you learn and practice this new relaxation technique. Each of the 4 modules will take approximately 10-15 minutes. We ask that you finish the 4-module program within 1 month (1 module every few days).

5. Lastly, at the end of the program, we ask that you complete the Final Survey. Tell us what you think! The questions in the final survey should only take about 10 minutes. And you will be a Mantram for Mamas Graduate!

This study involves a couple of minor risks that we have considered, which are: the **confidentiality of your personal data** that is collected and the potential of any **negative or uncomfortable emotions or anxiety** as you move through the program. Several action steps will be taken to minimize the potential risks to you as the participant. Your responses will be kept confidential using a random ID number outside the Healthie website so nobody will know your identity. I will keep the study data per protocol for a minimum of 5 years in a secure location. You may also quit being in the study at any time or decide not to answer any specific questions. Your well-being is the most important to us. If ever you are feeling overwhelmed or need extra support, please reach out to your Midwife/Healthcare provider. There are also community resources available:

- **Visit https://postpartumhealthalliance.org/contact-us/**
- **If you or a loved one need immediate support, please call the San Diego Access and Crisis Line (https://www.optumsandiego.com/content/sandiego/en/access---crisis-line.html) at 1-888-724-7240 or**
- **Call 9-1-1**

For signing up to participate in this study, the researcher will give you a $25 gift card via e-mail as a token of gratitude and you will be entered into a drawing for a special ritual kit containing a rose quartz crystal, a scented candle, and a goddess oracle deck valued at about $80. *You will receive this compensation even if you decide not to complete the entire study.*

Taking part in this study is entirely optional. ***Choosing not to participate will have no effect on you or any benefits to which you are entitled.*** Should you decide to participate, ***please print out a copy of this page for future reference.***

I will be happy to answer any questions you have about the study at any time. You may contact me through the secure messaging feature within the portal or by email at rsmedile@sandiego.edu.

If you would like to participate, please sign below to continue.

Ritamarie Smedile, MSN, RN, PhD(c) - Doctoral student

rsmedile@sandiego.edu

Dr. Ruth Bush, PhD - Advisor

rbush@sandiego.edu

☐ **I hereby agree to the document above.**

Name*

First Name: Last Name:

Signature*

(This will require your client's signature)

Date*

Appendix D

Health Insurance Portability and Accountability Act

HIPAA Agreement

HIPAA NOTICE OF PRIVACY PRACTICES

This notice outlines your protected health information, how it may be used, and what your rights are. Please review carefully and ask any questions prior to signing. Questions about this notice can be directed to Ritamarie Smedile.

OUR PLEDGE REGARDING PROTECTED HEALTH INFORMATION:

We, Ritamarie Smedile understand that protected health information about you and your health is personal. We are committed to protecting health information about you. This Notice applies to all of the records of your care generated by Ritamarie Smedile, whether made by Ritamarie Smedile personnel or your personal doctor or other health care provider. This Notice will tell you about the ways in which we may use and disclose protected health information about you. We also describe your rights and certain obligations we have regarding the use and disclosure of protected health information. The law requires us to:

- make sure that protected health information that identifies you is kept private
- notify you about how we protect protected health information about you
- explain how, when and why we use and disclose protected health information
- follow the terms of the Notice that is currently in effect.

We are required to follow the procedures in this Notice. We reserve the right to change the terms of this Notice and to make new notice provisions effective for all protected health information that we maintain by:

- posting the revised Notice in our office
- making copies of the revised Notice available upon request
- posting the revised Notice on our website.

HOW WE MAY USE AND DISCLOSE PROTECTED HEALTH INFORMATION ABOUT YOU

The following categories describe different ways that we use and disclose protected health information without your written authorization.

For Treatment: We may use protected health information about you to provide you with, coordinate or manage your medical treatment or services. We may disclose protected health information about you to doctors, nurses, technicians, medical students, or other personnel who are involved in taking care of you. Ritamarie Smedile staff may also share protected health information about you in order to coordinate the different things you need, such as prescriptions, lab work and x-rays. We also may disclose protected health information about you to people outside Ritamarie Smedile's office who may be involved in your medical care. We may use and disclose protected health information to contact you as a reminder that you have an appointment for treatment or medical care at Ritamarie Smedile. We may use and disclose protected health information to tell you about or recommend possible treatment options or alternatives or health-related benefits or services.

For Payment for Services: We may use and disclose protected health information about you so that the treatment and services you receive at Ritamarie Smedile may be billed to and payment may be collected from

you, an insurance company or a third party. For example, we may need to give your health plan information about nutrition services you received at Ritamarie Smedile so your health plan will pay us or reimburse you for the service. We may also tell your health plan about the nutrition services you are going to receive to obtain prior approval or to determine whether your plan will cover the treatment.

For Health Care Operations: We may use and disclose protected health information about you for Ritamarie Smedile health care operations, such as our quality assessment and improvement activities, case management, coordination of care, business planning, customer services and other activities. These uses and disclosures are necessary to run the facility, reduce health care costs, and make sure that all of our patients receive quality care. We may also combine protected health information about many Ritamarie Smedile patients to decide what additional services Ritamarie Smedile should offer, what services are not needed, and whether certain new treatments are effective. We may also disclose information to doctors, nurses, technicians, medical students, and other Ritamarie Smedile personnel for review and learning purposes. We may also combine the protected health information we have with protected health information from other health care facilities to compare how we are doing and see where we can make improvements in the care and services we offer. We may remove information that identifies you from this set of protected health information so others may use it to study healthcare and health care delivery without learning who the specific patients are. We may also contact you as part of a fundraising effort. Subject to applicable state law, in some limited situations the law allows or requires us to use or disclose your health information for purposes beyond treatment, payment, and operations. However, some of the disclosures set forth below may never occur at our facilities.

As Required By Law: We will disclose protected health information about you when required to do so by federal, state or local law.

Research: We may disclose your PHI to researchers when their research has been approved by an institutional review board or privacy board that has reviewed the research proposal and established protocols to ensure the privacy of your information.

Health Risks: We may disclose protected health information about you to a government authority if we reasonably believe you are a victim of abuse, neglect, or domestic violence. We will only disclose this type of information to the extent required by law, if you agree to the disclosure, or if the disclosure is allowed by law and we believe it is necessary to prevent or lessen a serious and imminent threat to you or another person.

Judicial and Administrative Proceedings: If you are involved in a lawsuit or dispute, we may disclose your information in response to a court or administrative order. We may also disclose health information about you in response to a subpoena, discovery request, or other lawful process by someone else involved in the dispute, but only if efforts have been made, either by us or the requesting party, to tell you about the request or to obtain an order protecting the information requested.

Business Associates: We may disclose information to business associates who perform services on our behalf (such as billing companies); however, we require them to appropriately safeguard your information. Public Health. As required by law, we may disclose your protected health information to public health or legal authorities charged with preventing or controlling disease, injury, or disability.

To Avert a Serious Threat to Health or Safety: We may use and disclose protected health information about you when necessary to prevent a serious threat to your health and safety or the health and safety of the public or another person.

Health Oversight Activities: We may disclose health information to a health oversight agency for activities

authorized by law. These activities include audits, investigations, and inspections, which may be necessary for licensure and for the government to monitor the health care system, government programs, and compliance with civil rights laws.

Law Enforcement: We may release protected health information as required by law, or in response to an order or warrant of a court, a subpoena, or an administrative request. We may also disclose protected health information in response to a request related to identification or location of an individual, victims of crime, decedents, or a crime on the premises.

Organ and Tissue Donation: If you are an organ donor, we may release protected health information to organizations that handle organ procurement or organ, eye or tissue transplantation or to an organ donation bank to facilitate organ or tissue donation and transplantation.

Special Government Functions: If you are a member of the armed forces, we may release protected health information about you if it relates to military and veterans' activities. We may also release your protected health information for national security and intelligence purposes, protective services for the President, and medical suitability or determinations of the Department of State.

Coroners, Medical Examiners, and Funeral Directors: We may release protected health information to a coroner or medical examiner. This may be necessary, for example, to identify a deceased person or determine the cause of death. We may also disclose protected health information to funeral directors consistent with applicable law to enable them to carry out their duties.

Correctional Institutions and Other Law Enforcement Custodial Situations: If you are an inmate of a correctional institution or under the custody of a law enforcement official, we may release protected health information about you to the correctional institution or law enforcement official as necessary for your or another person's health and safety.

Worker's Compensation: We may disclose information as necessary to comply with laws relating to worker's compensation or other similar programs established by law.

Food and Drug Administration: We may disclose to the FDA, or persons under the jurisdiction of the FDA, protected health information relative to adverse events with respect to drugs, foods, supplements, products and product defects, or post marketing surveillance information to enable product recalls, repairs, or replacement.

YOU CAN OBJECT TO CERTAIN USES AND DISCLOSURES. Unless you object, or request that only a limited amount or type of information be shared, we may use or disclose protected health information about you in the following circumstances:

- We may share with a family member, relative, friend, or other person identified by you protected health information directly relevant to that person's involvement in your care or payment for your care. We may also share information to notify these individuals of your location, general condition or death.
- We may share information with a public or private agency (such as the American Red Cross) for disaster relief purposes. Even if you object, we may still share this information if necessary for the emergency circumstances.

If you would like to object to use and disclosure of protected health information in these circumstances, please call or write to our contact person listed on page 1 of this Notice.

Appendix E

Study Handouts

Mantram Module 1 Handout

Mantram Examples

Om mani padme hum (Ohm mah-nee pahd-may hume)	An invocation to the jewel (Self), in the lotus of the heart
Namo Butsaya (Nah-mo Boot-see-yah)	I bow to the Buddha
My God and My All	St. Francis of Assisi's phrase
Maranatha (Mah-rah-nah-tha)	Lord of the Heart (Aramaic)
Kyrie Eleison (Kir-ee-ay Ee-lay-ee-sone)	Lord have mercy
Christe Eleison (Kreest-ay Ee-lay-ee-sone)	Christ have mercy
Jesus, Jesus	Son of God
Hail Mary or Ave Maria	Mother of Jesus
Lord Jesus Christ son of god, have mercy on me	Jesus Prayer
Rama (Rah-mah)	Eternal joy within (Gandhi's mantram)
Om Namah Shivaya (Ohm Nah-mah Shee-vah-yah)	Invocation to beauty and fearlessness
Om Prema (Ohm Pray-Mah)	A call for universal love
Om Shanti (Ohm Shawn-tee)	Invocation to eternal peace
Shalom (Shah-lome)	Peace, completeness
So Hum (So Hum)	I am that Self within
Barukh Atah Adonoi (Bah-rookh At-tah Ah-doh-nigh)	Blessed art Thou, King of the Universe
Ribono Shel Olam (Ree-boh-no Shel O-lahm)	Master of the Universe
Bismallah ir-Rahman ir-Rahim (Beese-mah-lah ir-Rah-mun ir-Rah-heem)	In the name of the merciful, the compassionate
O Wakan Tanka (Wah-Kahn Tahn-Kah)	Great Spirit

10 Tips to Choose & Use Your Mantram

1. Choose a traditional mantram (see the list of examples). Don't make up your own.
    - Your mantram does not need to have a religious or spiritual connection to you. You also do not need to understand the meaning for it to have an effect…sometimes it's best to choose what is unfamiliar—fewer associations.
2. Take your time choosing one, then don't change it.
3. Start building a HABIT.
4. Repeat your mantram silently several times throughout the day/night.
5. If other thoughts come up, simply let them go and turn back to your mantram.
6. Link your mantram to other activities to help you remember (e.g., when you brush your teeth, changing diapers, while you feed your baby, when you are making your coffee/tea, or as you fall asleep)
7. Use it when you don't need it (practice, practice, practice! Even it is just repeating it a few times)
8. Use it when you DO need it (e.g., feeling stressed, anxious, fearful, insecure)
9. You don't have to sit and meditate. Mantram repetition also works if you use it in free moments like waiting in line at the store or at the doctor's office or doing other things like taking a walk.
10. Remember to have fun with it!

Mantram Module 2 Handout

Tips For Slowing Down

1. Give yourself a little extra time.
   - Try driving a little slower; don't run yellow lights.
2. Give others the gift of your time.
   - Try to use your mantram to help you actively listen and give presence to those you are with.
3. Simplify your life.
   - Try to remove activities that aren't pleasurable or beneficial to you
4. Unplug, reflect and identify priorities
   - Try to do the MOST important things everyday. Use mantram to help stay in the present
5. Remember the benefits of using your mantram to slow down:
   - Potential to make fewer mistakes
   - Lowered stress response
   - Awareness of surroundings
   - Improved relationships
   - Opportunity to develop more patience and tolerance
   - Greater quality of life – savoring things you enjoy

PRACTICE PRACTICE PRACTICE! Let's Try it now…

Follow your thoughts for a moment.

See how long you can focus your mind on one thought before it skips away.

Now focus your thoughts.

Try to fix them for just a minute on some detail in front of you: the color of the floor, the texture of something in your hand.

Pay attention to your thoughts and notice when they wander.

Gently bring them back to the mantram and try to slow down the speed of your thinking.

Mantram Module 3 Handout

Tips For One-pointed Attention

1. Remember One-pointed Attention refers to the intentional selection of and focus on ONE "object" in the present moment (i.e. an activity, sensation, experience, etc.) aka: "Mono-tasking" or "Present Moment Awareness"

2. This is different from Attentional Control which refers to the capacity for an individual to choose what they pay attention to and what they ignore aka: The ability to concentrate

3. One-pointed attention is more efficient.

4. One-pointed attention helps you to be more fully absorbed in the present moment.

5. Present moment awareness can improve your work satisfaction and fulfillment in relationships.

PRACTICE PRACTICE PRACTICE! Let's Try it now…

Sit in a comfortable position. Set a timer for 1 minute (increase the time as you build this skill).

Close your eyes, repeat mantram silently.

When your mind drifts, bring it back gently, without emotion or judgment.

When distractions come, give MORE attention to mantram. (You can even say it out loud or write it.)

Build the muscle of your mind

Each time you re-direct attention you strengthen your ability to focus!

Myths vs. Facts

Our culture values doing more in less time.

Are YOU a proud multi-tasker?

MYTH: "Multi-tasking saves time!"

FACTS: Multi-tasking actually takes longer

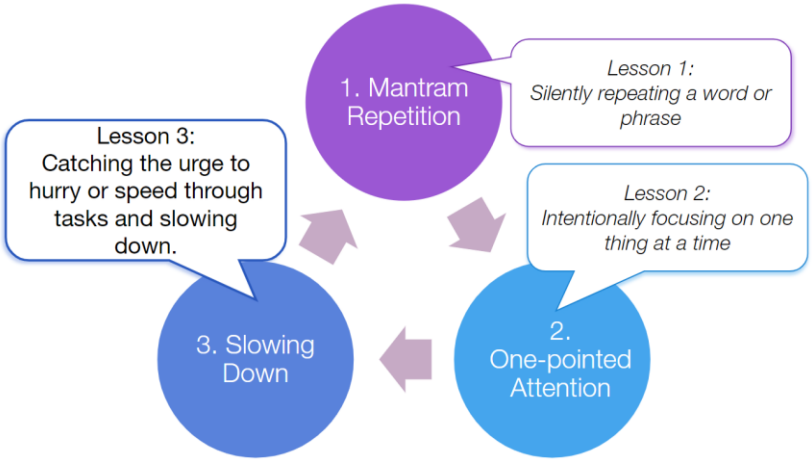
"Switch time" = time for brain to go from one task to another

Uses more energy

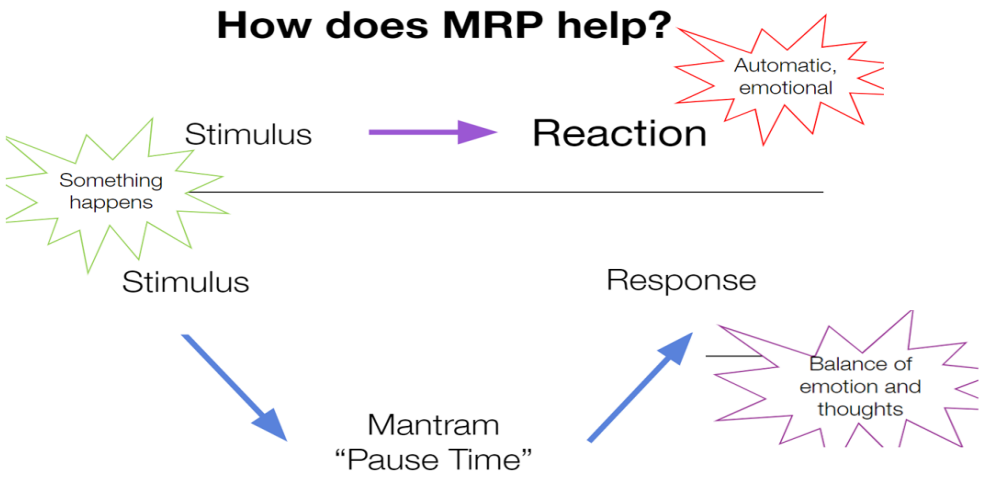
Contributes to more mistakes

Mantram Module 4 Handout

Putting it All Together



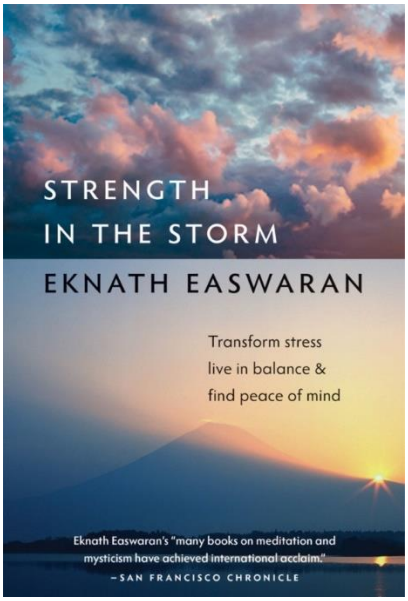
1. Your mantram practice is invisible, free and available to you whenever you need it!
2. It can be used at anytime, anyplace, even during most activities
3. This practice is complementary, non-pharmacological and non-toxic
4. It's simple to learn and can be made into a habit
5. Remember to practice!
    - While walking - try matching the rhythm of your footsteps with the rhythm of your mantram
    - While waiting
    - During routine activities
    - Before sleeping or when you wake up
    - Before an unpleasant task
    - In place of unproductive thoughts



We can't always change the things around us…we can only change our reactions to them.

Mantram Repetition Program Tools help us to do just that!

If you would like to explore the MRP more here is a great book to read:



Appendix F

Institutional Review Board Approval

Oct 26, 2022 1:03:33 PM PDT

Ritamarie Smedile
Hahn School of Nursing & Health Science

Re: Expedited - Initial - IRB-2022-529, Mantram for Mamas: A Pilot Study for Postpartum Women

Dear Ritamarie Smedile:

The Institutional Review Board has rendered the decision below for IRB-2022-529, Mantram for Mamas: A Pilot Study for Postpartum Women.

Decision: Approved

Selected Category: 7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Findings: Approved as Expedited review, category 7.
Please note that Dr. Connelly's CITI training certificate was still not updated in the application. As a courtesy, I went ahead and attached Dr. Connelly's USD Human Subjects Research training certificate as a separate attachment to the IRB application for compliance purposes. I did not catch this issue during my earlier phone conversation with Dr. Bush regarding this application. For future submission (renewal or modification) of this same study, please clean up the file attachments under training certificate section and include only USD-affiliated certificates of the proper Human Subjects Research course(s) for USD-affiliated research team members to prevent confusion.

Research Notes:

Internal Notes:

The USD IRB requires annual renewal of all active studies reviewed and approved by the IRB. Please submit an application for renewal prior to the annual anniversary date of initial study approval.
If an application for renewal is not received, the study will be administratively closed.

Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher. The next deadline for submitting project proposals to the Provost's Office for full review is N/A. You may submit a project proposal for expedited or exempt review at any time.
Sincerely,

Truc Ngo, PhD
IRB Administrator
Office of the Senior Vice President and Provost
Hughes Administration Center
5998 Alcalá Park, San Diego, CA 92110-2492
Phone (619) 260-4553 • Fax (619) 260-2210 • www.sandiego.edu

Appendix G

Transcript of Secure Chat Messages

Secure Chat with Participant 1:

November 15, 2022:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

November 30, 2022:

Primary Investigator: I hope you are doing well! Let me know if you have any questions or need any help navigating the platform!

Secure Chat with Participant 2:

November 30, 2022:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

December 3, 2022:

Participant 2: "I tried to resume my program from module 2 so I could finish but the app is stuck on loading :(Saw you reset my modules but it's still stuck on loading!"

Primary Investigator: Thanks for reaching out and letting me know! That is frustrating, I did try troubleshooting things on my end and have reached out to the IT team. Hopefully, we can solve this glitch soon! I will be in touch!

Participant 2: Thanks

December 4, 2022:

Primary Investigator: I talked to the *Healthie* team and unfortunately they said it was a bug in the new Apple update if you are using the app on an iPhone. If you have access to a laptop or

desktop that should work fine. I apologize for the trouble!

December 20, 2022:

Participant 2: Trying to do the final survey and it won't let me input text into the blank fields :

Primary Investigator: I'm sorry it's being glitchy! Have you tried on a computer? Or can you submit blank?

Participant 2: I'll see if I can log on through a computer tonight

Primary Investigator: Congrats on finishing the program! Thank you for taking the time and giving your feedback! Your $25 gift will be sent to your email, we are working on getting that to you! Your name has also been entered into the hat for the special gift drawing! That will happen in a couple of weeks and we will notify you if you win! Your health and wellness are important to us and we hope you have a wonderful holiday season! Reach out if you have any questions!

Secure Chat with Participant 3:

November 20, 2022:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

November 30, 2022:

Primary Investigator: I hope you are doing well! Let me know if you have any questions or need any help navigating the platform!

December 30, 2022:

Primary Investigator: Congrats on finishing the program! Thank you for taking the time and giving your feedback! Your $25 gift will be sent to your email, we are working on getting that to you! Your name has also been entered into the hat for the special gift drawing! That will happen in a couple of weeks and we will notify you if you win! Your health and wellness are important to us and we hope you have a wonderful holiday season! Reach out if you have any questions!

Secure Chat with Participant 4:

November 20, 2022:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

November 30, 2022:

Primary Investigator: I hope you are doing well! Let me know if you have any questions or need any help navigating the platform!

December 4, 2022:

Primary Investigator: We are working through some tech issues. If you are having trouble accessing module 2 from an iPhone, the new Apple update is causing a glitch in loading the module. Using a laptop or desktop would be better if you have access to that! Thanks and please contact me if you have any questions!

December 13, 2022:

Primary Investigator: Congrats on finishing the program! Thank you for taking the time and giving your feedback! Your $25 gift will be sent to your email, we are working on getting that to you! Your name has also been entered into the hat for the special gift drawing! That will happen in a couple of weeks and we will notify you if you win! Your health and wellness are important to us and we hope you have a wonderful holiday season! Reach out if you have any questions!

Participant 4: Thank you so much! I'm so glad I had the opportunity to be able to do the program! It really has helped me

December 18, 2022:

Primary Investigator: That's wonderful! I'm so happy to hear that! I hope your practice continues to nourish you! The videos are available on YouTube if you ever want to rewatch them!

December 26, 2022:

Participant 4: Hi, I have never received the email with the gc? Does it take a minute cause of the holidays?

December 29, 2022:

Primary Investigator: So sorry for the delay. The university is in charge of releasing the funds so I can send your gift cards and they have been closed for the holidays. You should see it in your email the first week of January when everyone is back in the office! I will keep you posted! Thanks for checking in! Happy New Year!

Participant 4: Okay no problem! I figured just wanted to make sure I didn't miss something

Secure Chat with Participant 5:

November 28, 2022:

Participant 5: Hello, I am excited to participate in your study. I gave signed up angeles completed forms as well as downloaded the app. At this point I'm a little confused on the next steps. I see I should start the mantram for mamas program but do not see where to access them. Thank you for your help!

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

Participant 5: Thank you very much!

December 4, 2022:

Primary Investigator: We are working through some tech issues. If you are having trouble accessing module 2 from an iPhone, the new Apple update is causing a glitch in loading the module. Using a laptop or desktop would be better if you have access to that! Thanks and please contact me if you have any questions!

Participant 5: I had trouble with the first module too but was able to get to it on my laptop. I will do the same with the second.

Primary Investigator: Sounds good! I apologize for the trouble!

December 20, 2022:

Primary Investigator: Congrats on finishing the program! Thank you for taking the time and giving your feedback! Your $25 gift will be sent to your email, we are working on getting that to you! Your name has also been entered into the hat for the special gift drawing! That will happen in a couple of weeks and we will notify you if you win! Your health and wellness are important to us and we hope you have a wonderful holiday season! Reach out if you have any questions!

Participant 5: Thank you so much. It was fun to participate!

Secure Chat with Participant 6:

December 3, 2022:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

Secure Chat with Participant 7:

January 16, 2023:

Primary Investigator: Welcome! I see you have completed your intake flow! You are now enrolled in the Mantram for Mamas program! Look for the program tab (it has a little graduation hat) on your dashboard, and you can get started! Let me know if you have any questions!

January 17, 2023:

Participant 7: Thank you!

January 31, 2023:

Primary Investigator: Congrats on finishing the program! Thank you for taking the time and

giving your feedback! Your $25 gift will be sent to your email, we are working on getting that to you! Your name has also been entered into the hat for the special gift drawing! That will happen in a couple of weeks and we will notify you if you win! Your health and wellness are important to us and we hope you have a wonderful New Year! Reach out if you have any questions!

Participant 7: Thanks so much! I really enjoyed the course and can tell how much time and effort you put into it ♡

Primary Investigator: Thanks, I appreciate that!

**Participants 1-6 received gift cards electronically to their emails of $25 to amazon on Jan 5th*

**Participant 7 received her gift card electronically on Feb 1st*

**Participant 2 was the winner of the special gift, sent on 2/22/2023*