A QUALITATIVE STUDY OF PARTICIPANTS' EXPERIENCES WITH ENGAGE & CONNECT PSYCHOTHERAPY FOR POSTPARTUM DEPRESSION THROUGH INTERVIEWS

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Abstract: This thesis presents a qualitative analysis of the Engage & Connect psychotherapy program, aimed at understanding its efficacy in treating women with postpartum depression. Through coding and thematic reviews on interview transcripts with program participants, this study explores the therapeutic impact, participant motivations, challenges faced during the program, and suggestions for improvement. The research highlights how the tele-psychotherapy addresses the specific needs of new mothers, integrating their personal experiences with structured non-medication-based therapeutic interventions. Key findings indicate that the program significantly aids in providing mental support and teaching effective coping strategies. Participants valued the accessibility and flexibility of the therapy sessions, which were tailored to their schedules and emotional states. However, challenges such as inconsistencies in therapy delivery and the need for more personalized approaches were also noted. The study recommends enhancements in therapy customization and greater focus on consistent care delivery to increase effectiveness. The insights derived from this research contribute to the broader understanding of tele-psychotherapeutic approaches in the context of postpartum depression, suggesting practical adjustments for enhancing participant engagement and satisfaction.

This document is dedicated to all Cornell graduate students.

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CHAPTER 1

INTRODUCTION

Postpartum depression (PPD) is one of the most common psychiatric complications associated with pregnancy and childbirth. According to the widely used International Classification of Disease v.10 (ICD-10), 13% of women experience mental health disorders within six weeks of giving birth, which also means postpartum phase [9]. The World Health Organization (WHO) reports that in developing countries, this percentage increases to 19.8%. In the United States, approximately 1 in 10 women suffer from postpartum depression after childbirth, with some studies indicating a prevalence as high as 1 in 7.

Postpartum depression is typically treated through a combination of psychotherapy and medication. Psychotherapy, especially Cognitive Behavioral Therapy (CBT) and Interpersonal Therapy (IPT), is commonly prescribed [6]. CBT helps postpartum patients manage their depression by changing negative thought patterns, while IPT focuses on improving interpersonal relationships and communication, which can influence one's mood dramatically.

Medications often include antidepressants, which can be effective in managing the symptoms of PPD. For severe cases, other methods like Electroconvulsive Therapy (ECT) may be considered. The recent introduction of Brexanolone, a medication administered via IV and specifically approved for treating PPD, represents a significant advancement in treatment options.

These therapies are generally effective in alleviating the symptoms of PPD, helping new mothers regain their quality of life. Psychotherapies like CBT and IPT are beneficial as they address the psychological aspects of PPD without the

need for medication, which is particularly important for nursing mothers concerned about the effects of drugs on their baby.

However, the treatments for postpartum depression are not without their challenges. Accessibility remains a significant barrier; not all patients have easy access to qualified mental health providers or centers offering specialized treatments like Brexanolone. Additionally, there are not enough trained psychiatrists or psychologists to serve everyone with PPD, and often these therapies are only available to those with commercial insurance or those who can afford to pay out of pocket. Medications can have side effects and may not be suitable for everyone, particularly for those who are breastfeeding. Furthermore, psychotherapy faces similar access issues. Beyond these logistical challenges, stigma and a lack of awareness about PPD can also prevent mothers from seeking the help they need.

In the context of postpartum depression (PPD), telemedicine has emerged as a significant trend [10], offering numerous benefits that cater specifically to the needs of new mothers. The use of telemedicine allows for the delivery of psychiatric and counseling services directly to the patient's home, overcoming traditional barriers such as logistical challenges, lack of childcare, or the reluctance to seek face-to-face therapy sessions. This approach not only enhances accessibility but also ensures continuity of care, which is crucial during the vulnerable postpartum period.

Telemedicine provides flexible scheduling and earlier access to specialists, which can be particularly valuable for managing the symptoms of PPD. The remote delivery model reduces the stigma associated with seeking mental health treatment, as patients can receive help discreetly and privately. Moreover,

telemedicine can facilitate ongoing monitoring and tailored treatment adjustments, improving the overall effectiveness of mental health interventions.

Building on the framework of telemedicine, the ”Engage & Connect” program is designed to address the challenges faced by mothers with PPD. This therapy is rooted in previous research and interventions aimed at older adult populations, adapting and applying these principles to address the unique challenges faced by mothers with postpartum depression. It incorporates a comprehensive approach that includes both psycho-education and interactive elements to foster engagement and support. By leveraging digital platforms, ”Engage & Connect” provides continuous access to therapeutic resources and community support, crucial for recovery and the enhancement of maternal well-being. The program emphasizes the development of coping strategies, resilience, and social connectivity, which are vital components in the recovery from PPD.

Overall, integrating telemedicine into the treatment and support systems for PPD presents a forward-thinking approach that aligns with contemporary healthcare trends and patient needs, making mental health care more responsive and adaptable. The ”Engage & Connect” program exemplifies this integration by providing targeted support that adapts to the dynamic needs of new mothers, offering them a lifeline during a critical period of their lives.

CHAPTER 2

METHODS

To address the function of Tele-health therapy on PPD, our research team implemented Engage & Connect program, which is a revised version of Engage, a behavioral activation intervention, that has been found to be effective in reducing mid- and late-life depression symptoms. The program is divided into multiple steps, where initial steps focus on re-engagement in social activities and subsequent steps introduce strategies to address specific barriers such as negativity bias, emotional dysregulation, and interpersonal difficulties. Each step includes forming action plans, identifying and overcoming barriers to social engagement, and employing specific strategies to manage difficulties encountered by mothers.

2.1 Therapy Session Structure

2.1.1 Social Engagement

The first three sessions of the program play a vital role in helping patients get used to the socializing treatment. They focus on getting patients involved in enjoyable social activities through a process called ”action planning.” The aim is to get patients back into social activities they enjoyed before but stopped doing after they became depressed. A supportive environment is crucial, with therapists creating and maintaining warm, trusting, and supportive relationships with patients. Therapists also guide patients to meticulously plan social activities that are both achievable and significant to them, potentially involving the

patients' children or family in these activities.

2.1.2 Addressing Strategies

Barriers such as emotional dysregulation, negativity bias, and interpersonal ineffectiveness are identified as common issues preventing patients from engaging in or enjoying social activities. The program uses specific strategies to address each barrier so that they do not interfere with the development and implementation of action plans. The stepped approach of the program involves systematically engaging in pleasurable social activities first. If persistent symptoms or barriers are identified, subsequent sessions focus on addressing these barriers using relevant strategies.

2.2 Eligibility Criteria

To be selected as participants in the "Engage & Connect" program, individuals must satisfy the following conditions:

1. Mothers must be up to 1 year post-delivery.
2. They must have an Edinburgh Postnatal Depression Scale (EPDS) score of 10 or higher. [2]
3. Participants should either be off antidepressants or on a stable dose of an antidepressant for at least 8 weeks and do not plan to change the dose in the next 10 weeks.

4. They must have the capacity to provide consent for research assessment and treatment.
5. Participants should speak English proficiently.

The exclusion criteria for the study are designed to ensure the safety and appropriateness of the treatment for the participants. These criteria include:

1. Individuals with suicidal intentions or plans in the near future.
2. Those currently engaged in ongoing psychotherapy more frequently than once every 8 weeks.
3. Individuals with active substance abuse or dependence.
4. Those with severe fetal anomalies, stillbirth, or infant death at the time of enrollment.
5. Individuals with psychiatric diagnoses other than specified (major depressive disorder without psychotic features, generalized anxiety disorder, persistent depressive disorder, or specific phobia).
6. Use of psychotropic drugs or cholinesterase inhibitors beyond specified limits .

The recruitment strategies to enroll participants in the "Engage and Connect" therapy program included using the Epic MyChart subject pool, where patients have consented to be contacted about research studies. Social media platforms like Facebook and Instagram are also employed to reach potential participants. Participants who respond to the social media ads are invited to fill in a Qualtrics survey to indicate their interest. This multi-channel approach aims to facilitate efficient recruitment and maintain participant engagement throughout the study .

2.3 Data Collection

The study utilizes qualitative interviews to gather in-depth insights into the experiences of participants who have undergone the ”Engage & Connect” therapy program for postpartum depression. All interviews were conducted via Zoom by one of two researchers, both trained in qualitative methods, ensuring a standardized approach while allowing for personal expression. Each session was audio-recorded through Zoom and subsequently transcribed using NVivo's transcription module to maintain accuracy and integrity in data handling. Prior to analysis, analysts meticulously reviewed each transcript to confirm its accuracy.

Interviews were structured around a pre-defined set of questions that ensured consistency across sessions while allowing flexibility for participants to express personal experiences and viewpoints. The interview guide covered several key areas including referral processes, therapy experiences, modality preferences, and additional support tools.

- **Referral and Initiation**: Participants discussed their referral to the study and their comfort with the referral sources.
- **Therapy Experience**: Feedback was solicited on what aspects of the therapy were helpful, what could be improved, and whether participants would recommend the program to others.
- **Modality**: The effectiveness of virtual therapy was assessed, including any technical challenges faced and preferences for remote versus in-person sessions.

- **Technology Integration**: Opinions were gathered on the use of additional technological tools like mobile apps, wearables, and the potential for self-paced therapy modules.

Please see full interview questions in the Appendix.

2.4 Data analysis

In our study, we employed a directed content analysis approach to meticulously analyze the collected transcripts. This method was chosen to specifically address the research questions pre-defined in our study protocol, enabling a focused examination of the relevant sections of each transcript.

2.4.1 Development and Refinement of the Codebook

The process began with the development of an initial codebook, which was constructed based on the research questions guiding this study. The initial set of codes was generated by the our research team during a preliminary review of several transcripts. These initial codes were then discussed and refined in collaboration among the team and advisors to ensure they comprehensively covered all aspects of the data relevant to our research questions.

2.4.2 Thematic Analysis

Upon refining our codebook, the thematic analysis was conducted collaboratively to extract and elaborate on significant themes from the data. This process allowed us to derive a structured understanding of the core aspects covered in the interviews. The themes were organized into three hierarchical levels, each representing a distinct layer of insight and complexity:

- **Level 1 Themes:** These are the broad, overarching categories that encapsulate the primarily pre-study, in-study and post-study responses and perceptions shared by the participants.
- **Level 2 Themes:** Derived from the overarching categories, the second-level themes provide a more specific and detail-oriented exploration within each broad category. These themes highlight distinct aspects of the participant experience, such as their motivations for joining the study and the feedback they provided during the study. For example, under the category of ”Participation Motivation,” themes such as ”Free Therapy,” ”General Interest in Research,” and ”Need for Treatment” elucidate the varied reasons participants were drawn to the study. Similarly, the ”Participant Engagement” category breaks down into specific actionable items and perceptions, like ”Action Plans” and ”Flexible Schedule,” detailing how participants interacted with the study framework and what factors contributed to their sustained engagement or potential barriers they faced.
- **Level 3 Themes:** At this most detailed level, themes concentrate on nuanced insights and fine-grained interpretations of participant responses. These themes delve deeply into specific actions, decisions, and experiences, such as the reasons behind choosing scheduled therapy or express-

ing a preference for physical advertisements over online registration. They often reveal underlying motivations, emotions, and subtle dynamics that not only inform but also enrich the broader topics identified at higher levels.

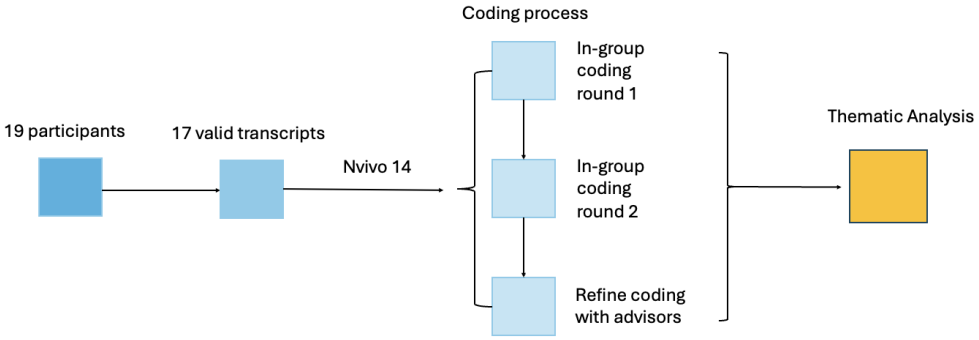

Figure 2.1: Workflow of our data analysis

CHAPTER 3

RESULTS

This section delineates the comprehensive findings derived from our qualitative analysis of the interviews conducted with participants in the ”Engage & Connect” program. The results are systematically structured into four main categories: 'Data Records,' 'Pre-Study and Recruitment Reflection,' 'In-Study Feedback,' and 'Future-Study Preference.' Each category further divides into subcategories that explore specific aspects of the participant experience and program feedback. The following structured presentation aims to highlight critical insights and actionable recommendations derived from the participant feedback, facilitating a nuanced understanding of the program's impact and areas for future enhancement.

3.1 Data Records

19 interviews were collected from this program, which have 17 interviews were valid, one interview recording failed to be transcribed and one interview is lost. The data collected by interviewing with participants is analysed by coding in NVivo 14 - Windows.

3.2 Pre-Study and recruitment reflection

From the interviews, participants discussed their reflections on recruiting processes, appropriateness of study initiation timing in relation to giving birth, and

their motivations of participating.

3.2.1 Recruitment of participants

In the process of recruiting, physical advertisement and online registration were the primary methods of recruitment. 15 of 17 participants registered through the online link. 2 participants registered in-person by seeing physical flyer. The only concern during this process is that although most participants feel certain, 1 participant was uncertain about qualifying for the inclusion criteria.

[...] I don't know if I recall, I mean, if I'm a good candidate or not. Like, I mean, I was not overly depressed, so I never was like, [b]ut it's still good to have a therapy. Okay. (Participant 7)

Physical Advertisement

In this domain of recruitment, 3 participants saw the flyer. One participant was recommended by the therapist when her symptoms seem severe.

[...] And at [REDACTED], I was I asked if a therapist could just come and speak with me because I was really down. And actually , this therapist from [REDACTED] who recommended this this study [...]. (Participant 15)

Another participant was referred by her O.B to the psychiatry, where she found the therapist would be available in next couple of months, by chance, a resident introduced this free opportunity.

I was in my third trimester. I had pretty bad depression symptoms. My O.B. referred me to a [Clinic name redacted]. [...] I saw one of their residents there [...]. And I think she might have referred me into this program because I received a call from [name redacted], and she did like a quick screening. [...] And they said that it might take a couple months to find a therapist who was available. And, you know, this kind of came up and sounded like a good opportunity. (Participant 11)

Online Registration

Another way of recruitment was through the registered link online. There were 11 of 15 participants who registered online because they saw the recruiting advertisement online in the new mother's group, two participants registered through the link when their friends recommended our program to them, and two participants were recommended by their O.B.

3.2.2 Study initiation timing

The start of participation in the study was based on specific time criteria: either the number of weeks since childbirth or the total duration of the postpartum

period. Not every participant reported when they start the treatment. In 3.1, it showed that the earliest time was around 3 weeks post-partum, and the latest time was around 48 weeks post-partum. Two participants indicated their participation were at about the 4th week after giving birth and two participants indicated their participation at the 20th week after giving birth. From the conversation with participants (3.1), their typical onset of postpartum depression usually occurs between 20 to 36 weeks after childbirth, indicating that most mothers do not recognize their symptoms immediately following delivery.

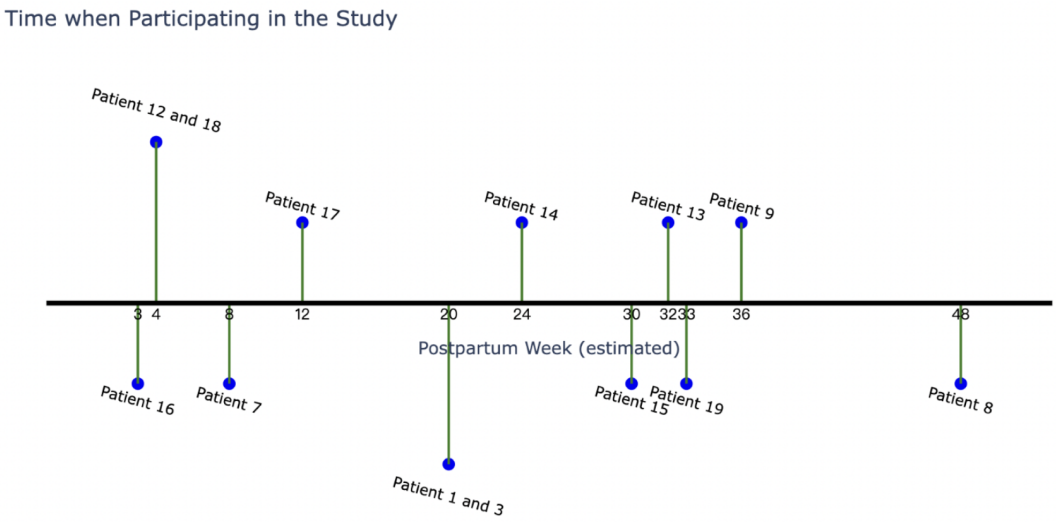

Figure 3.1: The timeline when participants decide to engage in the study post-partum

3.2.3 Participation Motivation

Participants were motivated to engage in the study by several reasons and some participants mentioned more than one motivation. In the Table 1, around 35% participants who choose to participate in the study have considered about its free of charge, about 64.7% participants agreed that they have a need for treatment, 23.5% participants were motivated by a general interest in the study or they believe there are benefits of guidance for being a new mother. Notably, there is one participant mentioned she likes the regularly scheduled therapy and there is one participant mentioned the lack of physical side effects in talk therapy is less harmful.

There are two most commonly mentioned domains of motivations, which are

Motivating Factor	**Number**	**Estimated Percentage**
Need for treatment	11	65%
Free Therapy	6	35%
General Interest in Research	4	24%
Benefits of Guidance	4	24%
Regularly Scheduled Therapy	1	6%
Lack of physical side effects in talk therapy	1	6%

Table 3.1: Number and Percentage of participants for each motivation

'Need for Treatment' and 'Free Therapy'. However, there are only two participants who mentioned being motivated by both factors. Four participants were motivated by both free therapy and the benefits they can get from the guidance in the study.

Free Therapy

Nearly 2/3 participants were motivated to join the trial due to the availability of free therapy, which was especially valuable given the high costs associated with their usual care.

"I think it's interesting, I had been going to different therapists for postpartum and it didn't feel like it was helping. I wanted to try something different. It's great that I don't have to spend £300 a session at another insurance place. And not only is it free, but I'm also getting paid for it. So, it doesn't hurt to try it." (participant 3)

General Interest in Research

Some participants were motivated by a general interest in the research study. They were intrigued by the opportunity to contribute to medical knowledge and explore different therapeutic approaches. For instance, one participant, who also conducts research, wanted to participate to help advance medical understanding.

"I do research as well. I wanted to participate in research and contribute to medical knowledge. I was also interested in furthering medical knowledge from a general standpoint. Additionally, I was experiencing postpartum mood disorder and thought participating in research would be helpful." (participant 14)

Another participant found the study interesting because it offered a new therapeutic experience, different from what they had previously tried. This interest in the study's potential for personal and broader scientific benefits, combined with the chance to try different therapies, played a significant role in their

decision to join.

Regularly Scheduled Therapy

One participant was motivated by the opportunity to incorporate therapy into their regular schedule, who hoped it could lead to a more long-term solution like ongoing talk therapy.

"I'm hoping that I could delve into that a little bit and then maybe find something longer, maybe long term like talk therapy moving forward." (participant 13)

Benefits of Guidance

Some participants were motivated by the benefits of structured guidance and support offered by the program. They appreciated the transparent process and clear communication about what was required from them and what benefits they might receive.

"The process was transparent. They clearly described the requirements and potential benefits for participation. I believe it was clear and easy to understand. I'm unsure of any improvements needed for recruitment. They accurately explained the course structure, and it matched my experience." (participant 11)

Lack of Physical Harm

One participant was motivated to join the program due to the lack of physical side effects associated with talk therapy. They appreciated that the therapy

posed no pain, making it a safe and appealing option for them to explore.

"I mean, free therapy and no pain." (participant 7)

Need for Treatment

Several participants were driven by an urgent need for treatment. Facing significant mental health challenges such as anxiety, depression, and postpartum mood disorders, they understood the importance of seeking help. For instance, one participant, overwhelmed with anxiety, was advised by their therapist to seek additional support. Another participant, who had recently relocated to a new city while pregnant, was worried about postpartum depression and the absence of community support. These individuals saw the program as a timely and accessible way to address their mental health needs, especially during a period when finding suitable therapy options was difficult.

"I know I was struggling mentally with everything going on and the uncertainty and the fears and just like all the promoters have all of it, so I was excited about getting involved." (participant 19)

3.3 In-Study Feedback

In the conversations with participants, there are five categories of feedback. These categories include technical feedback, participant engagement, tedious surveys, willingness to refer, and recommendations for future recruitment. Each section highlights insights and suggestions from participants to improve the study process.

3.3.1 Technical Feedback

Technical issues encountered during therapy sessions included connectivity problems, poor video or sound quality, and difficulties with session recordings and access links. Clients and therapists often faced disruptions but usually resolved these issues promptly, sometimes using alternative methods like cell phones for better sound. More than half of participants, however, reported no problems.

"It was a mix of the therapist videos going in and out. My sound kept going in and out. It might have been a connection issue in the city. It was a rainy day. A tutorial might not have helped. We figured it out. It took a couple of minutes, and then we decided to try this. Something else might have been easier, perhaps using the phone. However, it's hard because seeing the bigger screen is nice." (participant 2)

3.3.2 Participant engagement

Action plans

Action plans in therapy sessions seem to be a pivotal tool in enhancing motivation and fostering connections among participants, as evidenced by the positive feedback from various participants in a therapy study. These action plans, meticulously structured and personalized to each participant's circumstances, encouraged regular engagement and provided clear goals which participants found immensely helpful.

"The weekly goals, because being accountable to someone. It makes all the difference because. If someone would just tell me, okay, go be social. That will help. I would have no motivation, no energy to go and do it. But when we make a specific plan that this is what I have to do this with and I have to be accountable because we'll talk about it next session, then it makes all the difference." (participant 5)

For many, the action plans acted as a strong motivational tool. Participants reported that setting specific, actionable goals each week not only helped them stay focused but also gave them a sense of accomplishment and progress, which is crucial during the challenging postpartum period. One participant highlighted how these plans pushed her to engage in social activities and connect with others, which alleviated her feelings of isolation.

Furthermore, the therapy support accompanying these action plans reinforced the effectiveness of the sessions. The therapists played a key role in validating the experiences of the participants, making them feel understood and supported. This validation was crucial for the participants, as it not only helped them in dealing with their postpartum depression but also in feeling more connected to the therapy process and confident in the actions they were taking.

Flexible Schedule

One positive element of feedback was the recognition of the flexible schedule, which accommodates adaptive planning. This feature was particularly advantageous as it allowed participants to integrate therapy sessions into their existing responsibilities without the need for rigid appointments.

For example, one participant noted that the flexibility of the sessions was highly convenient, as they could participate in therapy while engaging in other necessary activities. This would have been challenging with traditional in-person sessions. Another participant, recovering from a C-section, appreciated the ability to schedule sessions around their recovery and work commitments. The transition back to work and the need to allocate time from a busy schedule were significantly eased by the option of evening sessions.

"It was really tough going back to work. To go from being on leave where I had much more flexibility in my schedule, to then transitioning back to work and now having to take an hour out of my workday or out of the two hours I get with my son at night, was just a really hard shift." (participant 12)

Participants also emphasized the benefit of not needing to leave their homes, which was critical for new mothers managing busy schedules and multiple children. One participant highlighted that the flexible scheduling of sessions enabled participation without the extensive planning and coordination required for in-person visits.

"I definitely am someone who's outgoing and likes being around other people. But knowing that each week I had a flexible plan to do something was very beneficial."

(participant 19)

3.3.3 Tedious surveys

Participants frequently reported that the daily surveys were burdensome due to their repetitive nature and the considerable time required for completion. For instance, one participant noted that the constant need to reflect on their mental health was taxing and that the survey design was sometimes ambiguous.

"I know the survey is necessary, but I'm not sure why it's done verbally. It could be completed in the session so that the practitioner knows where you are at the start. It was tedious and took up a lot of time. Doing it verbally was difficult because the one-to-five rankings weren't consistent. It was taxing on my memory to go through all of those. Doing it together with something in front of us, just clicking through it, would be more helpful and make it easier to start every session." (participant 12)

Another participant described logistical confusion caused by receiving surveys through multiple channels, leading to misunderstandings about the completion requirements. The redundancy and volume of the questions contributed to survey fatigue, with suggestions for fewer, more streamlined questions or the option to occasionally skip them.

"The most confusing and annoying part was the surveys. I was getting some to my phone and some to my email, and I wasn't sure when I had finished one or the other. They were coming from two different spots, so I didn't know I was supposed to do all of them. It wasn't until the seventh week, during a check-in with Serena, that

I realized I should be completing them every day. If you want these surveys followed, make the process clearer. I was assuming the ones I did via email were enough, so I never opened the ones on my phone until three weeks ago. Clearer expectations would help. At the start of therapy, we did similar questions, so I didn't realize I needed to do them daily."(participant 2)

3.3.4 Willingness of Referral

13 in 15 participants expressed a strong willingness to recommend this therapy to others. Also, they highlighted the benefits of the online treatment's flexibility, which allowed them to fit sessions into their busy schedules without needing to attend in-person appointments. One participant mentioned that they would recommend the program to others, emphasizing its focus on personal well-being and the ease of participating remotely.

"I just had my assistant manager, who has a two-month-old now. In the beginning, she was asking me many questions, and I was happy to share with her. But I was also going through it too. At that moment, I was so tired and couldn't think straight. Now I've caught up with her, and she seems to be in a good place, but I'm sure she still has a lot of questions. I would suggest this program to people who are ready to go back to work and need help navigating that transition. Unfortunately, I did not feel I had a supportive work environment." (participant 9)

Another participant found the study so helpful that they were eager to refer others, praising the straightforward sign-up process and the substantial support provided. A participant noted that the program could be integrated with

regular pediatric or OB visits, making it convenient for new mothers to get the necessary help without additional effort.

3.3.5 Recommendations for future recruitment and study initiation

Participants indicate that as a new mother, they sometimes don't know where to seek guidance, being reached out would be very helpful.

"The thing is that as as new mothers, we just don't have time to think about this or to reach out for help. And for me, the fact that it came like this, it was just super helpful because I had no energy to do any kind of research." (Participant 15)

In the context of outreach, several participants expressed concerns about privacy and the nature of unsolicited contact.

"So hypothetically, how would you have felt if someone reached out to you and said that you may be eligible for this study based on your electronic medical record? And let me know if that term makes sense to you." (Interviewer)

"It's very overwhelming. I don't think I would really like that because I would feel like it is a bit of an invasion of my privacy." (Participant 1)

However, participants point out that they prefer to hear from trusted sources, for example, the doctor's office or medical institutions which they have

been to before.

"But I think if my doctor, who I trust and know had come to me and said, hey, there's a program or hey, there's you know, I've since learned about all these different groups that exist to provide support. If my doctor had provided me that information, I would have received it very well. It's not necessarily easy when like a stranger comes into your hospital room and starts talking to you about your emotional state, you know." (Participant 13)

3.4 Future-Study Preference

3.4.1 Group Sessions

The interviews with 17 mothers revealed diverse therapy session preferences, highlighting individual differences in comfort and needs. Five mothers strongly preferred 1-1 sessions for the focused attention and privacy they provided, especially valuable for those with introverted personalities uncomfortable in group settings.

[...]Just I think because as especially as among you, at some point you just want to be just for yourself, like for, like the therapy session should be just about you and that other people like all the time being about other people. So that's kind of like your moment. (Participant 7)

In contrast, the majority, comprising 12 participants, showed openness and acceptance toward group sessions, often describing them with positive terms such as ”interesting,” ”nice,” ”helpful,” ”open to learn,” and ”great to have.” These mothers appreciated group sessions for the opportunity to learn from the experiences of others, the supportive environment, and the sense of community they fostered. Hearing different perspectives and stories not only provided them with practical advice but also made them feel more connected and less isolated in their experiences.

[...]I think that would be awesome. Document that we kept talking about was like, want you to socially get out there. But it's like when you don't have like for somebody like me who just moved here, I have no place to start from. That would have been helpful. You've been in a group with other people and that would have at least started and a group of people who are, you know, in the same phase. (Participant 16)

Within the group favoring group sessions, five mothers advocated for a hybrid model combining 1-1 and group sessions, seeing it as a way to enhance therapy by merging tailored individual support with the peer learning and moral support of group settings. Additionally, three participants shared varied experiences with past group sessions. Two had less positive experiences, noting a decline in session effectiveness over time, while one had a favorable view. Of these, only one participant expressed reluctance to continue with group sessions due to their diminishing returns. However, the other two remained open to future group sessions, valuing the community support and shared learning opportunities they provide.

3.4.2 Virtual sessions

Among the 17 participants, preferences for virtual versus in-person therapy sessions showed a notable tilt towards the virtual format. While two participants expressed a strong willingness to engage in in-person sessions, highlighting quicker relationship building and fewer distractions, the majority recognized the practical benefits of virtual sessions. Nine participants acknowledged the advantages of in-person sessions like immediate personal interaction and undivided attention that fosters faster bonding and therapeutic progress. However, they also appreciated the greater practicality of virtual sessions, which allowed them to accommodate therapy into their busy schedules more easily.

[...]I know that like plenty of people have very different reactions to that and would much rather be face to face. But for me it was better and it made it feel like like we were able to do it at 7 p.m. on Wednesdays or Thursdays, which I, you know, work more than full time, like have a little kid. (participant 4)

Six participants explicitly preferred virtual sessions, citing the convenience of not having to travel and the ability to integrate therapy sessions into their daily lives at home, where they could also care for their children without interruption.

3.4.3 Treatment initiation and duration

Among the seven participants discussing the timing of initiating therapy, there was a consensus on the benefits of starting early, especially during vulnerable periods such as pregnancy and early motherhood. Views varied based on individual circumstances: some favored starting therapy during pregnancy to preempt postpartum challenges, while others suggested waiting until after birth to avoid overwhelming new mothers. The idea of an early start was widely supported, though some acknowledged the challenges of coordinating such timing with the demands of new motherhood.

Regarding the duration of the therapy, opinions were divided among participants. One believed the current nine-week length was sufficient and found it beneficial for their needs. In contrast, others argued for an extension, suggesting that a longer period—possibly an additional three to four weeks—would better facilitate the development of a therapeutic relationship and allow for deeper engagement. These participants highlighted the need for more time to address complex issues thoroughly and build a solid therapeutic foundation.

3.4.4 Technological Involvement

Self-paced modules

In discussions about incorporating self-paced modules into therapy, most participants displayed hesitation. Out of 13 participants, 11 expressed reluctance

toward using self-paced modules that operate via online or mobile platforms without live therapist interaction. This approach was introduced to enhance flexibility and autonomy in managing personal issues.

Yeah , I used to do that, but every time that I don't have like exactly halfway that I find that that is good for me to do it. I just do calendar in Google and that's it. [...], I cannot open and click. And this is like sometimes I don't think I feel good in. So I know also that I'm over there in the phone. (participant 8)

Participants predominantly favored live sessions over self-paced modules, emphasizing the value of personal connection and real-time interaction with therapists. They highlighted the essential role of direct communication for effective therapy, expressing concerns that self-paced modules lack the capability to provide the immediate feedback and emotional support critical for addressing complex emotional and psychological needs.

Software Tools

Among eight participants asked specifically about their willingness to use software tools such as tracking apps, six expressed a willingness to try these tools. Most participants appreciated how these digital tools help manage therapy sessions flexibly alongside daily responsibilities, particularly beneficial for those with children. The features like structured exercises, progress plot tracking, and asynchronous therapeutic activities were highly valued for maintaining continuity in therapy. These tools provide consistent prompts and reminders, en-

hancing engagement and ensuring steady progress throughout the therapeutic process.

I don't know that I would need my fitness track, but if there was an app for me to click on my watch to hear a meditation, that would be more helpful. (participant 2)

Wearable Devices

In the study of wearable devices for therapy, the overall sentiment among participants is positive, with 9 out of 14 ready to integrate these technologies into their therapeutic practices. They appreciate the functionality of wearables, such as tracking physical activity, sleep patterns, and providing real-time health data, recognizing the potential for these devices to enhance therapy by offering therapists tangible insights into daily routines and stress levels. However, alongside the enthusiasm, concerns about privacy issues and the risk of over-focusing on quantitative data persist. Skepticism also remains about the effectiveness of such data in therapy, with worries it could distract from critical therapeutic dialogues.

[...]Maybe encourage people like myself. I've thought about it since I had the baby. What if I had one of those? I could get a better understanding of my sleep and my sleep quality and how that may be affecting other things. And also, for exercise or activities. I could see the connection there. (participant 12)

3.4.5 Other related feedback

Participants in therapeutic interventions emphasized the need for clear definitions of their therapist's role and specific strategies for improvement, highlighting the importance of structured initial intake sessions. These sessions provide therapists with a comprehensive understanding of a participant's mental health history and personal challenges, crucial for setting realistic goals and expectations. Additionally, participants voiced a need for therapy programs to adapt to individual circumstances, such as requiring privacy or accommodating therapy into their busy schedules.

In discussing motherhood, the significant role of partner involvement was frequently mentioned. Participants shared how support or the lack thereof from partners profoundly impacted their recovery from postpartum depression and other related challenges. They suggested that therapy programs include partners in sessions to enhance understanding and support, emphasizing the importance of privacy during these discussions.

CHAPTER 4

DISCUSSION

Research on various therapies for postpartum depression (PPD) has demonstrated significant benefits. Cognitive Behavioral Therapy (CBT) effectively reduces depressive symptoms by modifying negative thought patterns and behaviors [4]. Interpersonal Therapy (IPT) enhances communication and builds social support, addressing interpersonal issues contributing to depression [5]. Group therapy provides emotional support through shared experiences, reducing isolation and enhancing social connections [3]. Psychodynamic Psychotherapy explores underlying emotional conflicts, offering benefits for those seeking deeper emotional understanding [7]. Telemedicine, including video conferences and app-based support, effectively delivers these therapies, improving accessibility and convenience for new mothers, with outcomes comparable to traditional face-to-face treatments [1]. These interventions offer flexibility, reduce barriers to accessing care, and can be tailored to individual needs. Overall, telemedicine is a viable option for treating PPD, offering comparable results to traditional face-to-face therapies while improving accessibility and convenience for new mothers [8]. This trend underscores the importance of leveraging digital platforms for engaging this demographic.

The findings from our study provide nuanced insights into the efficacy of the Engage & Connect program, which is specifically designed to meet the mental health needs of postpartum individuals. During the pre-study recruitment phase, we observed that traditional methods like physical flyers were less effective compared to digital strategies such as internet dissemination and online registration for participants, especially new mothers who may have limited

mobility. During the study, the timing of initiation varied widely among participants, with some starting as early as three weeks postpartum and others as late as forty-eight weeks. The primary motivations for joining the program were the need for treatment and access to free therapy, emphasizing the critical role of cost-effective and accessible mental health solutions for new mothers, who often face financial and logistical barriers to care. Regularly scheduled therapy is highly valued by participants because it provides a consistent, structured support system that enhances emotional stability and routine.

In terms of in-study feedback, participants faced some challenges but also noted improvements. Technical issues, such as connectivity problems, were commonly reported yet were generally resolved quickly, minimizing disruption. However, participants expressed concerns over the repetitive nature of the surveys and the inconsistency in therapist assignments. Despite these challenges, structured action plans significantly enhanced participant engagement by helping them manage their busy schedules more effectively. Notably, one participant reported a significant improvement in their experience after switching from a process-oriented therapist to one who offered more personalized support, highlighting the importance of tailored therapeutic approaches in enhancing treatment effectiveness.

Looking forward, the preference for group sessions revealed a significant desire among participants to connect with other new mothers who experienced similar challenges. The flexibility of virtual sessions was particularly valued, allowing new mothers to integrate therapy into their daily routines without the need for travel. Participants suggested starting therapy early in the postpartum period but recognized the challenges of coordinating this with new motherhood

demands. While self-paced modules were less favored due to the lack of real-time interaction, software tools and wearable devices were appreciated for their ability to track progress and manage therapy flexibly.

Overall, participants endorsed the program strongly, with 13 out of 15 willing to recommend it to others. The program's non-medication-based approach and the flexibility of online sessions made it a practical and accessible option for managing postpartum mental health, emphasizing the need for continued support and personalized care in future implementations.

The inclination towards virtual sessions among the participants can be attributed to the flexibility and convenience these sessions offer, especially relevant for new mothers and busy individuals. Virtual therapy removes the logistical barriers of travel and scheduling, making it a more accessible and less stressful option for many. It also provides the privacy and comfort of one's own home, which is essential when discussing personal and sensitive issues. Additionally, one participant's suggestion of home visits from therapists points to a need for even more personalized therapy options that accommodate individual preferences and circumstances. While virtual sessions offer numerous benefits, the data also suggests a potential integration of home visits could cater to those who prefer a more personal touch but find in-person sessions at clinics or hospitals stressful due to environmental factors.

The skepticism towards self-paced modules highlights a strong preference for traditional therapist-guided sessions, suggesting that self-paced modules may not fully meet the complex needs of individuals. Given these concerns, therapy programs should consider cautiously integrating self-paced modules, focusing instead on enhancing traditional therapy with supplementary digital

tools. This approach maintains crucial therapist interaction and avoids compromising the effectiveness of treatment due to the limitations of self-paced modules.

To address concerns with the integration of technology in therapy, such as the impersonality of digital tools and potential technical disruptions, therapy programs could adopt hybrid models. These models blend software tools with regular in-person or live virtual sessions, leveraging the efficiency of digital tools while maintaining essential direct therapist-client interactions. This approach could significantly enhance the effectiveness and acceptability of therapy by ensuring that technology complements rather than replaces the human elements of therapeutic engagement.

Furthermore, while wearable devices are valued for their ability to track health data like physical activity and sleep patterns, reservations about privacy and the potential overemphasis on quantitative data necessitate a balanced approach. There is skepticism about the effectiveness of this data in therapy, suggesting the need for these technologies to augment rather than dominate therapeutic processes. By using technology to support rather than overshadow core therapeutic goals, therapy programs can ensure that digital enhancements effectively contribute to treatment outcomes without compromising the integrity of therapeutic interactions.

To optimize therapy effectiveness, it is recommended that sessions begin with a clear and detailed intake process and that therapy is tailored to the unique needs of each participant. This approach includes extending support beyond standard sessions to more effectively integrate therapeutic strategies into participants' daily lives and maintaining a confidential and secure environment

to foster open discussions and ensure comfort.

Including partners in therapy sessions can provide a broader support system and help all parties understand the mental health challenges faced during motherhood. Addressing specific challenges related to motherhood within therapy can support mothers more effectively, improving family dynamics and overall well-being.

There's a lot we can do to improve therapy in the future. therapy programs should offer a hybrid model that incorporates both one-on-one and group sessions, catering to different comfort levels and therapeutic needs. Such an approach would ensure personalized attention while also providing the benefits of peer support and reducing feelings of isolation. In addition, it is recommended that therapy programs clearly outline what to expect from both group and individual sessions at the outset. Training therapists to manage and facilitate group dynamics effectively could further improve participant engagement and satisfaction, making the therapy experience more beneficial for all involved.

Furthermore, it is essential to empirically evaluate this hybrid approach in future studies to ensure that the efficacy of treatment is maintained. This would involve systematic assessment of therapeutic outcomes across both formats to determine the optimal balance and implementation strategies for combining group and individual therapy elements.

CHAPTER 5

LIMITATIONS

The sample size of our study is bit of limited. Besides, in this study, we did not involve racial and geographical elements. The results derived from a homogeneous group in New York City may not be applicable to the broader population. Finally, the relatively short duration of the study prevents assessment of the long-term impacts of the therapy.

CHAPTER 6

CONCLUSIONS

The ”Engage & Connect” program has demonstrated significant potential of telemedicine in addressing the complex needs of mothers experiencing postpartum depression in the context of psychotherapy. Through the innovative use of telemedicine and structured therapeutic interventions, the program successfully provides accessible, timely, and effective support to participants. This research highlights the importance of integrating digital health solutions in mental health strategies, particularly for conditions like PPD where traditional barriers can prevent effective treatment. Future efforts should focus on expanding access, enhancing engagement strategies, and continuously evaluating the outcomes to refine and optimize the approach for broader populations.

APPENDIX A

APPENDIX: POST-STUDY INTERVIEW GUIDE

Post-Study Interview Questions

Pre-interview reminders

- Health services researchers separate from the therapy team – we want to make these services better so we hope you can be totally open about your experience
- Your feedback can be as personal (or not) to your own experience as you feel comfortable with
- You can skip any question or stop/pause the interview whenever you like
- [Pause for their questions]
- Ask before beginning the interview and recording

Interview content

*Questions in italics, interviewer notes in regular typeface

Referral

Can you tell us more about the process of how you were referred to this study?

- *What made you want to be involved with the study?*
- *Hypothetically, would you be comfortable if you had been told you were referred due to data in your electronic medical record?*
- *At what point, if at all, do you think it is important to let people know that this is how they were referred?*
- *What questions would you have about this process?*
- *About what point postpartum did you start therapy? Did this seem like the right point for you?*

Therapy - overall

Would you recommend this program to a friend experiencing postpartum depression? Why or why not?

What could be improved about the therapy program?

What was helpful about the therapy program?

- *Are there elements of the program we should definitely continue?*

Modality

How did you feel about doing the therapy virtually as opposed to in person?

- *Did you experience any technical difficulties?*
- *Were there benefits to doing the therapy remotely?*
- *Are there any ways we can improve the delivery of the therapy remotely?*
- *Would you like to have the option to do the therapy in person?*

How would you feel about having group therapy sessions?

- *What questions would you have about this?*
- *Would you be open to all group therapy sessions or prefer a mixture with individual sessions?*

Additions to therapy – technology probes

Are there things you would recommend adding to therapy? [Ask open ended, then provide examples: a mobile app, resources for relaxation/meditation, articles regarding perinatal mood and anxiety, access to support groups for others experiencing similar issues]

- *Are there other forms of technology that you have used or heard of that may be helpful to integrate with the Engage & Connect therapy program? [Ask open ended, then probe about wearables such as Apple Watch, FitBit, etc.)*

Opportunity for self-paced modules

How would you feel about having some sessions as self-paced (I.e., not with a live therapist) online or mobile phone modules instead of a live session with your therapist?

- *How many sessions would you open to doing this way? (e.g, every fourth session, every third session, every other session)?*

Is there anything else we have not covered that you would like to share about your experience?

Four times where you had things flash on the screen, picture of your therapist looking happy or sad, you were supposed to hit the spacebar when you saw a white square

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