

## ORIGINAL ARTICLE


## FREEDOM OF MOVEMENT AND POSITIONING IN CHILDBIRTH WITH NON-INVASIVE TECHNOLOGIES OF NURSING CARE


### HIGHLIGHTS

1. Nurses encourage free movement in childbirth with non-invasive technologies;
2. Encourage ambulation, pelvic movements, squatting, and upright positioning;
3. Offer technologies in a relationship with informed and shared decisions;
4. Nurses' actions and attitudes preserve the non-invasive attribute of the technologies.

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### ABSTRACT

**Objective:** to identify the non-invasive technologies and care strategies used by obstetric nurses to encourage freedom of movement and positioning in the parturition process. **Method:** A descriptive and qualitative study, with 20 obstetric nurses working in public obstetric services in Rio de Janeiro - Brazil. Data were collected from May to July 2021 through semi-structured interviews and submitted to thematic analysis. **Results:** the participants use the encouragement to ambulate and perform pelvic movements and squats, also suggesting specific positions, especially vertical ones. As strategies, they orient about the benefits of these technologies and respect the choice of the expectant women, interfering, however, in cases of obstetric complications. **Conclusion:** The incentive to freedom of movement and positioning in parturition happens with the offer of different non-invasive technologies in a care relationship with clarified and shared decision-making processes, which promote autonomy and ensure the right to safe and respectful assistance.

**DESCRIPTORS:** Pregnant Women; Obstetric Nursing; Culturally Appropriate Technology; Exercise and Movement Techniques; Natural Childbirth.

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## INTRODUCTION

In the 18th century, the process of medicalization of society transformed everyday aspects of life into objects of biomedical knowledge intervention. In this context, parturition became a dangerous event, requiring control through hospital medical procedures. Consequently, childbirth has become configured as a male act, where the continuous infusion of oxytocin, electronic fetal monitoring, anesthesia, episiotomy, and horizontal positions have been practices incorporated into obstetric care, which place women in a position of passivity and restrict their freedom of movement and positioning<sup>1-2</sup>.

In the late twentieth century, this scenario changed with the recommendations of good childbirth practices, indicating the discouragement of those that limit female autonomy, because scientific evidence shows that free movement, ambulation, and the adoption of upright positions during parturition favor physiology, minimize pain, increase the chances of vaginal delivery, shorten the duration of childbirth process, correct dystocia, reduce the need for interventions, including cesarean sections, and enhance the female sense of control over her own body<sup>3-4</sup>.

On the other hand, encouraging the free movement of women in childbirth requires adequate physical space that favors mobility; availability of instruments to assist in specific movements; and trained professionals who do not interfere with the physiology, allow the instinctive movement of the body, and respect the women's autonomy in decision-making processes<sup>5-6</sup>.

Such practices are commonly called good practices or non-pharmacological methods for pain relief<sup>5</sup>. In this study, we chose to adopt the terminology Non-Invasive Technologies for Nursing Care (TNICE- in Portuguese), defined as a set of knowledge, techniques and procedures applied with intentionality and justification, involving knowledge and skills transformed into actions developed in a relationship of shared care with the woman<sup>7</sup>. From this point of view, it is understood that the term contemplates the distinction of the know-how of the obstetric nurses in offering these technologies.

Given the above, the following questions arose: What are the TNICE used by obstetric nurses to encourage women's freedom of movement and positioning during parturition? What are the strategies adopted to offer these technologies? Thus, this study aimed to: Identify the non-invasive technologies and care strategies used by obstetric nurses to encourage freedom of movement and positioning in the parturition process.

Considering that the free movement of expectant women is still a distant reality for most obstetric services<sup>8</sup>, it is relevant to investigate the use of TNICE by obstetric nurses, especially those that encourage freedom of movement and positioning, because it is a practice that contributes to humanized, qualified, safe, and respectful assistance to women's citizenship.

## METHOD

This is a descriptive and qualitative study with 20 obstetric nurses from the State of Rio de Janeiro - Brazil. Inclusion criteria were to have worked in the care of expectant women in public institutions for at least one year. Specialists working only in the private network and in home birth services were excluded.

Participants were recruited using the Snowball technique, in which an individual with the appropriate profile is selected to be the first interviewee, called the seed. The seed is asked to indicate other potential participants, who indicated new contacts, and so on until

the sample is saturated<sup>9</sup>.

The seed was intentionally selected due to the proximity of the researchers with obstetric nursing residency preceptors. Using a messaging application, the potential participants were contacted so that they could obtain clarifications about the research and invitation to participate. The formalization of acceptance occurred by filling out the Informed Consent Form, shared by email in the format of an electronic form.

Data collection took place between May and July 2021 through individual interviews, following a semi-structured script: the first part with closed questions for a brief characterization of the interviewees; and the second part with open questions: how do you promote the free body movement of women during parturition? Do you offer any non-invasive care technology to encourage freedom of movement and positioning? Which technologies do you offer, how and with which objectives?

Due to the pandemic context, the interviews were conducted by videoconference on the date chosen by the participants and carried out by three authors, resident nurses. With an average duration of 40 minutes, the interviews were recorded using an image and audio recorder application with prior authorization and transcribed using a word processor (Word).

Considering that the group of participants had similar characteristics, to confirm the instrument's suitability, we chose to carry out three pilot tests, which made up the analytical corpus of the study. Still, there were no losses of participants in this process, but there were eight refusals. It is noteworthy that the finalization of the reference chain was based on inductive thematic saturation, identified in the eighteenth interview, when no new themes emerged in the analysis phase, which was confirmed by conducting two more interviews.

The data were submitted to thematic content analysis, which unfolds in three stages: pre-analysis (floating reading of the transcribed material, considering the criteria of completeness, representativeness, homogeneity and relevance); exploration and categorization (identification of the registration and context units; selection of significant clippings; and definition of analytical categories); treatment and interpretation of the data (construction of the interpretative synthesis with inferences and in dialogue with the scientific production)<sup>10</sup>. This process involved the analysis of 258 transcribed pages of approximately 16 hours of interviews, from which two categories emerged: "TNICE that encourage women's freedom of movement and positioning during parturition" and "Obstetric nurses' strategies for offering TNICE".

The study was approved by the Research Ethics Committee, under opinion number 4,518,637. The participants' anonymity was ensured by adopting the letter "N", referring to the nurse, followed by a number corresponding to the order in which the interview was conducted.

## RESULTS

At the time, most participants were between 30 and 35 years old, as well as holding the title of specialist by means of residency training. All worked directly in assistance to the expectant woman, and two interviewees had up to five years of experience in obstetric nursing; 13 had worked between five and ten years; and five had worked in the specialty for more than ten years. As for the employment relationship, 12 were statutory public servers and eight were hired under the Consolidation of Labor Laws regime (CLT- in Portuguese).

The participants promote women's freedom of movement and positioning during parturition through the provision of TNICE that may or may not involve the use of instruments, namely: encouraging free movement, walking, and encouraging upright positions.

*I stay close to women, assisting and offering non-invasive technologies: encouraging free movement, ambulation, I take them to the sprinkler bath... To give comfort, sense of control over pain and the process... I think the upright positions cooperate with childbirth process. [I am guided by what the woman says and by the literature, which states that: the ball is more useful in the active childbirth process phase and with dilation greater than 6 cm; the birth stool should be offered from 8-9 cm or during the expulsive period. (N01)*

*If the woman is in a good mood, I like to offer ambulation, depending on the phase and if she can move around [...] It's an easy technology! The woman can move around a lot. Have a good mobility of the pelvis. (N15)*

They also use TNICE that are based only on the body movement of the woman and the suggestion of specific positions, such as encouraging pelvic movements, the waddle and squats as well as the adoption of four-legged positioning:

*I believe in the benefits of pelvic movements, because the pelvis will open, adjusting and facilitating the movements of the baby.(N08)*

*If I see that the baby needs to go down in the pelvis, I tell her to squat a little more. If I want the baby to float less, settle more, and move more, I ask her to squat with her leg a little more closed. (N04)*

*Four supports, I offer to improve the baby's descent a little more [...] Helps a lot in pain relief, in relaxation, when the contractions are a lot more active, to favor the baby's fitting and the change in his position in the pelvic floor plane. (N06)*

For the use of TNICE, the obstetric nurses base themselves on scientific knowledge, on the recognition of the woman's subjectivities, and on the practical experience gathered in their professional trajectory.

*There are moments when the woman just wants to rest, and we respect that. There are women who are a little more active [...] We evaluate the moment of each woman to stimulate or not movements, suggest positions and, many times, they do it by the body's own initiative. (N12)*

*It is not only in labor that we can use the ball [...] Will I use the ball only when the baby is high and to rotate the baby? No! I can use the ball for anything! The woman is very tense, and I want to try to make her relax in the bath, I will give her the ball because she will move more. The woman didn't want to walk, but she liked to stay in the bath exercising on the ball [...] To use the technologies, you know what the final objective of each one is, but you don't have to be plastered to use them only in certain situations. We can look at sometimes it's the woman's emotions, and I offer a technology to see if it helps. Sometimes, it is just a change of position. (N13)*

As strategies adopted to encourage freedom of movement and positioning in the process of parturition, the participants present the TNICE and guide women about their possibilities of use during childbirth process. In this context, they demonstrate attitudes of respect for the expectant women right to choose and freedom of decision:

*When the woman arrives, I introduce myself, I identify myself as an obstetric nurse, I tell her that she has the freedom of movement, that she can look for a more comfortable position, move, take a warm bath, use the ball, the horse riding.(N05)*

*I talk to her, explain that she doesn't have to lie down, that she can move around, walk... The boxes have pictures with several childbirth process and delivery positions! I show her that, besides these, she can stay in any other position she wants and can walk around inside the box. (N07)*

*She can do whatever she wants! If she wants to lie down, go to the shower... We leave it very free! [They have free movement! (N09)*

Upon the perception that the woman is not completely clear about the possibility of freedom of movement and positioning during parturition or in the event of some obstetric complication, the participants intervene by suggesting specific TNICE, accompanied by previous instructions.

*I inform her that she can stay in any position she wants because it's her choice! [...] I intervene more when I notice that she is uncomfortable in that position and, sometimes, she doesn't know that she can stay in a different one. Mainly when they are lying down and think they must stay that way, belly up. (N07)*

*I don't like to impose on the woman what she must do! I like to ask if she wants to try and experiment because we must leave them free. For some women, I will need to suggest something, but I won't be saying: "you have to get on all fours or on your side now! [unless I really see that that position or movement is going to make a difference in her picture. If we must shorten the time of the expulsion period because it is prolonged, I try to talk to her and orient her. (N15)*

## DISCUSSION

To promote freedom of movement and positioning of the expectant women, the participants use the following TNICE: encouragement to ambulate; suggestion of specific positions, encouragement to perform pelvic movements and squats.

The incentive to ambulate is a TNICE that promotes freedom of movement, relieves pain, and aids cervical dilation and fetal descent and rotation, contributing to the activation and shortening of childbirth process, without negative effects on maternal and fetal well-being. Moreover, it provides interaction, bonding, and active participation of women in the process<sup>3,11</sup>.

Most obstetric nurses encourage non-supine positions, revealing the development of practices based on scientific evidence and recommendations of the Ministry of Health (MS- in Portuguese), the World Health Organization (WHO), and international organizations, which cite the importance of encouraging freedom of movement and the adoption of upright positions during parturition<sup>5,11-12</sup>.

By encouraging expectant women to avoid the dorsal decubitus and assume more comfortable and upright positions, the following is promoted: the physiology of labor; the descent of the fetal presentation; the expansion of pelvic diameters; the improvement of sacral mobility and efficiency of uterine contractions and expulsive pulls, as well as the strengthening of women's autonomy<sup>3,13-14</sup>.

When compared to supine positions, upright positions reduce the duration of the expulsion period and the occurrence of the use of forceps, the performance of episiotomy, and complications related to the newborn's heart rate. However, upright positions seem to increase the risk of blood loss and second-degree lacerations, although the available evidence is of poor quality<sup>13</sup>.

When encouraging verticalization and specific positions in labor, the participants can use some instruments such as the stool and the horse riding, which reduce pain, provide a sense of control, active participation of the woman and enlarge the pelvis diameters, assisting fetal descent and rotation<sup>15</sup>. Commonly applied to the second stage of childbirth process, the use of these instruments does not shorten the duration of the expulsive period when compared to the lithotomy position. However, specifically the horse riding, by propitiating pelvic balance, is beneficial in cases of asynclitic babies<sup>13</sup>.

Childbirths assisted on a stool or in the semi-sitting position do not present significant

differences related to pain, edema, and hematoma. As for lacerations, the use of the stool is associated with higher occurrence, although it is not possible to determine correlations between injuries and delivery position, because perineal integrity depends on maternal, fetal and care factors<sup>16</sup>.

Regarding the suggestion of positions in childbirth process, the four-lying position was frequently scored by the participants as favorable to the physiological progression of labor, showing agreement with the WHO and the MH (Ministry of Health) guidelines, which recommend the encouragement of squatting, lateral and four-lying positions<sup>5,12</sup>. Regarding the latter, it is noteworthy that the body mobility of this position relieves back pain and aids the rotation of the baby to the posterior-occiput and the release of the shoulder blades during the expulsion period<sup>13</sup>.

The encouragement to perform specific body movements is a TNICE that emerged in the speeches of the participants as well as encouragement to pelvic movements and squats during childbirth process. In this sense, they mention movements performed only with the woman's body, such as rolling over, circular movement of the hips and pelvis, or with the help of instruments such as the Swiss ball and the shawl.

To favor the nesting, descent, and rotation of the fetus in the birth canal, hip wobbling is suggested, which also contributes to the release of endorphins and is often performed instinctively by the woman when she moves in rhythm with the contractions, moving the pelvis back and forth, from side to side or in circular movements<sup>17</sup>.

In or around the expulsion period, the encouragement of squats facilitates fetal displacement in the pelvis, and when proposed in the second stage of childbirth process, it attempts the adoption of vertical postures, sharing the same benefits of the standing, sitting, kneeling, or four-legged positions<sup>13,18</sup>. Squats can be performed freely, with the help of another person or with the help of a support bar<sup>13,18</sup>, and the squat with the feet completely supported on the floor is more indicated for its biomechanical impact on lumbar curvature and pelvic orientation<sup>19</sup>.

In obstetrics, the performance of specific body movements associated with the use of the Swiss ball is a recreational resource to stimulate verticalization, which provides comfort, relief of pain and tension, promotes stretching and strengthening of the perineal muscles and activates blood circulation. It is noteworthy that this TNICE can be used with others, such as the application of massage or the use of warm water through the sprinkling bath<sup>20-21</sup>.

The shawl can also be used to enable pelvic movement by placing it on specific regions of the woman's body with the intention of massaging, stretching, and relaxing the muscles; relieving pain; moving the hips; helping in the proper fetal positioning; and assisting in the expulsion period, as a traction object. Subjectively, this instrument materializes the necessary support for parturition, contributing to the manifestation of emotions and the perception of well-being, safety, and mutual support<sup>20,22</sup>.

Although all participants encourage freedom of movement and positioning during parturition, the restriction of mobility and adoption of non-supine positions persist in many Brazilian maternity hospitals due to the biomedical hospital culture, inadequate infrastructure, and lack of institutional protocols and professional training, which subsidize women's access to birth care in unconventional positions and to safe and respectful care<sup>2-3,8,23</sup>.

In this context, obstetric nurses stand out with the use of TNICE, developing a care process with humanistic and non-invasive characteristics, which promote well-being, the physiological evolution of parturition and women's autonomy through shared decisions<sup>12,15,20</sup>. Thus, the participants offer the TNICE using the following strategies: to clarify the possibility of free movement; and to present these technologies as care options, which may or may not be used with the help of instruments, keeping them visibly available. It is noted that

these actions involve dialogical attitudes and respect for the right to choose, providing an inviting environment for freedom of movement and positioning in childbirth.

Clear and culturally appropriate communication is essential at the time dedicated to guidance and clarification, because this approach provides the apprehension of ways of life and the construction of meanings, contributing to the provision of congruent care to the reality of each person, safe and respectful with greater confidence and adherence<sup>2,24</sup>. This way of communicating begins with the construction of an empathic relationship, based on verbal and non-verbal communication, active listening, and sensitivity to needs and preferences, with clear information about the care. From this perspective, the necessary conditions are created to make women aware of their autonomy to decide and make choices about care<sup>5,25-26</sup>.

As verified among the obstetric nurses in this study, their actions, and attitudes toward the provision of TNICE configure a woman-centered model of care, in which they encourage expectant women to take control of their bodies and provide for the sharing of decisions, including those related to freedom of movement and positioning.

It should be noted that the fact that women move and adopt different positions during childbirth does not always mean that their choices were respected or that there was no coercion, imposition, and interference of professionals in decision-making processes<sup>23</sup>. Restricting freedom of movement and imposing a certain position constitute disrespect, abuse, and mistreatment and, therefore, violations of women's human rights to be treated with dignity, to be free from harm and to have their choices and preferences respected in childbirth care<sup>27</sup>.

In contrast, the results of this study show that, when identifying interurrences and recognizing women with a medicalized culture of parturition or with little clarification about freedom of movement and positioning, the obstetric nurses indicate the use of specific TNICE with prior guidance. These actions suggest informed consent and the sharing of decisions about care, so that, despite the intervention, the nurses' attitudes do not seem to interfere with female autonomy.

Women should not be restricted in their freedom of movement unless there is a clear clinical indication<sup>1</sup>. In the face of obstetric dystocia, the participants propose movements or positions to reverse them, following scientific evidence that proves the effectiveness of alternative positions for the resolution of these complications<sup>28</sup>. When they identify expectant women who are unaware of the possibility of moving freely and adopting the positions they want, they indicate the use of specific TNICE, understanding that these attitudes are the result of the medicalized culture internalized by many women, which unconsciously influences their behavior during parturition<sup>2-3,23</sup>.

Brazilian obstetric care is still marked by hospital deliveries and in dorsal decubitus, consequent to the process of medicalization of society. Sharing this worldview, and to facilitate the performance of interventions, many professionals induce women to adopt lithotomic positions, which restrict their movements<sup>2,13</sup>, conforming hierarchical relationships where the professional holds the scientific and technical authority, while the expectant woman is dependent on him to obtain permissions and information<sup>29</sup>.

In this asymmetric power dynamic, actions such as not providing clarification, performing interventions without prior consent, and restricting mobility are considered disrespectful of human rights, because informed consent, women's involvement in decision making, and bodily freedom are fundamental elements for the exercise of women's autonomy in childbirth<sup>29</sup>.

Considering that the participants encourage the freedom of movement and positioning of expectant women through the provision of TNICE in a care relationship where decision-making processes are clarified and shared, it is possible to infer that the use of these technologies is strategic to ensure human rights, especially access to safe and

respectful care.

As a limitation, it is pointed out that the Snowball technique may accentuate a parity among the participants, since the indications tend to be from close people who probably work in a similar manner. Moreover, the virtual interviews may have made it difficult to capture the subjectivities of non-verbal communication, which could be better explored with a face-to-face interview.

## CONCLUSION

It was found that to promote freedom of movement and positioning in parturition, obstetric nurses use the following TNICE: encouragement to ambulate; suggestion of verticalized positions in childbirth process; and encouragement to perform pelvic movements and squatting with or without the aid of instruments.

As strategies for offering these technologies, they guide women about their benefits, presenting them as care options and respecting their choices. In the face of obstetric complications and situations in which expectant women are unaware of their rights during childbirth, the actions and attitudes of these specialists preserve the non-invasive attribute of TNICE, so that the need to intervene is not configured as a violation of women's bodily autonomy.

Therefore, the importance of investing in the performance of obstetric nurses in parturition is observed, given its potential to drive effective changes in obstetric care. Moreover, this study adds value to the use of TNICE and offers subsidies for continuing education activities and professional training from the perspective of de-medicalization and human rights as well as to substantiate actions in the health field.

Highlights: Nurses encourage free movement in labor with non-invasive technologies; Encourage ambulation, pelvic movements, squatting, and upright positioning; Offer technologies in a relationship with informed and shared decisions; Nurses' actions and attitudes preserve the non-invasive attribute of the technologies.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Costa ACM, Prata JA, Oliveira KR, Silva CRF da, Progianti JM, Mouta RJO, Pereira AL de F**; Drafting the work or revising it critically for important intellectual content - **Costa ACM, Prata JA, Oliveira KR, Silva CRF da, Progianti JM, Mouta RJO, Pereira AL de F**; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Costa ACM, Prata JA, Oliveira KR, Silva CRF da, Progianti JM, Mouta RJO, Pereira AL de F**. All authors approved the final version of the text.

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