

Needs, Obstacles, and Experiences of Parturients and Health Professionals during Labor Pain Management in Two Maternity Hospitals in Benin

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How to cite this paper: Dossou, A.J.E., Otti, A., Avanon, J., Sossa, C.J. and Dallaire, C. (2026) Needs, Obstacles, and Experiences of Parturients and Health Professionals during Labor Pain Management in Two Maternity Hospitals in Benin. *Journal of Biosciences and Medicines*, **14**, 59-72. <https://doi.org/10.4236/jbm.2026.141005>

Received: November 19, 2025

Accepted: January 1, 2026

Published: January 4, 2026

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Abstract

Introduction: Labor pain is the result of a complex interaction of several physiological, psychosocial, cultural, and environmental factors, making its management difficult and challenging for caregivers. This study aimed to explore the needs, barriers, and experiences of parturients and healthcare professionals in managing labor pain in this context. **Methods:** An exploratory descriptive qualitative design with non-probability sampling was adopted and allowed the recruitment of 40 women who had given birth and 10 health professionals (8 midwives and 2 nurses). The intervention research method of Sidani and Braden (2011) was used for data collection. A thematic analysis with triangulation of experiential, empirical, and theoretical data for understanding the problem has been carried out. Also, using Roy's model as a theoretical framework, the results were grouped according to the model adaptation modes and in relation to the goals of this stage of the Sidani and Braden (2011) method. **Results:** Faced with the medicalization of childbirth, women express a strong reliance on non-pharmacological approaches (NPAs) to relieve pain. NPAs promote a more woman-centered model of care, with a holistic view of the woman and consideration of her psycho-socio-cultural particularities. The needs and adaptation difficulties of the parturient in the four adaptation modes (comfort, relief, emotional and psychological support, social support) were identified. Healthcare professionals report a lack of training, clear protocols, and time to

implement these methods due to workload and organizational constraints. Identified barriers also include inadequate infrastructure, cultural beliefs, and a preponderance of pharmacological use. PDAs are perceived as effective but not integrated into practices. **Conclusion:** The adoption of ANPs requires a systemic approach, combining training, awareness-raising, institutional protocols, and appropriate material conditions. Their integration could improve the quality of the childbirth experience, reduce perceived pain, and increase maternal satisfaction, thus contributing to humanizing childbirth in Beninese maternity wards.

Keywords

Pain, Labor, Childbirth, Non-Pharmacological Approach, Complementary Therapy, Benin

1. Introduction

Labor pain is the result of a complex interaction of several physiological, psychosocial, cultural, and environmental factors [1] [2], making its management difficult and a challenge for caregivers. Labor pain is considered a stimulus, a complex experience. It is a multidimensional process that involves mechanisms normal biological and physiological, to original interpretations psychological and social, which interact in a dynamic circular manner, and whose components can occur separately or together [3] [4]. This is a physiological process linked to the intensity and frequency of uterine contractions that causes the dilation of the cervix and the descent of the fetal mobile. This phenomenon, inevitable at term, causes intense pain at the heart of the birth experience [5] [6] whose effects on maternal well-being are widely documented [5] [6].

Thus, the birth of a child is a pivotal moment in the life of a woman and her family, marked by physical, physiological, emotional, psychological, and social changes [7] [8]. In many resource-limited countries, effective relief of labor pain remains a challenge [6] [9]. Even though the World Health Organization (WHO) recommends intervening from the first stage of labor to improve the comfort of the parturient, by combining, depending on the context, pharmacological options and non-pharmacological interventions [10].

In Benin, as elsewhere, recent decades have seen a progressive medicalization of pregnancy and childbirth, with increased recourse to medical interventions (oxytocin infusion, amniotomy, caesarean section) often performed outside of strict indications [10] [11]. In this context, for example, there is a common practice of inducing labor with oxytocin. The systematic administration of oxytocin to accelerate labor deemed “slow” without true dystocia is widespread, promoting excessive medical intervention and uterine hyperstimulation, beyond evidence-based protocols. This trend, justified by the desire to reduce maternal and neonatal mortality [12], is accompanied by less consideration of the physiological resources and preferences of women [13]. Several studies have shown that unnecessary medical interventions,

whether in the latent or active phase, can prolong the duration of labor and increase the risk of complications [14] [15].

In many African countries, including Benin, giving birth in a health facility often takes place in difficult human and material conditions: lack of respect for privacy, refusal of the presence of a companion, verbal abuse, non-compliance with standards of care, and insufficient pain management [16] [17]. Non-pharmacological approaches (NPAs) (such as massage, structured breathing, mobility, and continuous support) are recognized as effective in relieving pain and humanizing childbirth [18]. However, their use remains ineffective in Benin, often due to a lack of training for professionals, an absence of institutional protocols, and insufficient material resources.

Given this observation, it is essential to better understand how women in labor and maternity health professionals manage labor pain in the Beninese context.

2. Methods

2.1. Type and Framework of the Study

This was an exploratory qualitative descriptive study that took place in two maternity hospitals in southern Benin: The Lokossa Zone Hospital and the Comé Communal Health Center, two facilities without an operating theater or obstetrician-gynecologist, where deliveries are carried out by midwives and nurses.

This is an intervention research based on the approach proposed by Sidani and Braden [19]. The method proposed by Sidani & Braden (2011) unfolds in three stages: development, evaluation, and implementation. The three main phases of the development stage addressed in this study are: 1) understanding the problem under study through a clarification of its nature, its manifestations, the factors influencing the problems, the level of severity with which it is experienced, and the consequences; 2) selecting appropriate interventions; and 3) theorizing the intervention, indicating its mechanism of action and how it addresses the identified needs. This third phase is necessary for developing the intervention manual. At each stage of this process, three types of data were collected (experiential, empirical, and theoretical) (Sidani & Braden, 2011) [19]. In addition to the three main phases, a fourth phase includes a pilot project with a pre-experimental design. This phase involves the implementation and evaluation of the selected interventions, as well as the feasibility and acceptability of the intervention protocol. The results of the pilot project are used to refine the intervention protocol. In summary, for this study and methodology, the experiential approach collected data from individuals who had experienced the problem, while the empirical approach gathered research findings necessary for understanding the problems or needs arising in the management of labor pain. Finally, the theoretical approach highlighted what can be influenced and how this can occur. The inductive and deductive approaches were combined during the analysis, with triangulation of the three data sources—experiential, empirical, and theoretical—allowing for the establishment of a list of needs and a list of interventions at the end of phases 1 and 2.

The study was conducted in two maternity hospitals in southern Benin: The Lokossa Zone Hospital and the Comé Communal Health Center, two facilities without an operating theater or obstetrician-gynecologist, where deliveries are carried out by midwives and nurses.

2.2. Conceptual Framework

Roy's adaptation model served as a conceptual framework, considering the parturient as a holistic adaptation system interacting in a life process with the environment in four modes: physiological, self-concept, role function, and interdependence, with all of its needs for adaptation and maintenance of its integrity [20]. This model emphasizes the changes experienced by human beings when they react to stimuli (all conditions, circumstances, and influences present in the internal or external environment that affect the person) while using innate or acquired adaptation mechanisms (biological, psychological, or social) to maintain their integrity which can be reinforced by nursing interventions [20]. According to Roy's conceptual model, the factors that influence adaptation are focal, contextual, and residual stimuli. These concepts of focal, contextual, and residual stimuli were used to structure the needs assessment in a comprehensive and personalized way. Focal stimuli correspond to the direct and immediate elements affecting the woman in labor, in this case, the pain experienced during labor, which is assessed according to its physiological characteristics and the physical and emotional reactions it elicits. Contextual stimuli include environmental, social, cultural, and personal factors that influence the perception and management of pain, such as family background, beliefs, and social support, allowing care to be tailored to each woman's specific needs. Finally, residual stimuli encompass more subtle or subjective influences, such as experiences, unconscious fears, or deep-seated beliefs that can affect adaptation, providing insights to anticipate and best support the woman in labor. This integrated approach thus guides a holistic and individualized needs assessment to promote optimal adaptation to pain during labor.

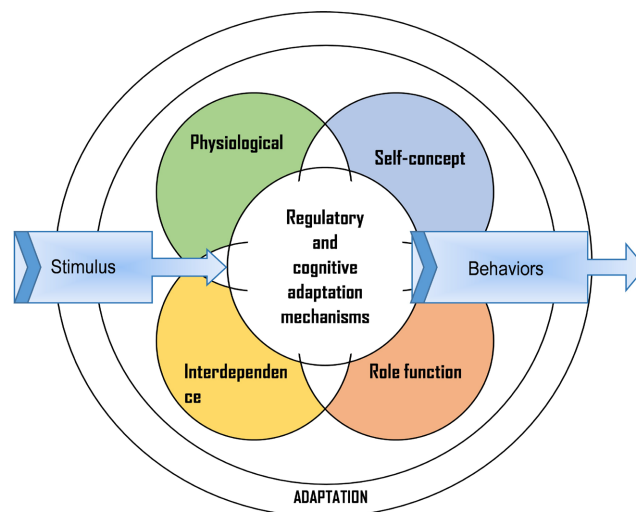


Figure 1. Adaptation of the representation of Roy's adaptation model.

By integrating Roy's four coping modes into pain management, the goal of nursing care is to promote effective adaptation of the parturient to pain in order to contribute to her health, quality of life, or the maintenance of her dignity [20]. Furthermore, Roy's adaptation model in this research guides the midwife or nurse in assessing the problem under study, allows them to adopt a holistic approach, understand adaptation mechanisms, identify individual needs, and promote women's autonomy during this important period of their lives. In order to identify specific interventions by midwives or nurses with a view to guiding practice. **Figure 1** shows the representation of Roy's adaptation model.

2.3. Study Population and Sampling

The study population consisted of women who had given birth and were seen postpartum, and health professionals, including midwives and nurses.

The sampling was non-probability and by reasoned choice [21] [22]. The study included women who had given birth over the age of 18; who had delivered at least one child with a full-term pregnancy in one of the selected maternity units by vaginal delivery; who had been seen in the postpartum monitoring room or in a postnatal consultation during the study period; who had given informed consent to participate in the study; and who agreed to participate in the study. Midwives or nurses must have had at least two years of experience in the position in one of the maternity units, been working in the delivery room, and agreed to participate in the study. The sample size was determined by data saturation [23]. Excluded were women seen for abortion or other pathologies related to the puerperium period, as well as professionals absent for the entire duration of the survey, assigned to other units, or who subsequently refused to participate.

2.4. Data Collection and Analysis

The intervention research method of Sidani and Braden (2011) [19] is used during data collection to gain a deeper understanding of the needs, barriers, and experiences of parturients and involves both an inductive approach (through the collection of experiential data) and a deductive approach (through the use of intermediate theories and consultation of empirical data).

Three data sources were used: 1) experiential with semi-structured interviews (pre-tested and adjusted), with women and professionals, and non-participant observation in the delivery room with an observation grid in order to supplement the statements of the research participants, thus allowing the collection of data on the experience of pain, care practices, and the context of maternity wards; 2) empirical by extracting elements from scientific literature in the following databases: Cinahl and Medline with keywords used: Childbirth; Natural childbirth; Normal childbirth; Delivery; Labor; Pain; Pain management; labor pain; Non-pharmacological; Alternative Medicine; Complementary Therapies on non-pharmacological interventions (NPIs); and 3) theoretical through the mobilization of nursing models and theories for an understanding of the problem [19].

The data from the three sources, recorded, transcribed, and coded, were analyzed thematically and inductively, and then grouped into themes and sub-themes. These were used as an organizational framework in NVivo according to the adaptation modes of Roy's model, namely the physiological mode, self-concept, role function, and interdependence, integrating a triangulation among experiential, empirical, and theoretical data for the understanding of the problem.

3. Results

A total of 40 women who had given birth aged 18 to 35, the majority of whom were between 18 and 24 years old, and 32.5% between 25 and 30 years old. Most were married (70%), two were widowed and reported receiving support from their extended family, and the others were living in a common-law relationship; 24 participants had two children and 16 had one, as shown in **Table 1**.

For the 10 health professionals (8 midwives, 2 nurses) who participated in this phase of the study and worked in the maternity wards of Lokossa ($n = 6$) and Com  ($n = 4$) according to **Table 2**, the majority were aged 30 to 45, with an average professional experience of 5 to 10 years in the delivery room. Regarding their marital status, most were married (70%), while the others were living in a common-law relationship or were single. Almost all had dependent children, confirming the dual professional and family responsibilities. All had at least 2 years of seniority in the position, but only a few had undergone specific continuing education in pain management or non-pharmacological approaches, which reflects a lack of capacity building.

Table 1. Socio-demographic profile of women who gave birth ($n = 40$).

Variables	Categories	Frequencies	Percentage (%)
Age of respondents	18 - 24 years old	21	52.5
	25 - 30 years old	13	32.5
	31 - 35 years old	06	15.0
Marital status	Bride	26	65.0
	Free union	12	30.0
	Widow	02	5.0
Do you have a job?	Yes	34	85.0
	No	06	15.0
Type of employment	Reseller	18	45
	Restaurateur	03	7.5
	Hairdresser	08	20
	Seamstress	09	22.5
	Braider	02	5.0
Gesture	Primigravida	16	40%
	Second gesture	24	60%
Parity	Primiparous	16	40%
	Multiparous	24	60%

Table 2. Socio-demographic profile of health professionals (n = 10).

Variables	Categories	Frequencies	Percentage (%)
Age	18 - 24 years old	01	10
	25 - 30 years old	01	10
	31 - 35 years old	00	00
	36 - 40 years old	04	40
	41 - 45 years old	02	20
	46 - 50 years old	02	20
Sex	Female	10	100
	Male	00	00
Qualification	Midwife	08	80
	Nurse	02	20
Level of education	State diploma in midwifery	08	80
	State nursing diploma	02	20
Years of professional experience	[0 - 5 years [	04	40
	[5 - 10 years [	02	20
	[10 - 15 years old [	02	20
	[15 - 20 years old [	02	20
Description of practice environments	Postnatal consultation	03	30
	Delivery room	04	40
	Hospitalizations	02	20
	Intensive care	01	10
Years of experience in practical environments	[0 - 5 years [	04	40
	[5 - 10 years [	02	20
	[10 - 15 years old [	04	40

According to their experiences, women described the pain of childbirth as particularly intense and difficult to bear, often without prior preparation or sufficient support. Some reported not knowing how to manage their breathing or their efforts, which accentuated their feelings of distress: “The pain was so strong that I thought I was going to die... no one had explained to me how to breathe or what to do to help me” (ACCH 03, Lokossa). In addition, reprimanding attitudes towards the expression of pain were also reported: “I screamed and cried but I was told to be quiet, that it was not good to scream” (ACCH 12, Comé). Some participants nevertheless recognized the positive effect of the encouragement received, although this was considered insufficient due to the unavailability of the healthcare staff: “When the midwife encouraged me, it gave me strength, but she couldn’t stay with me for long” (ACCH 15, Comé).

In terms of needs, the women who had just given birth expressed a desire for better preparation from the outset of pregnancy, particularly through information

sessions on non-pharmacological pain management methods. They wanted to be guided and supported continuously during labor: “If we were shown during pregnancy the techniques we can use to cope with the pain a little, it would help us on the day of delivery” (ACCH 09, Lokossa). They also emphasized the need for prior explanations: “I would like someone to explain to me before labor what to expect, instead of finding out everything at the last minute” (ACCH 22, Comé), and for active support: “We need someone to stay with us, to talk to us, and to help us cope with the pain without injecting medication” (ACCH 04, Lokossa).

However, several obstacles limited the use of non-pharmacological approaches. Women highlighted a total lack of information, inadequate infrastructure (small spaces preventing mobility), overworked staff, and sociocultural constraints: “No one told me that there are natural ways to reduce pain, I didn’t know anything” (ACCH 18, Lokossa); “There is no room to walk or turn around, we stay lying on the delivery table and we suffer” (ACCH 05, Comé); “When there are many women, midwives cannot stay with each one, no one takes care of us” (ACCH 14, Lokossa); “We are afraid of doing things forbidden by custom and culture, such as shouting too loudly, crying, or asking for help (rescue) while we are in pain” (ACCH 21, Comé). The majority of participating women expressed a lack of non-pharmacological approaches to managing labor pain.

The expressed needs were classified according to Roy’s four modes of adaptation: physiological, self-concept, role function, and interdependence, as shown in **Figure 2**:

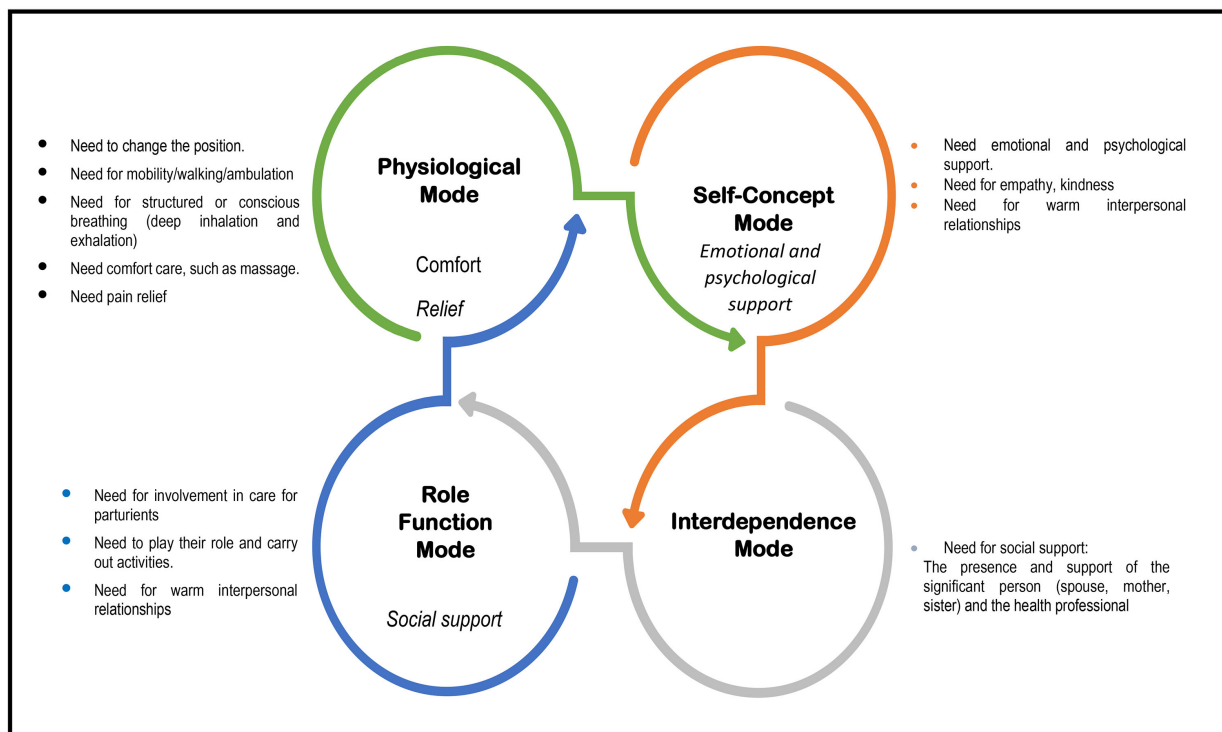


Figure 2. Needs mentioned by both women who have given birth and health professionals according to Roy’s adaptation methods [20] from an experiential perspective.

Midwives and nurses perceived ANPs as useful for relieving women's pain, but they were rarely systematically integrated due to organizational constraints and a lack of protocols. Some recognized their effectiveness: "These methods, like breathing and massage, really help women, but we don't always have the time to apply them" (PROFS 02, Com ). Close support, when possible, provided real benefits: "When we have time to stay close to a woman, she suffers less because we can encourage her" (PROFS 07, Lokossa). However, implementation often depended on personal habits: "We do things according to our personal experience, because there is no formal guide" (PROFS 01, Com ).

The needs expressed mainly concerned continuing education, the provision of clear protocols, and the improvement of material and human conditions. As one participant emphasized: "We need training on non-drug techniques, to know how to use them" (PROFS 08, Lokossa). Others emphasized the importance of a regulatory framework: "We need a clear protocol that tells us when and how to apply these methods" (PROFS 04, Com ), and the need to strengthen the available staff: "We need more staff to be available to women" (PROFS 06, Com ).

Finally, several obstacles were highlighted, including work overload, understaffing, and the lack of preparation of women before childbirth: "With the number of women in labor and the few staff, we can't stay with each one to support them" (PROFS 02, Lokossa); "The department is too busy, we don't have time to do more than what is essential" (PROFS 09, Com ). Some also noted resistance linked to highly medicalized routine practices: "Our work habits are centered on medicalization; it's not easy to change" (PROFS 01, Com ).

4. Discussion

This study highlights the needs, obstacles, and experiences related to pain management during childbirth, in a context of increasing medicalization in Benin.

The majority of participating women expressed experiences marked by intense pain and a lack of non-pharmacological means to cope with it. Several mentioned the instinctive recourse to methods such as breathing, mobility, or support from a loved one but deplored the lack of structured support for the various non-pharmacological means of relief from healthcare personnel. They emphasized the need for the presence of the midwife/nurse, as well as listening and encouragement during labor from the midwife/nurse. Additionally, the midwives and nurses recognize the relevance of non-pharmacological approaches (NPA), but highlight a lack of training, clear protocols, and sometimes time to implement them. Some also mention the lack of suitable equipment (balls, mobility spaces). Thus, the needs identified are related to: better prenatal information, the integration of NPAs into current practices, the possibility of choices for parturients, and the improvement of emotional support.

The results show that women express a strong desire for emotional support and active participation in decisions regarding their care. They also wish to benefit from a more frequent use of ANPs, which offer significant benefits both physio-

logically and psychologically, considered as a valuable alternative, complementary to pharmacological methods and pain relief. These observations are consistent with those of studies conducted in similar contexts, notably in Ghana, where women report being dissatisfied with the care received and perceive childbirth as an essentially female experience [24]. The presence of the partner remains limited in the majority of maternity units, despite its potential role in supporting and providing comfort to women in labor.

The quality of interactions between healthcare professionals and women in labor appears to be a determining factor in the adoption of PDAs. Observations indicate that respectful communication and kindness are key elements in establishing a climate of trust and reducing women's anxiety, particularly in the face of sometimes negative verbal or physical behavior. These findings are consistent with the results of studies conducted in other developing countries, where women have reported similar experiences [25]. Furthermore, knowledge and familiarity with ANPs remain limited, both among women and among staff, which hinders their systematic use.

The study also identified several obstacles to the implementation of ANPs. For healthcare professionals, the preponderance of medicalization influences the perception of pain and promotes the use of pharmacological analgesics, which often have unexpected harmful effects [26] [27]. In this regard, the increasing medicalization of childbirth in Benin transforms pain from a natural experience into a pathology requiring technical intervention, with a strong preference for pharmacological approaches. This biomedical view, shared by healthcare professionals, relies on standardized protocols and underestimates non-pharmacological approaches (NPAs), perceived as less effective despite their recognized benefits. For women in labor, a lack of prenatal information on these alternatives and the emphasis on medicalization create an expectation of rapid relief through medication, minimizing natural methods such as movement or emotional support. This context limits women's autonomy, fuels their anxiety about pain, and reinforces the systematic use of invasive medical interventions, thus reducing the space for a holistic and personalized approach to pain management during labor. The perception of low effectiveness of ANPs is reported by a significant number of midwives, ranging from 42% to 91% depending on the studies [28] [29]. On the women's side, limited information and lack of prenatal preparation on non-pharmacological approaches contribute to their low use [30] [31]. Cultural beliefs and an initial preference for pharmacological approaches also play an important role. In some ethnic groups within our study area, pain during childbirth is perceived as shameful, a sign of weakness or cowardice. A woman is expected to remain stoic, control her emotions, and refrain from crying out in order to uphold family and social honor. This cultural belief thus limits the verbal or physical expression of pain, which can complicate its recognition and appropriate management by healthcare professionals. "In my culture, when contractions begin and I am in pain, I am not allowed to scream or cry, even if I am in pain. I must be brave to

endure the pain so as not to dishonor my family” (ACCH 01). Finally, the health system presents organizational and material barriers: inadequate infrastructure limits privacy and comfort during childbirth [24], the lack of staff is cited by 41% to 95% of midwives as an obstacle to the application of ANPs [32] [33], and the absence of institutional protocols or policies and the lack of specialized training appear as major obstacles and complicate the systematic implementation of these methods [31] [34].

The use of Roy’s adaptation model [20] made it possible to structure needs into four dimensions (physiological, self-concept, role function, and interdependence), which could thus facilitate their appropriation by professionals. This conceptual framework offers a holistic approach to identify not only essential physiological needs but also often underestimated psychological and social dimensions, such as stress and anxiety management, the woman’s social role, and her relationships with those around her. Taking into account obstacles to adaptation, such as fear, lack of support, or environmental constraints, highlights factors that directly influence the well-being of the woman in labor. This Roy model allows us to understand the subjective experience of women in labor, including their own cognitive and emotional coping strategies, by integrating individual perceptions into a global dynamic. This framework facilitates an in-depth and contextualized analysis of the complex and multidimensional needs of women in labor. This justifies its choice and has allowed a triangulation of data from the experiential and empirical phases carried out by including the insight provided by theories for the links between needs but also to guide clinical interventions aimed at improving the quality of maternal care by promoting personalized, woman-centered care.

5. Conclusion

The results of this research show that women in labor express a clear need for emotional support, prenatal preparation, and ongoing support, while midwives and nurses want clear protocols, ongoing training, and appropriate material and human resources to effectively implement these methods. This study highlights the importance of non-pharmacological approaches (NPAs), which are side-effect-free, safe, effective, and customizable alternatives that focus on the overall well-being of the woman in labor to improve pain management during labor in our context. By promoting the integration of simple and inexpensive NPAs into routine practices, it is possible to improve the quality of the labor experience, reduce the excessive use of medical interventions, relieve perceived pain, and enhance maternal satisfaction. These results offer concrete avenues for health policies such as strengthening the initial and continuing training of midwives/nurses, prioritizing, for example, several specific themes and skills of the training such as: practical mastery of non-pharmacological approaches (ANP) and clinical simulations for immediate application, evaluation of the effectiveness of ANP: use of validated scales (Visual Analogue Scale, numeric scale) to monitor pain and adapt interventions in real time; relational and holistic strategies, communication strat-

egies with patients. Also, the humanization of care, providing suitable spaces and institutionalizing these practices in maternal health policies and supporting the adaptation of women in a context where medicalization remains predominant.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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