

# Physiotherapeutic assistance during labor

*Assistência fisioterapêutica no trabalho de parto*

*Asistencia fisioterapéutica en el trabajo de parto*

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**ABSTRACT** | Labor is a natural event; a subjective and complex experience changing from woman to woman. Physiotherapeutic intervention in obstetric assistance values women's autonomy during labor by the active use of their bodies and non-pharmacological methods of pain management. Our study aimed to assess puerperal women's perspective in face of the physiotherapeutic assistance received during labor. This study uses qualitative, descriptive, and exploratory approaches. Data were collected by a semi-structured survey for profile characterization and open-ended interviews containing questions on physiotherapeutic assistance and childbirth. Bardin's content analysis was used to treat data. In total, 12 puerperal women were included. By analyzing the content of our survey, we created three main ideas: childbirth experience; physiotherapeutic assistance; and physical therapy for pain relief. We can conclude that in the perception of puerperal women, physiotherapeutic assistance plays an important role in reducing pain and anxiety, as it contributes to their emotional support and promotes relaxation.

**Keywords** | Physical Therapy Modalities; Labor, Obstetric; Delivery Rooms; Surveys and Questionnaires.

**RESUMO** | O parto é um acontecimento natural, sendo uma experiência subjetiva e complexa que varia de mulher para mulher. A intervenção fisioterapêutica na assistência obstétrica, valoriza a autonomia da mulher no processo de trabalho de parto, por meio do uso ativo do corpo e de métodos não farmacológicos para alívio da dor. O presente estudo buscou verificar a percepção da puérpera frente à assistência fisioterapêutica recebida durante o trabalho de parto. Trata-se de uma pesquisa qualitativa, descritiva e exploratória. Os dados foram coletados através de questionário semiestruturado para a caracterização do perfil e entrevista aberta, com perguntas relacionadas à

assistência fisioterapêutica e ao parto. Para a análise dos dados, utilizou-se da análise de conteúdo de Bardin. Foram incluídas 12 puérperas. A partir da análise do conteúdo das entrevistas, foram criadas três ideias centrais: experiência do parto; assistência fisioterapêutica; fisioterapia para alívio da dor. Pode-se concluir que na percepção das puérperas, a assistência fisioterapêutica tem um papel importante para a redução do quadro algíco e ansiedade, pois contribui para o suporte emocional, além de promover o relaxamento.

**Descritores** | Modalidades de Fisioterapia; Trabalho de Parto; Salas de Parto; Inquéritos e Questionários.

**RESUMEN** | El parto es un evento natural, y una experiencia subjetiva y compleja que varía de una mujer a otra. La intervención fisioterapéutica en la asistencia obstétrica valora la autonomía de la mujer en el proceso de trabajo de parto por medio del uso activo del cuerpo y métodos no farmacológicos para el alivio del dolor. El presente estudio pretendió conocer la percepción de la puérpera sobre la asistencia fisioterapéutica recibida durante el parto. Esta es una investigación cualitativa, descriptiva y exploratoria. Los datos se recolectaron de un cuestionario semiestructurado que caracterizaba el perfil, y de entrevista abierta, con preguntas relacionadas con la asistencia fisioterapéutica y el parto. Para el análisis de datos se utilizó el análisis de contenido de Bardin. Participaron 12 mujeres puérperas. A partir del análisis del contenido de las entrevistas, se establecieron tres ejes centrales: experiencia del parto; asistencia fisioterapéutica; fisioterapia para aliviar el dolor. Se concluyó que la asistencia fisioterapéutica desde la percepción de las puérperas desempeña un papel importante en la reducción del dolor y la ansiedad, ya que contribuye al apoyo emocional y promueve la relajación.

**Palabras clave** | Modalidades de Fisioterapia; Trabajo de Parto; Salas de Parto; Encuestas y Cuestionarios.

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## INTRODUCTION

Pregnancy and birth are unique events in women's lives, generating varied feelings and emotions, and are considered singular experiences in their lives<sup>1</sup>. Labor is a natural event, and the pain of childbirth is a subjective and complex experience that varies among women<sup>2</sup>. This is a physiological process related with several emotions and can be a joyful and empowering experience, but it can also cause negative results generating fear and anxiety<sup>3</sup>.

Labor pain may have physical or psychological causes. Physical factors include uterine contractions, cervical dilation, among others<sup>3</sup>. Psychological factors relate to fear and anxiety, previous negative experiences, support, and inadequate knowledge of the experienced moment<sup>3</sup>.

Physiotherapeutic assistance can help women prepare themselves and become aware of the need to remain calm and relaxed during labor<sup>4</sup>. For this, physical therapists may use non-pharmacological methods of pain relief and techniques that allow the strengthening of the pelvic musculature and body awareness to relax them and reduce their pain<sup>4,5</sup>.

Non-pharmacological methods for pain relief during labor provide significant benefits to women without causing them additional harm<sup>6</sup>. The World Health Organization<sup>7</sup> (WHO) recommends some methods, among them music therapy, breathing techniques, massages, hot compresses and other techniques that may vary according to the context. Another WHO recommendation<sup>7</sup> for women with low-risk pregnancies is adopting vertical postures and mobility.

Given this, physiotherapeutic intervention in obstetric care values parturients' autonomy via the active use of their bodies<sup>8</sup>. The physical therapist's function is mainly to inform women on the pelvic floor musculature, pain relieving positions, breathing exercises and pelvic mobility<sup>8</sup>. Their presence is a stimulus for parturients to understand that their bodies can be instruments to facilitate labor<sup>9</sup>.

Therefore, our study aims to assess puerperal women's perception of the physiotherapeutic assistance received during labor.

## METHODOLOGY

This is a qualitative, descriptive and exploratory study developed in the obstetric center of the maternity of a

large hospital located in the northern area of the Rio Grande do Sul state.

In total, 12 puerperal women were included in our study, selected according to the following inclusion criteria: aged 18 years or older; with a final gestational age equal to or greater than 37 weeks; single fetal pregnancy; vaginal postpartum with physical therapy assistance; agreed to participate in the study and signed an informed consent form. Women meeting the following criteria were excluded: aged under 18 years old; with a gestational age under 36 weeks and 6 days; women who received physiotherapeutic assistance, but had cesarean sections; and foreign females.

Parturients received physiotherapeutic assistance after admission to the obstetric center. Non-pharmacological methods for pain relief – pelvic mobility exercises, vertical postures, among others – were applied. These measures were taken with parturients' permission and there was no care protocol to be followed.

Data was collected between June and September 2020 via interviews. The puerperal women were invited to participate after childbirth. A questionnaire was applied to assess participants' profiles; their socioeconomic, demographic, and obstetric antecedents. An open-ended interview on childbirth, labor information, and physiotherapeutic intervention was also conducted. Interviews were conducted during their hospitalization in a favorable environment, with only the researcher and the participant present to preserve their anonymity and confidentiality.

Profile data were collected via Google Forms and percentages for frequency analysis were used for their description. The open-ended interviews were recorded via a voice recorder, transcribed, and analyzed to extract from the audios significant data for our study. Data were analyzed via Bardin's content analysis<sup>10</sup>, divided into three stages: pre-analysis; exploration of the material; interference and interpretation.

To maintain participants' anonymity, interviews were identified alphanumerically by a code with the letter P and the number of the interview, from P1 to P12.

## RESULTS

To describe the participants, we characterized their sociodemographic and obstetric profile, described in Table 1 and 2, respectively.

Table 1. Characterization of participants' sociodemographic profile

Characteristic	n	%
Age		
19-24	6	50
25-30	4	33.2
>31	2	16.6
Marital status		
Single	1	8.3
Married	3	25
Common-law marriage	8	66.7
Schooling		
Incomplete elementary school	1	8.3
Incomplete high school	4	33.3
Complete high school	5	41.7
Some higher education	1	8.3
Complete higher education	1	8.3
Occupation		
Administrative assistant	2	16.7
Inspection assistant	1	8.3
Cleaning assistant	1	8.3
Domestic services	2	16.7
Pharmacist	1	8.3
Microentrepreneur	1	8.3
General services	1	8.3
Saleslady	3	25

Table 2. Characterization of participants' obstetric profile

Obstetric Characteristic	n	%
Prenatal		
Complete	10	83.3
Incomplete	2	16.7
Gestational age		
37 weeks	2	16.7
38 weeks	5	41.7
39 weeks	3	25
40 weeks	2	16.7
Parity		
Primiparous	6	50
Multiparous	6	50
Previous pregnancies		
One	4	66.7
Two	2	33.3
Comorbidities/Infections		
GDM	1	8.3
MHD	2	16.7
Hypothyroidism	1	8.3
UTI	2	16.7
Syphilis	1	8.3
Toxoplasmosis	1	8.3
Absent	6	50

GDM: gestational diabetes mellitus; MHD: maternal hypertensive disorder; UTI: urinary tract infection.

Participants reported their experiences with delivering and the physiotherapeutic assistance received during labor. We constructed three central ideas from reading and organizing the contents of the interviews: Childbirth experience; physiotherapeutic assistance; and pain relieving physical therapy.

### Childbirth experience

Participants described childbirth as a moment different from what they expected, a unique experience, as the reports show:

*I think it was very different from what I imagined, you know? (...) than what people were talking about. I thought it was much easier (...) I think it's an exciting (...) thing (...) only you know how it will be for you. I think it's a unique experience. (P8);*

*It was surreal. It was really, really transformative (...) it was nothing like I imagined (...) totally different from what I expected. (P7).*

They also described labor pain:

*It was something different, you know? It wasn't so bad. (...) It's the contraction that hurts the most. (P2);*

*Really painful, pretty different from anything I had felt before. But, in the end, I felt relieved. (P12).*

We observed that women who had previous vaginal deliveries had better childbirth experiences than before. The participants stated:

*Look, my first delivery was awful (...) a horrible experience. But my second and this one... were a breeze. (P1);*

*This one was better (...) this was better than the first. A lot of real patient people helping you out and my husband right next to me, you know? (P6).*

When asked if they had access to information on labor during prenatal care and if they knew who could assist them at that time, they answered:

*No, I got checkups, but, like, no one went into details about the delivery. We went to the consultations to see*

*how everything was, but details (...) of how the delivery would be, no. (P12);*

*No, I thought it was just him, I didn't think there'd be anyone else like that to help me. (P8).*

## Physiotherapeutic assistance

Regarding the physiotherapeutic assistance received during labor, most puerperal women reported that the intervention performed helped them at the time to feel safe and relieve pain. They reported:

*It helped me a lot (...) the talk about breathing, you know? 'Cause we get really scared when the time comes, so it really helps a lot. It's really nice to have someone like that by you. We feel safer.(P3)*

*(...) It helped me a lot, helped me keep cool, helped me not feel much pain, to focus (...) For me, it was really good, helped me a whole lot. (P6)*

In addition to contributing to physical aspects, we can observe the emotional support for parturients in labor. They expressed how important it was to have someone by their side at that moment:

*It was wonderful. I think physical therapy made all the difference. It helped me a lot, the emotional and physical support. (P7)*

*(...)Me, by myself, first son, you don't know what you're doing. Don't know if you gotta breathe. No one tell us that. The person who came with you usually can't explain what's going on (...) 'cause the pain is huge. So, it was key (...) if they hadn't helped me, I don't know if I'd made it, 'cause it's really tough. (P5).*

Parturients reported how having someone by their side motivates and teaches them what can be done to optimize labor:

*I think it was very important because even if you're alone, you don't know what you'll have to do (...) so if somebody's helping*

*you, is there with you, checking what you gotta do. I think it's much better. I thought it was very important. (P8);*

*'Cause it's a lot of pain (...) We can't think. The pain comes and takes over your whole body. So, if you don't have anyone there with you, telling you what to do, you lose it (...) and you can't do anything anymore (...) It helped me a lot, 'cause I think that if I didn't have anyone telling me "Do this", "Do that", I don't think I'd pulled through(...) For me, it was really important. (P4).*

## Pain relieving physical therapy

All participants reported that physiotherapeutic assistance relieved pain during labor. Among the non-pharmacological methods used, they cited massages, baths and the Swiss ball as the main means for this relief. According to the reports:

*(...) the massage was very important, like, when we were there in the shower. So much so that the contraction really eased up on me. I mean, like, eased up, 'cause when I felt that contraction out of the shower and without the massage... Jesus, it was horrible. (P9)*

*Yes (...) that part of the shower really helped, the massage(...) felt like they took the pain away with their hands.(P5)*

*It was more the exercises, really (...) I thought I couldn't do squats, I thought the pain was going to get bigger and it was the other way around, you know? When I crouched, I felt that instead of the contraction getting stronger, I felt that relief. So, all that exercise and massage were great, better than any medicine. Wonderful. (P1)*

Promoting a calm and welcoming environment also helped them relax. The participants cite music therapy as a contributing factor for reducing pain and anxiety:

*(...) all that time under the shower helped me a lot! And the music relaxed me a lot. Plus all the exercises done under the shower. (P7)*

*The back massage part, the music and the ball part with the shower. I liked that a lot. (P10)*

## DISCUSSION

According to the participants, we can highlight physical therapy as a significant character in facing labor. Participants had a mean time of approximately 4 hours and 50 minutes of labor. The average duration of labor in our study is similar to the findings in Eliane Bio's study<sup>9</sup>, with an average duration of approximately 6 hours. We observed interventions such as episiotomy in 33.3% of the women, 25% had second-degree lacerations and 25% retained perineal integrity.

During childbirth many feelings flow, such as joy, excitement and even fear of the pain generated in this period<sup>11</sup>. Pregnant women expect the moment of childbirth, and its meanings are (re)constructed dynamically according to experiences or reports. It is also considered a feared moment due to ignorance of what may happen. Pain and fear influence expectations for childbirth<sup>12</sup>. Inserting physical therapists in delivery rooms can improve the quality of delivery care<sup>9</sup>.

A study conducted in Sweden<sup>13</sup> reports that previous delivery experiences are a contributing factor for women fearing childbirth. In our study, we could observe that, although participants reported first deliveries negatively, they found later deliveries to be positive experiences.

Psychosocial factors of maternity care in all phases of childbirth are important psychosomatic factors serving as a significant criterion for women's satisfaction. Healthcare must take into account women's psychosocial needs during labor. Creating a comfortable, calm, and emotionally favorable environment can improve labor and positively influence the experience<sup>14</sup>.

Women need a psychosomatic structure during childbirth, and it must be prepared during pregnancy<sup>9</sup>. The predominance of puerperal women who received no adequate guidance during prenatal care indicates the existing difficulty of communication in health services, generating a stimulus deficiency and lesser dissemination regarding the efficacy of non-pharmacological methods for pain relief<sup>15</sup>. Informing parturients of non-pharmacological methods for pain relief can provide humanized care for them, as the WHO recommends<sup>7</sup>.

The physical therapist's presence during labor contributes to the parturients' confidence and safety during childbirth<sup>16</sup>. A study conducted to verify nurses' care during labor found that they made a difference

in the care provided, contributing to a positive and humane experience, reducing parturients' anxiety and fears generated in the process<sup>17</sup>. The positive results can also be interpreted as the emotional support provided by the physical therapist and not only by body mobility exercises<sup>9</sup>, corroborated by the findings of our study.

A study conducted in Zamora, Spain<sup>11</sup>, assessed the attitude parturients' partners would have during childbirth. Participants reported doubt for believing their partners would be unable to give them continuous support and become even more nervous. These findings agree with the reports in our study. The importance of the presence of parturients' companions of choice is unquestionable, because their attributions are different from physical therapists'.

In our study, the most cited means to reduce pain were hot baths, massages in the lumbosacral region and the use of the Swiss ball. Baths are considered an accessible, non-invasive and low cost method to improve blood circulation and favor muscular relaxation promoting comfort for women<sup>1</sup>.

Massages occupy an important place in pain relief practices as another effective, low-cost and easy-to-apply method. Massages are used during labor to relax parturients, decrease pain and anxiety, resulting in greater satisfaction and positive perception of the labor process<sup>3</sup>.

Performing pelvic mobility movements with vertical postures promote greater uterine activity which can reduce labor time<sup>9</sup>. The use of Swiss balls is part of the strategies for performing movements during childbirth, allowing the performance of exercises with the woman sitting on the ball, allowing smooth pelvic movement, promoting women's relaxation and their active contribution to the process<sup>5</sup>. It can also be associated with other features such as shower baths and massages, reducing pain perception and increasing parturients' comfort<sup>5</sup>.

Some systematic and integrative review studies highlight that non-pharmacological methods for pain relief during childbirth can provide significant benefits to parturients without harming the fetus. Warm shower aspersion, music therapy, aromatherapy and breathing techniques relax and reduce anxiety levels<sup>18,19</sup>. The physical therapy intervention in childbirth care values parturients, making their body an instrument to facilitate labor, thus generating a satisfactory experience<sup>9</sup>.

When submitted to normal delivery, women are at risk of perineal trauma, and we observed a high

percentage of episiotomy. This procedure can cause women injuries, discomfort and biopsychosocial impairments, with consequences on their self-esteem, pelvic floor and family context<sup>20</sup>. Primiparous women had the highest incidence of episiotomy and second-degree lacerations. On the other hand, multiparous women showed greater perineal integrity and first-degree laceration, corroborating Riesco et al.'s findings<sup>21</sup>. Interventions should be carefully evaluated to provide a unique experience and prevent the onset of childbirth-related trauma<sup>22</sup>.

Our study has as limitations its low participant number, a single hospital institution as its place of study, and participants' low to moderate schooling was a limiting factor for extracting content from the interviews. We emphasize that the participants had undergone no follow-up with a physical therapist in preparing for delivery, and that this was often their first contact with a physical therapist, sometimes evidencing their ignorance of their function.

## CONCLUSION

The findings of our study allow us to conclude that in the perception of puerperal women, physiotherapeutic intervention helps reducing pain, anxiety and promoting relaxation. In addition to contributing to their emotional support, bringing greater confidence and security, and providing a positive and humanized childbirth experience. Though we need more studies on the subject, we highlight the importance and need for more physical therapists in obstetric centers.

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