Complementary medicine for laboring women: a qualitative study of the effects of reflexology

Abstract:
Background: Despite pharmacological interventions, labor pain and anxiety still remain a challenge, and can carry long-term psychological complications. The goal of this study was to assess the effect of reflexology on these symptoms and to explore the physical and psychological components of women's experience associated with this treatment.

Methods: This qualitative study was conducted in an Israeli university hospital that offers integrative medicine services. Reflexology was offered to laboring women in the hospital, by the medical staff. In-depth, open interviews were conducted with 36 women, still in hospital, who consented to be interviewed, within 48 h after delivery. Questions referred to their labor experience with reflexology treatment.

Results: Of the 36 participants, 34 (94%) described a positive and empowering experience. They reported reduced pain and anxiety, and an increased sense of self-efficacy brought about by the ability to become active and manage labor.

Conclusions: Using reflexology as one of the complementary medicine treatment available can contribute greatly to the entire labor experience as it empowers women and increases self-confidence and ability to self-manage labor and delivery.

Keywords: childbirth, complementary medicine treatment, qualitative study, reflexology, self-empowerment, women's experience

Introduction

A woman’s memory of birthing may affect her postpartum adjustment [1]. However, objective circumstances alone cannot be related directly to a pleasant or an unpleasant birth experience [2]. Severe labor pain can lead to long-term psychological complications, disrupt the mother’s mental health, and have a negative effect on mother–infant relationship [3]. Research [4] has shown that post-traumatic stress disorder is becoming increasingly recognized as a possible consequence of childbirth, especially following birth difficulties.

Delivering a baby can provoke anxiety, and studies have been conducted to understand the physical and psychological mechanism of this anxiety and its effects. The professional literature [5] has described broad research, showing that anxiety associated with over-activation of the sympathetic nervous system and its accompanying vascular constriction can lead to a restricted blood flow between the uterus and placenta, which in turn can bring about a lack of nourishment for the fetus. In addition, the activation of the sympathetic nervous system produces higher levels of adrenaline, which could impair muscle contraction during labor. Furthermore, increased anxiety and an associated impairment in breathing can lead to muscle tension, impeding cervical dilation, and tightening pelvic-floor muscles [5].
The long-lasting symptoms of pain and anxiety should be targeted for intervention, as they can affect a woman’s functioning, the development of the relationship with her infant, and the care she provides for her baby [6, 7]. To minimize a woman’s negative experience of childbirth, it is important to gain knowledge of factors affecting maternal satisfaction, as well as those affecting pain relief and reducing anxiety levels. For this reason, effective control of delivery pain, as is control of other acute pain, is the most important social and health challenge [3].

Despite the many pharmacological solutions to relieving pain during labor, not all can be administered to every woman, either for medical reasons or for lack of the laboring woman’s consent. One solution is to turn to noninvasive and non-pharmacological complementary methods [8], among them psychological treatment during labor [9] and relaxation or visualization [10]. Other treatments include homeopathy and aromatherapy [11] and reflexology [12]. The support that such an intervention can provide, could reduce the need for pharmacological analgesia and increase birth satisfaction [13]. Using these treatments could empower laboring women to make individual choices for managing labor discomfort and pain, supporting them to see labor pain not as a problem to be solved, but as a process to be worked through [14]. According to Carvalho and Cohen [15], the psychosocial ramifications of maternal sense of control and satisfaction with pain management are of high value, and can have wide-ranging and long-lasting effects on maternal wellbeing as well as on the wellbeing of the wider family.

The current study focuses on the experience of laboring women who received reflexology as one of the available complementary medicine treatments, and was the treatment selected based on the availability of the hospital complementary treatment stuff at the time of the study. Reflexology is a special type of foot and hand massage and is non-pharmacological. Applying pressure on certain reflex points of the sole and palm breaks calcium crystals and uric acid accumulated in nerve endings. The pressure opens blocked nerve pathways, and improves blood flow in the entire body.

Studies have shown that reflexology reduces peri-procedural anxiety [16] and improves pain management and overall wellbeing [17]. Reflexology also showed positive effects on the management of chronic back pain [18, 19], and on reducing nausea, vomiting, and pain in patients with cancer [20, 21]. Reflexology for pregnant women has been found effective for treatment of nausea and vomiting, constipation, edema, fatigue, and headache, and, postpartum, enhanced lactation [22–24].

In their qualitative exploratory research on reflexology, Embong, Soh, Ming, and Wong [25] noted that most research on the subject has been quantitative. However, they claimed that qualitative studies gather beliefs and values from the respondent that are “not normally conveyed in quantitative survey study” [26, p. 330]. The few qualitative studies which examined women’s experience with complementary and alternative medicine during pregnancy showed a positive effect on women experience [26, 27].

The goal of this study is to explore the physical and psychological components of laboring women’s experience with reflexology. The findings may contribute to adequately assess outcomes of reflexology treatment during labor, not only as a means to alleviate pain and anxiety, but to enhancing the laboring woman’s confidence in her ability to manage her labor. Based on the finding, reflexologists will be able to fine-tune their treatment strategy to better meet the needs of laboring women.

Methods

This qualitative research was designed to seek out the meanings of the participants’ central themes, aiming to provide a broad understanding of their experiences. The research was conducted in Bnai Zion Medical Center, Haifa, Israel in 2016. Bnai Zion is a university hospital with an integrative medical service that provides complementary medicine treatments (e.g. hypnosis, guided imagery, acupuncture, and reflexology) to inpatients. These treatments are conducted with the full cooperation of the medical and paramedical staffs and in coordination with them [28].

Participants

The research was conducted on 36 laboring women from northern Israel, 29 (8%) Jews and 7 (19%) Arabs who received reflexology. The women ranged in age from 19 to 43 (M=31.42, SD=5.87); most (88.9%) were married, 58.66% had an academic degree, 25% were high-school graduates. For 16 women (44%) this was the first child, for 13 (36%) the second, and for 7 women (19%) their third child or more. Of the 20 women for whom this was a second or more birth, 14 had previously delivered vaginally, 5 by cesarean sections, and 1 had an assisted delivery. Two participants had previous experience with reflexology during labor.
Research tool

An in-depth interview (in Hebrew) was conducted with each participant up to 48 h postpartum. The researcher asked focused questions about the women’s labor experience, leading them to refer to the treatment they had received. At the beginning of each interview, demographic data were collected. The interview had three core questions, and these enabled the researcher to add questions according to the development of each interview: (1) Can you describe what you remember from the treatment you received during labor? (2) Did you feel any physical and emotional change during and after the treatment? (3) In general, what was your impression of this treatment and would you consider a reflexology treatment when you are in labor again?

The interviews were analyzed according to Sabar Ben-Yehoshua’s [29] protocol for qualitative data analysis. The analysis aimed to derive distinct themes regarding each of the questions, and began with a search for systematic, repetitive, visible, and direct content. Next, the researchers referred to the contents seeking frequency of appearance, and for the researchers’ subjective interpretation of its significance to the interviewees. Interpretation entailed dividing the contents into groups and identifying prominent themes, each of which was then given a title. A major theme, categories and subcategories derived from the interviews are presented in figure 1.

![Figure 1: Major theme, categories, and sub categories derived from the interviews.](image)

Procedure and ethical consideration

Prior to conducting the interviews, an ethical approval by the institution’s Helsinki committee was administered for the research (ethical approval no. 0041-09-BNZ).

Reflexology treatment was offered to the women by the medical staff – midwives and physicians – prior to their entering the birthing room. Two female reflexology therapists came to the laboring women and treated those who were interested. The treatment was given during latent and active labor, and as delivery approached, the therapists were asked to leave the room. The researcher received from the medical staff the names of the women who had consented to be interviewed and asked them to be interviewed about their treatment experience. Each laboring woman who was treated and who agreed to be interviewed signed a letter of consent regarding the participation in this study. Participation was voluntary, and participants’ anonymity and confidentiality were guaranteed. The women were assured that the data collected would be used for research purposes only, and were told that they were free to withdraw from the study at any time.

The interviews took place 24–48 h after delivery, when the women were still hospitalized. The interviewees consented to have the interviews recorded and the recordings were later transcribed. The interviews, conducted in Hebrew (for the seven Arab women, Hebrew was a second language), lasted about 40 min, according to the women’s general feeling and ability to cooperate. In three cases, the interviews were interrupted (and then resumed) by relatives’ visits or a physical examination.

Results

Content analysis of the interviews yielded a major theme – Sense of self-empowerment in which we identified four major categories and subcategories: Personal attention, trust and confidence, from passive to proactive, and self-management of pain.

Personal attention

The women sensed that unlike most of the medical staff who were mostly occupied with monitoring measurable progress and changes (e.g. dilation and fetal heartbeat), the reflexology therapists were focused on them and on...
their overall feelings, including their emotional and physical state. It was apparent that they were encouraged to see that the therapists’ top priority was that they have a positive labor experience.

I felt that the therapist did everything in her power to help me and to make it easier for me, I was her top priority.

She devoted time to me. Saw me and the problem I had that moment and did everything she could to help.

The participants felt that they meant a lot to the therapists, that the therapists wanted them to have a positive experience, and that they used their full toolkit to achieve this goal.

The therapist focused on me. She was there for me. It was really inspiring. She treated me according to my special needs and when I needed it. It wasn’t about the fetus’ position. It wasn’t about dilation, and not about the monitor. Just me.

**Trust and confidence**

The participants mentioned that the therapist was someone they could trust and really talk to during the treatment while they laid in the birthing room. They could reveal their feelings and fears, share what bothered them, ask for clarification regarding the procedure. Their conversation with the therapists during the reflexology treatment made them feel less pressured and better prepared for the delivery.

I was so nervous. I cried, everything was so tense. Her talks really met my fears. I cried during the time she was talking. She was fine with it. I’m even starting to cry right now (smiles). She understood my fears, and as it was my third birth, she said that my fears are understandable since I knew what’s ahead of me. I got her full permission to be afraid and unexpectedly I felt much more confident in myself.

Another woman, for whom this was second labor, described a high level of anxiety, along with a feeling of confidence:

The fact that she was with me, explaining everything that happened to me, was really reassuring … She kept explaining exactly what she was doing and how it might help me.

**From passive to proactive**

Unlike other interventions during labor (such as repeated vaginal examinations, intrusive assisted labor delivery, and cesarean section), which are made by the medical staff according to the progress of labor, the decision to receive a reflexology treatment is entirely up to the laboring woman. She is the one in charge of the whole process, and it was she who decides whether to receive treatment, the duration of treatment, and whether she wanted the session to end.

The fact that I was offered a treatment which I could try and see for myself if it suits me, was really good for me. I felt I was in charge. It was entirely my decision. It was different from all the other procedures I had to cooperate with, in the delivery room.

The combination of touch and talking with the therapist also encouraged the women to be active, to take more responsibility for the labor process.

The reflexology helped me help myself and try to lead the whole process in the direction I wanted.

The power of the therapist’s words was another issue raised by the participants as an influence, the participants referred to a feeling of self-control that her words gave them:

She made me believe in myself that I can influence the whole process.

She made me realize that the stress I was under, held me back. She taught me how to let go.

I really felt that I can control my body, it responded to me as I wanted it to. As labor progressed, I felt more and more secured, it’s like a snowball.

The fact that it is was the woman who decided to receive this treatment was also experienced as something that speeds up labor, and made the whole process shorter and more intense. Some of the women said that right after treatment they reached complete dilation, some said that they believe that their treatment certainly relates to the fact that the baby was out only a few minutes after the treatment. In their opinion, their own decision to receive reflexology treatment was related to the good results they experienced.
**Self-management of pain**

The ability to control and manage the pain was another aspect of which the women were aware. They described the treatment as a holistic experience, in which they learned a few techniques that made it possible for them to relax also after the therapist had left the room.

While she touched a certain point on my feet the therapist told me to breathe deep and slow when I had a contraction. She also told me to think about positive things. I responded to it, it helped. I was in charge.

It’s not that suddenly I had no pain. The pain was there but I felt it differently, like I was floating.

I could breathe into my pain, I felt the contraction and it was painful, but I kept on breathing and felt that I’m in control.

She taught me how to relax. I felt her also after she left. I continued to breathe as she taught me, I felt I could help myself.

The combination of touch, talk, and being listened to, encouraged the women to focus on their body and on their labor. Consequently, they felt more aware of their body and more empowered to manage the pain.

**Summary of research findings**

Of the 36 participants, 34 reported having had a positive and empowering experience. They felt that the labor was less painful, accompanied with lower anxiety levels, and with an increased ability to become active and manage delivery. Two mentioned that the treatment was pleasant, but they were not sure whether it had actually helped them. The significance of these finding is detailed in the Discussion.

**Discussion**

The aim of the current qualitative study was to learn about the way women experience foot reflexology as one of the available complementary medicine treatments during labor.

Our findings reveal an empowering experience for most of the participants. The women associated the treatment with lower pain levels and lower anxiety levels, and with an increased ability to become active and manage the entire birthing process. Our findings clearly indicate that while describing their experience, the women made a strong connection between their experience of the treatment and their own increased ability to manage the pain, emphasizing their self-trust and feelings of confidence, faith in their own power to handle the challenge of the birthing process. Turning to complementary medicine as part of an effort to maintain and control health condition, also discussed in other studies [30, 31].

While describing their own experience, the women referred to the holistic experience they had with the therapists, including the conversations they had with them, the touch and the special connection that was created between them. Previous studies have already demonstrated that during labor, reflexology was found to lower pain, anxiety, and stress [12, 18]. The participants in the present study referred to the therapy they received in a more holistic manner, emphasizing emotional wellbeing, not only the alleviation of physical symptoms. This lead us to conclude that the special and personal interaction between a therapist and a patient is unique and original. The fact that the therapist responded to the woman’s feelings and state of mind and did not focus mainly on their body, strongly impacted the entire experience. Women described their interaction with the therapist as empowering and as one that enhanced their ability to manage their pain. Even after the therapist had left the room, the women retained their self-confidence and experienced less anxiety during delivery. In other words, and in line with Mitchell [27], the fact that the women in labor felt that there was someone who was there for them, fully attentive and dedicated to them in these crucial hours, had power and efficacy, both physically and emotionally. This insight led us to wonder whether the short-term relationship with the complementary medicine therapist differs from that with the midwife or midwives who attend the birthing woman throughout labor and delivery. Researchers [27, 32, 33] have found that there is indeed a special connection created between a therapist and a woman in labor, a connection that is usually not likely to evolve with a midwife. However, we must bear in mind that while the therapist has only one duty – to tend to the laboring woman, the hospital midwife has multiple responsibilities, many of which are to be carried out simultaneously, often hindering her ability to reach a profound and meaningful connection with a woman during labor. According to Mitchell [27], “When midwives work within systems constrained by obstetric ideology and risk dominated policies they find...
it impossible to develop connecting relationships with women. They no longer have the option or the time to provide individualized care” (p. 5).

Therapists use special strategies and behaviors to create an environment that improves client trust and communication, allowing people to feel safe to discuss their worries and concerns [34]. A recent study [35] of massage therapists also referred to the importance of clear communication and a comfortable treatment environment. These two factors were related to a positive treatment experience where patients felt that the therapist meets their needs. The participants in the current research expressed this component in the unique connection with the therapist. However, as mentioned above, the therapist had one task, and one task only. Given the constraints of a modern health system, the therapist took part of the traditional role of the midwife, being hands-on and supportive, while the midwives were working according to a demanding hospital protocol that often deters from their ability to spend time with the laboring woman.

Research limitations

The present study is qualitative, and hence the sample (36 laboring women), is relatively small. Also, due to hospital routine (doctors’ visitation, nurses who take measurements, presence of family members) some interviews were interrupted or lacked privacy. It is also possible that a day or two after delivery was not the optimal time to conduct the interviews – perhaps a few additional days would have given the women an opportunity to process their experience more profoundly and more perceptively.

Furthermore, no attempt was made here to qualitatively compare the experience of women who received reflexology with those who received standard pharmacological treatment. It might be interesting to conduct this comparison, and also to investigate whether they would seek such treatment in labor if they were to have another child.

Another limitation lies in the notion that based on the current study the specific contribution of reflexology to the positive impact on women’s ability to manage the labor process, is not clarified – it is impossible to separate the influence of the reflexology itself (touch and pressure) from the influence of therapist–patient interaction with its associated psychodynamics. To reach an accurate understanding of each of these components of the treatment, more research is required, where each component will be examined by itself, preferably with two types of groups – research and control groups.

Conclusions

This study led us to conclude that the interaction created between a complementary therapist and a patient is unique and original, especially when the treatments require constant presence and interaction (unlike acupuncture that enables the therapist to leave the room after needle insertion). The therapist’s holistic approach to the therapy enables reflexology during labor to improve the physical and the emotional wellbeing of the women. It is highly recommended to policymakers therefore, to enable an inclusion of complementary methods in birthing rooms The way the therapist responded to the women’s feelings and state of mind, empowered the women and strongly impacted their entire experience in a positive manner.

Author contributions: All the authors have accepted responsibility for the entire content of this submitted manuscript and approved submission.

Research funding: None declared.

Employment or leadership: None declared.

Honorarium: None declared.

Conflict of interest: The authors declare that there is no conflict of interest of any kind (financial, personal or professional) in connection with this manuscript. The authors declare they take full responsibility for the entire content of the manuscript.

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