

# Concept formation of ambience for labor and normal institutionalized delivery

*Formação do conceito ambiência para trabalho de parto e parto normal institucionalizado*  
*Elaboración del concepto de ambiencia para el trabajo de parto y el parto normal institucionalizado*

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## ABSTRACT

**Objective:** to develop the concept ambience for labor and normal institutionalized delivery, identifying in the literature its antecedent, defining attributes and the consequent. **Method:** the method used was the analysis of literature, corresponding to the first stage of the qualitative method of concept analysis. The theoretical operation was performed in the databases CINAHL COCHRANE, LILACS, PsycINFO, and PubMed. **Results:** aspects of the parturient woman and the qualification of the physical and social space are presented as the antecedent. The defining attributes outline the assistance interaction process with Non-Invasive Technologies. As the consequent, we highlight the outcome for normal delivery, pain relief and comfort, woman satisfaction and well-being. **Final considerations:** the analysis of the antecedent, defining attributes and the consequent allowed the elaboration of an unprecedented theoretical proposition of this concept.

**Descriptors:** Labor; Natural Childbirth; Hospitals; Concept Formation; Hospital, Maternity.

## RESUMO

**Objetivo:** elaborar o conceito ambiência para trabalho de parto e parto normal institucionalizado, identificando na literatura seus antecedentes, atributos definidores e consequentes. **Método:** empregou-se o método da análise crítica da literatura, correspondendo à primeira etapa da metodologia qualitativa de análise de conceito. A exploração teórica foi realizada nas bases de dados CINAHL, COCHRANE, LILACS, PsycINFO e PubMed. **Resultados:** elementos referentes à parturiente e à qualificação do espaço físico e social são apresentados como antecedentes. Os atributos definidores delineiam o processo de interação assistencial com o uso das Tecnologias Não Invasivas. Como consequentes, destacam-se desfecho para o parto normal, alívio e conforto da dor, satisfação e bem-estar da parturiente. **Considerações finais:** a análise dos antecedentes, atributos definidores e consequentes permitiu elaborar uma proposição teórica inédita desse conceito.

**Descritores:** Trabalho de Parto; Parto Normal; Hospitais; Formação de Conceito; Maternidades.

## RESUMEN

**Objetivo:** elaborar el concepto ambiencia para el trabajo de parto y el parto normal institucionalizado, identificando en la literatura sus antecedentes, sus atributos definidores y consecuentes. **Método:** se utilizó el método de análisis crítico de la literatura, que corresponde al primer paso de la metodología cualitativa del análisis de concepto. Se hizo una búsqueda teórica en las bases de datos CINAHL, COCHRANE, LILACS, PsycINFO y PubMed. **Resultados:** los elementos relativos a la parturienta y a la calificación del espacio físico y social se presentan como antecedentes. Los atributos definidores delimitan el proceso de interacción de la atención con el uso de las tecnologías no invasivas. Ya de los consecuentes, se destacan el resultado del parto normal, el alivio del dolor y comodidad, la satisfacción y el bienestar de la parturienta. **Consideraciones finales:** el análisis de los antecedentes, atributos definidores y consecuentes permitieron elaborar una propuesta teórica inédita de este concepto.

**Descriptor:** Trabajo de Parto, Parto Normal, Hospitales, Formación de Concepto, Maternidades.

## INTRODUCTION

This study highlights the concept of ambience for labor and normal delivery; given its significant influence on the quality of the care provided to mother and child. Ambience in healthcare is characterized by a set of actions that comprise the physical, social/professional space and interpersonal relationships; these integrated actions build a health project focused on a welcoming, problem-solving and human care<sup>(1)</sup>. Fifteen years ago, in Brazil, the concept of ambience emerged as a guideline of the National Humanization Policy<sup>(2)</sup>, providing for the construction of collective processes in health promotion. These processes go beyond the physical and functional organization because they contribute to the qualification of the labor system as a strategy of good practice, especially the humanized care delivery<sup>(3)</sup>.

Recently, Brazilian institutions of childbirth assistance have gathered efforts to establish the ambience, aiming to ensure the safety of mother-child and companion, their welcoming reception and comfort, in addition to the preservation of privacy<sup>(3)</sup>. Thus, interventions have been implemented, although timidly, as the protagonism of women and respect for their needs; the presence of a companion; the stimulus to drive and ambulation; freedom of choice of position during the pre-delivery and delivery; soft food intake; and the termination of traditional practices such as amniotomy and routine episiotomy. Also, Non-Invasive Technologies (NIT) have been implemented, among them the Swiss ball, lumbar and perineal massage, aromatherapy, music therapy, and hydrotherapy<sup>(3)</sup>.

Although the term ambience is engaged in the usual way, the new concept still prevails, which involves an apparent lack of reality about its bases and consequently its real significance in relation to the birth. Moreover, there is a tendency to correlate ambience with environment by restricting the concept to the physical structures at the expense of professional and personal relationships. Thus, discussions between health managers, professionals and researchers have provoked with the need to better understand this concept and try to incorporate it to the obstetric practice.

The concept can be understood as "cognitive representations" of a perceived reality, from direct or indirect experience, which may be based on situations, events or actual behaviors<sup>(4)</sup>. To understand a concept, it is necessary to know its constituent elements, i.e. its antecedent, its defining attributes and consequences<sup>(5)</sup>. Defining attributes are words and/or phrases used to define the properties that make up the concept of interest, differentiating it from other similar concepts or the like<sup>(6)</sup>. The antecedent and concept of the consequent are described by situations, events or incidents that happen before and after the study phenomenon.

As we did not find in the literature any study that specifically addressed the concept of ambience in obstetrics, there is a pressing need to identify its attributes through studies on clarification and conceptual development<sup>(7)</sup>. It is noteworthy that in this study the formation of the concept of ambience is limited to care during the pre-delivery and delivery period, composing, in in this case, the normal institutionalized delivery process, whether in a maternity or in a birth center.

## OBJECTIVE

To develop the concept of ambience for labor and normal institutionalized delivery, identifying in the literature its antecedent, defining attributes and consequences.

## METHOD

A qualitative method of concept analysis was used<sup>(7)</sup>. This analysis intends to equip the research for development, design, comparison, clarification, correction or identification of a concept and consists of three steps: the identification of indicative concept attributes; verification of these attributes; and, finally, the manifestation of the concept<sup>(4,7)</sup>. This study corresponds to the first step of the qualitative methodology of concept analysis, which is employed in the method of critical analysis of literature<sup>(7)</sup>. This method allows us to investigate different perceptions of the concept in question, contexts in which it is being used and information about its explicit and implicit attributes, helping to assess its logical coherence<sup>(8)</sup> and know the implications of its adoption in practice. In critical review, the attributes may be obtained by different ways, such as by the use of literature as data source, by participant observation, or even by interviews<sup>(4)</sup>. In this study they were identified in the scientific literature.

### Sources of information and research

The theoretical exploration was carried out in January and February 2018. Figure 1 shows the descriptors and strategies applied, according to databases, as well as the process of exploration and the selection of the references<sup>(9)</sup>.

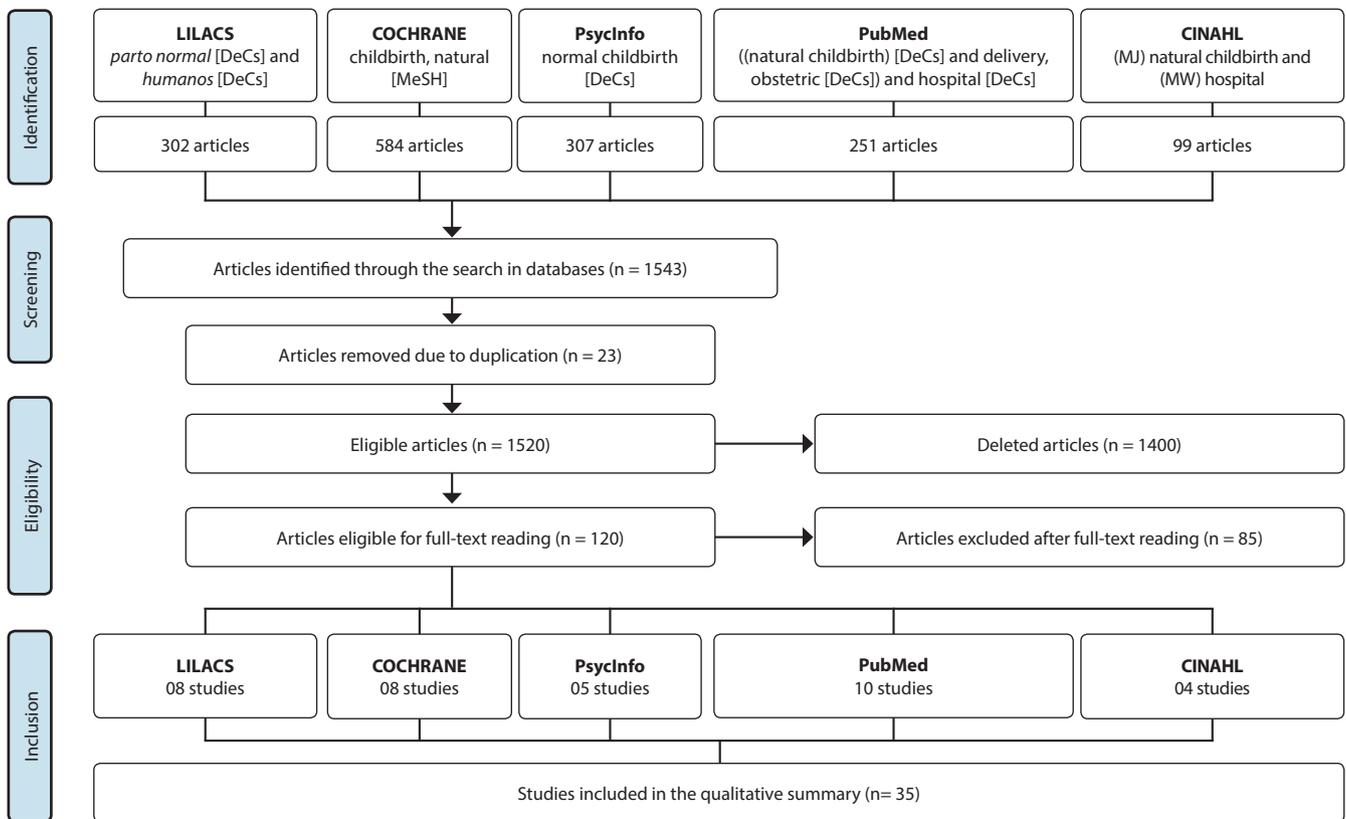
### Eligibility criteria

Publications that presented possible defining elements of the concept of ambience and that evidenced interactions in labor and normal institutionalized delivery were included. Moreover, studies published in full text in Portuguese, English or Spanish, as of the year 2000, were selected. This date is justified by approaching the year of the creation of the Prenatal and Birth Humanization Program (PHPN)<sup>(10)</sup>, which underlies the premise of humanization in childbirth and hence ambience for labor and delivery.

The references that did not include the object of this study were excluded. In general, they were related to surgical delivery, the use of medications, specific diseases, prenatal, non-institutionalized delivery, private techniques or procedures in a professional category, the late and remote puerperium, abortion, and to newborns after hospital discharge. Also, the references that were not a scientific study or showed inconclusive results were excluded, as well as those that were duplicated in the database (Figure 1)<sup>(9)</sup>.

### Process of review and selection of studies in databases

The process was conducted by the authors, with most of them being nurses and three being specialists in obstetrics. It began with the reading of the title and summary of references in order to



Source: Moher D et al.<sup>(10)</sup>

**Figure 1** – PRISMA flow chart of the research in Databases, 2018

select those relevant to the objective of the study. In the absence of summary or when it did not allow such a definition, the publication was maintained for the next phase of full-text reading. These were read in full and analytically, with the purpose of identifying those who bring possible contributions to the study, that is, present elements of the concept of ambience for labor and normal institutionalized delivery; which may be an antecedent, a defining attribute or a consequent. Thus, new screening occurred, which determined the references to be analyzed (Figure 1)<sup>(9)</sup>.

### Data extraction

The data extraction was performed by the authors and nurse-midwives and began with the full-text reading and critical analysis of selected studies. Initially, information was extracted to characterize the studies (Chart 1). Then they highlighted parts of texts that could provide elements to the concept of ambience for labor and normal institutionalized delivery. These small pieces were analyzed by considering their arguments and their context, and they received a representative name of that content, constituting a code. To facilitate the recovery of information and codes, Microsoft Excel 2010 was employed. Next, we identified to which element the code belonged: whether it were the antecedents, defining attributes or the consequent. In the event of inaccuracies, it was required greater reflection of nurse-midwives to then define which attribute it was, making some changes to its definitive identification. In addition, an element may be present at the same time as antecedent, defining attribute or consequent<sup>(6)</sup>.

### Data analysis

Qualitative methodologies for concept analysis has as main purpose the organization and consolidation of data into categories<sup>(7)</sup>. Also, the categorial classification is intended to identify the defining attributes, with the antecedent and the consequent<sup>(7)</sup>, in this case, of ambience for labor and normal institutionalized delivery. To this end, the analysis performed to identify the attributes and categories of the construction was based, more specifically, on the broad concept of ambience<sup>(3)</sup> and on the premises of PHPN<sup>(10)</sup>. The review has been achieved through the constant comparative process, in order to identify conceptual boundaries of ambience for labor and normal delivery, that is, characteristics that distinguish it from other concepts, such as humanization or welcoming care, making the study concept more clearly defined<sup>(7)</sup>. Thus, the codes were compared and clustered depending on the similarity of their meanings, and, inductively, names were established to the generated clusters. From the evaluation and constant comparison of the similarities and variations between clusters, categories and subcategories of analysis were created<sup>(7)</sup>. As the codes were arranged in the antecedent, defining attributes, and consequent, the categories formed preserved this organization. The contents of newly formed categories were compared to verify their suitability and relevancy. And the categories that referred to the same attribute of ambience were merged and reorganized to improve their creation. Finally, the categories were named based on the interpretation of the meanings of their attributes, applying techniques of abstraction and synthesis, seeking to accurately describe the contents

of each category<sup>(7)</sup>. Sometimes, their names have been changed in the search for a representative denomination adjusted to the meaning of the attributes clustered when then became definitive.

### Methodological rigor

In the step of data extraction and identification of the antecedent, defining attributes and the consequent, other professionals specialized in obstetric care were consulted when doubts and dilemmas raised. Also, the initial step of data analysis and creation of categories were carried out independently by the authors and nurse-midwives. Then they have together reached a consensus on the definition of the categories and submitted for the validation of a fourth nurse midwife.

### RESULTS

Initially, we present the results of the study selection process (Chart 1). Then we show the specific frames of the antecedent (Chart 2), defining attributes (Chart 3), and the consequent (Chart 4). As a result, we present the theoretical-conceptual proposition of ambience for labor and normal institutionalized delivery.

### Studies characteristics

In theoretical exploration, 69 references were selected for the study. However, in this article, those of greater relevance and relevance to the concept of training were employed. Thus, the process of search and selection considered 35<sup>(11-45)</sup> references, much of qualitative approach, seven clinical trials, among other methods, through which the attributes of the concept of ambience were identified for labor and normal institutionalized delivery. Table 1 shows the key characteristics of the studies.

Whereas the theoretical exploration did not include any studies that specifically address the ambience in the context of health or obstetrics, the selected publications present the elements of the concept of ambience for labor and normal institutionalized delivery, such as the element of NIT. Most<sup>(11-12,14-25,27-28,30,32-35,37,40-44)</sup> publications consist of empirical studies, confirming the property of the antecedent, defining attributes and the consequent analyzed. Regarding the country of origin of studies, almost half of them were conducted in America<sup>(12,14,16-17,20,22,26-27,30-31,34,36-38,41,43,45)</sup>, more specifically in Brazil<sup>(12,16-17,20,22,27,34,36-37,41,43)</sup>, agreeing with the relevance of this study of concept formation.

Chart 1 – Characteristics of the study publications, 2018

Reference	Year/Country	Design/ number of patients	Intervention/Focus	Outcome/Conclusion
Larkin, Begley, Devane, 2017 <sup>(11)</sup>	2017 Ireland	Cross Quantitative Approach n = 531	Most significant element to women in labor	Pain relief
Kologeski, Strapasson, Schneider, Renosto, 2017 <sup>(12)</sup>	2017 Brazil	Qualitative Content Analysis Approach n = 15	Professional's perception of skin contact	Staff has difficulties in adhering to the practice
Gupta, Sood, Hofmeyr, Vogel, 2017 <sup>(13)</sup>	2017 United Kingdom	Review n = 30	Labor position	Upright position reduced the labor length
Happel-Parkins, Azim, 2016 <sup>(14)</sup>	2016 USA	Thematic Qualitative Analysis Approach n = 6	Primigravida experience with normal delivery	Often their basic rights were disregarded
Aune, Torvik, Selboe, Skogås, Persen, Dahlberg, 2015 <sup>(15)</sup>	2015 Norway	Qualitative Approach/ Systematic Texts Condensation n = 12	Factors that influence the woman's positive experience of normal delivery	Safe environment and emotional strength
Borem, Ferreira, Silva, Valério Júnior, Orlanda, 2015 <sup>(16)</sup>	2015 Brazil	Descriptive Study n = 1449	Redesign of the Birth Model of Care	Reduction in the percentage of caesarean sections
Côrtes, Santos, Caroci, Oliveira, Oliveira, Riesco, 2015 <sup>(17)</sup>	2015 Brazil	Quasi-experimental n = 50	Implementation of best practices in normal delivery	Positive impact
Coxon, Sandall, Fulop, 2015 <sup>(18)</sup>	2015 United Kingdom	Qualitative Approach n = 41	Influence of the current labor on planning the next pregnancy	Current experience influences the choice of the next delivery location – Hospital or Birth Center
Hajian, Shariati, Mirzaii Najmabadi, Yunesian, Ajami, 2015 <sup>(19)</sup>	2015 Iran	Quali/Quanti Approach n = 290	Cultural influence on the intention by normal delivery	Confident mothers are more likely to have normal delivery
Scarton, Prates, Wilhelm, Silva, Possati, Ilha, 2015 <sup>(20)</sup>	2015 Brazil	Qualitative Description Approach n = 10	Experience of primiparous in normal delivery	The care reflects on the coping experience and delivery
Serçekeş, Egelioglu Cetisli, İnci, 2015 <sup>(21)</sup>	2015 Turkey	Cross-sectional study n = 162	Preference on the type of birth	90.8% of women and 92% of their partners chose normal delivery

To be continued

Chart 1

Reference	Year/Country	Design/ number of patients	Intervention/Focus	Outcome/Conclusion
Silva, Nascimento, Coelho, 2015 <sup>(22)</sup>	2015 Brazil	Qualitative/Descriptive Exploratory Approach n = 30	Autonomy, dignity and participation of women in normal delivery	The dignifying practices were the most observed.
Hammond, Foureur, Homer, 2014 <sup>(24)</sup>	2014 Australia	Ethnography n = 8	Physical and aesthetic design of the delivery room	Changes in the setting and delivery room aesthetics can generate safer, more comfortable and effective practices
Liu, Liu, Huang, Du, Peng, Huang et al., 2014 <sup>(25)</sup>	2014 China	Clinical Trial n = 108 (38/70)	Immersion in water during labor	Immersion in water can reduce pain in labor and is associated with lower rate of cesarean delivery and postpartum urinary incontinence
Nutter, Meyer, Shaw- Battista, Marowitz, 2014 <sup>(26)</sup>	2014 USA	Integrative Analysis n = 38	Water birth	It is associated with a positive outcome of the delivery
Jamas, Hoga, Reberte, 2013 <sup>(27)</sup>	2013 Brazil	Narrative Analysis n = 17	Assistance received in a Birth Center	Positive evaluation by women
Karlsdottir, Halldorsdottir, Lundgren, 2013 <sup>(28)</sup>	2013 Iceland	Phenomenology n = 14	Women's experience in pain preparation and management in delivery	The staff contributes to the pain management during delivery
Lawrence, Lewis, Hofmeyr, Styles, 2013 <sup>(29)</sup>	Australia 2013	Systematic Review n = 25 (5,218 women)	Upright versus recumbent position in labor	Reduced labor length in the upright position
Simmonds, Peter, Hodnett, McGillis Hall, 2013 <sup>(30)</sup>	2013 Canada	Narrative Analysis n = 14	Moral responsibility of nurses in relation to the woman in labor	Main influencing factor relative to the expectations of the woman in labor
Hodnett, Downe, Walsh, 2012 <sup>(31)</sup>	2012 Canada	Systematic Review n = 10 (11,795 women)	Alternative versus conventional institutional settings for birth	Alternative institution is associated with lower rates of medical intervention and high maternal satisfaction
Cheung, Mander, Wang, Fu, Zhou, Zhang, 2011a <sup>(32)</sup>	2011 China	Paired Retrospective Cohort n = 452 (226/226)	Clinical results of a Birth Center and a Hospital	Normal delivery at the Birth Center – 87.6%, and at the Hospital – 58.8%
Cheung, Mander, Wang, Fu, Zhou, Zhang, 2011b <sup>(33)</sup>	2011 China	Qualitative Approach n = 40	Perception of the woman (n = 30) and professional (n = 10) on the Delivery Unit	Positive in relation to the Unit and its Model of Care
Silva, Oliveira, Silva, Alvarenga, 2011 <sup>(34)</sup>	2011 Brazil	Descriptive Study n = 35	Use of the Swiss ball	100% in Normal Birth Centers and 40.9% in Obstetric Centers
Liu, Chang, Chen, 2010 <sup>(35)</sup>	2010 Taiwan	Randomized clinical trial experimental n = 60 (30/30)	Effects of music therapy on the labor	Decrease in pain, anxiety and temperature
Riesco, Oliveira, Bonadio, Schneck, Silva, Diniz et al., 2009 <sup>(36)</sup>	2009 Brazil	Narrative review n = 12	Scientific production on the Normal Birth Center	Predominant foci are obstetric practices and maternal outcomes
Da Silva, De Oliveira, Nobre, 2009 <sup>(37)</sup>	2009 Brazil	Clinical randomized trial n = 108 (54/54)	Water immersion in labor	Significant reduction in pain in the experimental group
Romano, Lothian, 2008 <sup>(38)</sup>	2008 EUA	Theoretical-reflective study	Obstetric practices based on evidence	Six obstetric practices highlighted
Lundgren, Berg, 2007 <sup>(39)</sup>	2007 Suécia	Secondary Analysis n = 8	Central concepts in the woman-nurse relationship	Six pairs of the woman-nurse relational concept highlighted
Walsh, 2007 <sup>(40)</sup>	2007 UK	Ethnography n = 30 women and n = 5 professionals	Culture, beliefs, values, customs and practices at the Birth Center	The Normal Birth Center can encourage new ways of childbirth assistance
Bio, Bittar, Zugaib, 2006 <sup>(41)</sup>	2006 Brazil	Prospective clinical trial n = 100 (50/50)	Influence of maternal mobility during labor	Better tolerance to pain, less use of drugs and better dilation evolution
Mousley, 2005 <sup>(42)</sup>	2005 UK	Descriptive Study	Aromatherapy use within Maternity	Effective in normalization of childbirth and increase in the satisfaction of mothers

To be continued

Chart 1 (concluded)

Reference	Year/Country	Design/ number of patients	Intervention/Focus	Outcome/Conclusion
Hoga, 2004 <sup>(43)</sup>	2004 Brazil	Thematic Oral History n = 6	Motivation of nurse insertion at the Birth Center	Dissatisfaction with the Biomedical Model, with the hospital interventionist character and the desire to transform
Yildirim, Sahin, 2004 <sup>(44)</sup>	2004 Turkey	Clinical trial n = 40 (20/20)	Effects of the breathing and massage technique on labor	Effective in reducing pain
Lauzon, Hodnett, 2001 <sup>(45)</sup>	2001 Canada	Systematic Review n = 209 (105/104)	Effects of the Labor Assessment Program	Evidence of benefits to women in labor with term pregnancy

### Summary of categories and subcategories

The critical analysis of the literature<sup>(4,7)</sup> enabled the creation of categories of analysis that name elements of the concept of ambience for labor and normal institutionalized delivery, namely the antecedent, defining attributes and the consequent. To better explain the elements of the categories, in turn, they can be divided into subcategories. Briefly, categories and subcategories are presented below.

#### Antecedent of the concept of ambience for labor and normal institutionalized delivery

These are elements that precede the establishment of the ambience and permeate the social context of its application<sup>(6)</sup>, are organized into two categories (Chart 2):

- Meaning ascribed to motherhood by the women in labor added to the self-esteem and confidence in their body in the childbirth process and in health professionals, and the preference and willingness to surrender to the labor and delivery with good expectations for the institution;
- Qualified physical and social space.

The category "Qualified physical and social space" has four subcategories:

- Qualified physical space;
- Qualified staff with informative experience, clinical autonomy,

critical thinking, emotional self-control, and contribution of each professional;

- Close relationship, trust, and therapeutic and equal affection with the mother, based on the recognition of her uniqueness, her capacity for normal delivery and stimulating the protagonism in delivery;
- Teamwork process based on confidence in the clinical competence of professionals to ensure the safety of the mother, the Admission Assessment Program, the possibility of spontaneous onset of labor, soft food intake, the choice of companion and labor position and delivery for the woman in labor.

Considering that assistance to labor and delivery will be focused on the woman in labor and that she will be the protagonist, as the antecedent, it is imperative to promote self-esteem and self-confidence through encouragement and team support, raising awareness about their ability for delivery<sup>(30,39)</sup>. Another antecedent of ambience is the preference of the mother for normal delivery added to her good expectations and the family's regarding the institution<sup>(40)</sup>. Also, as the antecedent, we highlight the qualification not only of the physical space, but also of the social institution; comprising the local and the professionals in the first call to the woman in labor until the completion of the delivery process. In particular, the physical and functional settings of the institution must provide resources to carry out the NIT<sup>(34,37)</sup>.

The antecedent to the concept of ambience describes specific aspects of the mother and the environment; including interpersonal relationships and the teamwork process. However, we observed that the antecedent does not follow a logical sequence of continuity, but, together, they are foundational elements of ambience for labor and delivery.

Chart 2 – Categories and subcategories of analysis of the antecedent for the concept of ambience for labor and normal institutionalized delivery, 2018

ANTECEDENT OF THE CONCEPT OF AMBIENCE FOR LABOR AND NORMAL INSTITUTIONALIZED DELIVERY	
Meaning ascribed to motherhood by the women in labor plus the self-esteem and confidence in their body in the childbirth process and in health professionals, and the preference and willingness to surrender to the labor and delivery with good expectations regarding the institution	
Meaning ascribed to motherhood <sup>(39)</sup> ; High self-esteem <sup>(30)</sup> ; Self-confidence <sup>(15,30,39)</sup> ; Trust in your body and in the delivery process <sup>(14,15,28)</sup> ; Trust in health professionals <sup>(11,19,39)</sup> ; Preference for normal delivery <sup>(21,31)</sup> ; Willingness to surrender to the labor and delivery <sup>(39)</sup> ; Good expectations regarding the institution <sup>(40)</sup> .	
Qualified physical and social space	
Subcategories	Codes and references
Qualified physical space	Propitious institutional physical setting <sup>(22,24,31)</sup> ; Resources for Non-Invasive Technologies <sup>(22,34,37)</sup> ; Relaxing environment <sup>(32)</sup> .
Qualified staff with informative experience, clinical autonomy, critical thinking, emotional self-control and contribution of each professional	Qualified staff <sup>(11,43)</sup> ; Experience informed by the staff <sup>(39)</sup> ; Appropriation of clinical autonomy <sup>(23)</sup> ; Critical thinking <sup>(39)</sup> ; Emotional self-control <sup>(30)</sup> ; Contribution as a professional <sup>(33,39)</sup> ; Belief in assistance to normal delivery <sup>(23,39)</sup> .

To be continued

Chart 2 (concluded)

Subcategories	Codes and references
Close relationship, trust, therapeutic and equal affection with the mother, based on the recognition of her uniqueness, her capacity for normal delivery and stimulating the protagonism in delivery;	Recognition of uniqueness <sup>(39)</sup> ; Belief in the capacity of the mother <sup>(39)</sup> ; close relationship <sup>(27,39)</sup> ; Trust relationship <sup>(18,39)</sup> ; Equal relationship <sup>(39)</sup> ; Therapeutic Affective Relationship <sup>(40)</sup> .
Teamwork process based on confidence in the clinical competence of professionals to ensure the safety of the mother, the Admission Assessment Program, the possibility of spontaneous onset of labor, soft food intake, the choice of companion and labor position and delivery for the woman in labor.	Confidence in the clinical competence among professionals <sup>(30)</sup> ; Team work <sup>(23,30)</sup> ; Presentation of the mother to the institution of choice for labor and delivery <sup>(40)</sup> ; Safety of the mother <sup>(37)</sup> ; Guarantee of the possibility of spontaneous onset of labor <sup>(38)</sup> ; Admission Assessment Program <sup>(15,45)</sup> ; Guarantee of choice of the mother's companion <sup>(14)</sup> ; Guarantee of the choice of the mother on the intake of soft foods and liquids <sup>(36)</sup> ; Guidelines on benefits of upright positions during labor and delivery <sup>(29)</sup> ; Guarantee of the choice of childbirth position <sup>(13)</sup> ; Staff flexibility regarding standards and institutional routines <sup>(27)</sup> .

**Defining attributes of the concept of ambience for labor and normal institutionalized delivery**

Attributes refer to defining characteristics, whether explicit or implicit, related to a particular concept itself<sup>(6)</sup>, delineating its peculiarities. The peculiarities of the concept of ambience are set into two categories (Chart 3) restricted to the assistance interaction process as a whole and to the use of NIT, which are:

- Assistance process focused on the woman in labor triggered by the empowerment and protagonism of labor and delivery, sequenced by clinical assessment and interventions guided by the evidence of changes in the natural dynamics of labor and delivery, the judicious use of oxytocin, the amniotomy and episiotomy, and early promotion of skin contact;

- Use of NIT as presence and continuous support companion, friendly environment for relaxation, acupuncture, walking, bathing, Swiss ball, massage, compresses, ventilatory exercises, soft food intake and freedom of labor and delivery position.

Such attributes are in the categories and subcategories of analysis with references. Ambience for labor and normal institutionalized delivery is established from a collective interactional process involving woman in labor, staff and companion. Considering the centered care in women in labor, the ambience has as its central attribute the empowerment of the woman in labor and the protagonism of labor and delivery<sup>(30,39)</sup>. Given the scientific evidence on the avoidance of morbidity for the mother and the fetus, the judicious use of oxytocin infusion, the amniotomy and episiotomy<sup>(36)</sup> stands as a defining attribute of interventions

Chart 3 – Categories and subcategories of analysis of defining attributes for the concept of ambience for labor and normal institutionalized delivery, 2018

DEFINING ATTRIBUTES OF THE CONCEPT OF AMBIENCE FOR LABOR AND NORMAL INSTITUTIONALIZED DELIVERY	
Assistance process focused on the woman in labor triggered by the empowerment and protagonism of labor and delivery, sequenced by clinical assessment and interventions guided by the evidence of changes in the natural dynamics of labor and delivery, the judicious use of oxytocin, the amniotomy and episiotomy, and early promotion of skin contact;	
Assistance focused on the woman with continued attention <sup>(11,23,39)</sup> ; Awareness of the mother of continued care, focused on her <sup>(39)</sup> ; Resolute welcoming <sup>(20,22,27)</sup> ; Clinical assessment <sup>(23,40,45)</sup> ; Prioritization of emergency calls <sup>(27)</sup> ; Guidance on labor and delivery <sup>(20,27,30,39)</sup> ; Empowerment to the protagonism of the mother for labor and delivery <sup>(11,18,22,39)</sup> ; Active listening <sup>(39)</sup> ; Interventions on the evidence of changes in the natural dynamics of the labor and delivery <sup>(38-39)</sup> ; Judicious use of oxytocin infusion, the amniotomy and episiotomy <sup>(36)</sup> ; Early promotion of skin contact <sup>(12)</sup> ; Umbilical cord ligation <sup>(43)</sup> .	
Use of NIT as presence and continuous support companion, relaxing environment, acupuncture, walking, bathing, Swiss ball, massage, compresses, ventilatory exercises, soft food intake and freedom of labor and delivery position.	
Subcategories	Codes and references
Presence and continued support of the companion of choice of the mother	Presence of the companion of choice of the mother; Continued support of the companion <sup>(38)</sup> .
Relaxation techniques	Relaxation techniques <sup>(32,35,42)</sup> .
Walking	Walking <sup>(17,28,36)</sup> .
Bath	Spraying and immersion baths <sup>(20,26-27,34,36)</sup> .
Swiss ball	Use of the Swiss ball <sup>(34)</sup> .
Massages	Massages <sup>(17,36)</sup> .
Compresses	Hot or cold compresses <sup>(28)</sup> .
Ventilatory exercises	Ventilatory exercises <sup>(44)</sup> .
Soft food intake	Soft food during labor <sup>(36)</sup> .
Freedom of labor and delivery position	Freedom of labor and delivery position <sup>(32,34,41)</sup> .

for ambience in the context of labor and delivery. And, as an intervention involving attribute the newborn, we highlight the practice of the early promotion of skin contact<sup>(12)</sup> and umbilical cord ligation<sup>(43)</sup>.

In a peculiar way, NIT characterize the ambience, since they are procedures, techniques and knowledge aimed at retrieving the essence and autonomy of the mother during labor and delivery, mobilizing and enhancing her capacity as a major player in this process<sup>(46)</sup>. The use of NIT should be based on scientific evidence<sup>(46)</sup> due to their novelty in practice and to recognize the signs of each of them in accordance with the evolution of labor.

The defining attributes of the concept of ambience for labor and normal delivery show elements that define and delimit the concept; discussing the practice, on the use of NIT and the resources available to the physiological evolution of the labor and delivery.

### The consequent of the concept of ambience for labor and normal institutionalized delivery

These are elements resulting from the application of the concept<sup>(6)</sup> of ambience for labor and normal institutionalized delivery. In turn, the consequent of the concept of ambience are shown in categories and subcategories composed of four categories (Chart 4), namely:

- Pain management, relief and comfort;
- Promotion of the natural evolution of labor with outcome for normal delivery;
- Avoidance of early admission to effectiveness in meeting the needs of the woman in labor, plus the delivery and protagonism in labor, satisfaction, well-being and safety, with feeling of relaxation and relief from anxiety;

**Chart 4** – Categories and subcategories of analysis of the consequent for the concept of ambience for labor and normal institutionalized delivery, 2018

<b>CONSEQUENT OF THE CONCEPT OF AMBIENCE FOR LABOR AND NORMAL INSTITUTIONALIZED DELIVERY</b>	
<b>Pain management, relief and comfort</b>	
Self-confidence of the mother <sup>(15,39)</sup> ; Acupuncture <sup>(28)</sup> ; Music therapy <sup>(28,35)</sup> ; Aromatherapy <sup>(42)</sup> ; Mobility of the woman <sup>(28,33)</sup> ; Shower <sup>(25-26)</sup> ; Practice exercises <sup>(27,44)</sup> ; Massage favoring pain management <sup>(28,36)</sup> ; Swiss ball <sup>(27,34)</sup> ; Compresses on the perineum <sup>(28)</sup> .	
<b>Promotion of the natural evolution of labor with outcome for normal delivery</b>	
Avoidance of routine interventions <sup>(38)</sup> ; Labor and delivery in water <sup>(27)</sup> ; Effective support of the companion <sup>(38)</sup> ; Mobility of the woman <sup>(33,41)</sup> ; Adoption of upright positions <sup>(13,38)</sup> ; Use of the Swiss ball for greater permanence of the woman in the upright position <sup>(27,34)</sup> ; Outcome of the normal delivery <sup>(11,16,31)</sup> .	
<b>Avoidance of early admission with effectiveness in meeting the needs of the woman, plus delivery and protagonism in labor, satisfaction, well-being and safety with feeling of relaxation and relief from anxiety</b>	
Avoidance of early admission <sup>(45)</sup> ; Effective meeting of the woman's needs <sup>(40)</sup> ; Commitment to labor <sup>(39)</sup> .	
<b>Subcategories</b>	<b>Codes and references</b>
Protagonism	Aromatherapy <sup>(42)</sup> ; Favorable environment <sup>(24)</sup> .
Satisfaction and well-being	Welcoming reception <sup>(27)</sup> ; Prioritization of care in case of emergency <sup>(27)</sup> ; Presence and continuous support of the companion <sup>(14)</sup> ; Specific guidance on labor and delivery <sup>(27)</sup> ; Continued care by professionals <sup>(14,27)</sup> ; Aromatherapy <sup>(42)</sup> ; Mobility of the woman <sup>(44)</sup> ; Ventilatory exercises <sup>(44)</sup> ; Bath <sup>(27)</sup> ; Swiss ball <sup>(27)</sup> ; Massages <sup>(44)</sup> ; No episiotomy <sup>(27)</sup> .
Safety	Presence of companion <sup>(27)</sup> ; Continued care by professionals <sup>(27)</sup> ; Staff and woman relationship <sup>(27)</sup> .
Relaxation and relief from anxiety	Swiss ball <sup>(34)</sup> ; Aromatherapy <sup>(42)</sup> ; Music therapy <sup>(32,35)</sup> ; Propitious environment <sup>(32)</sup> ; Presence of the companion <sup>(27)</sup> .
<b>Reduced use of oxytocin, epidural analgesia and analgesics, with decrease in the occurrence of episiotomy and promotion of perineal integrity, supported by therapeutic communication and staff satisfaction.</b>	
<b>Subcategories</b>	<b>Codes and references</b>
Therapeutic communication	Commitment <sup>(33)</sup> .
Staff integration	Gratification <sup>(43)</sup> ; Satisfaction <sup>(24,43)</sup> ; Facilitation of the staff performance <sup>(24)</sup> .
Reduced use of oxytocin	Admission assessment of the woman <sup>(45)</sup> ; Propitious institutional setting <sup>(31)</sup> .
Normal delivery without epidural analgesia	Admission assessment of the woman <sup>(45)</sup> ; Propitious institutional setting <sup>(45)</sup> ; Mobility of the woman <sup>(41)</sup> ; Upright position <sup>(29)</sup> ; Labor and delivery in water <sup>(26)</sup> .
Reduced use of analgesics	Mobility of the woman <sup>(41)</sup> .
Promotion of perineal integrity	Swiss Ball Effect assisting in the exercise of the perineal region <sup>(34)</sup> ; Labor and delivery in water promoting the perineal integrity <sup>(26)</sup> .
Decrease in the occurrence of episiotomy	Propitious institutional setting <sup>(31)</sup> ; Labor and delivery in water <sup>(26)</sup> ; Upright position <sup>(13)</sup> .

- Reduced use of oxytocin, epidural analgesia and analgesics, with decrease in the occurrence of episiotomy and promotion of perineal integrity, supported by therapeutic communication and staff satisfaction.

Unlike the antecedent and defining attributes, in this study the concept of the consequent are based on its motivators, which are interrelated as a network, since a single element contributes to reaching different consequent. Thus, most of the elements that are constituted as the antecedent and attributes are validated as the consequent of the implementation of ambience in practice, in achieving the desired results.

Among the consequent, we highlight *pain management, relief and comfort*, and *promotion of labor and normal delivery* (Chart 4). The consequent *pain management, relief and comfort* is achieved through *self-confidence of the mother regarding her body and her natural ability to give birth. Music therapy, acupuncture, aromatherapy, mobility of the woman* and other interventions are recognized as technologies for relaxation and coping with pain and are mainly associated with the mother's protagonism in parturition and the restriction of the use of analgesics<sup>(28,33,42)</sup>.

Another important consequent of ambience is the *promotion of the natural evolution of labor with outcome for normal delivery*. The natural evolution of labor, the *avoidance of unnecessary interventions* is a fundamental element of the ambience, saving the natural physiological process of disruption and potential damage to the woman and the fetus<sup>(38)</sup>. Other elements favoring the promotion of labor, such as the *effective support of the woman, free mobility*<sup>(33,41)</sup>, *adoption of upright positions*<sup>(13,38)</sup>, and the *use of Swiss ball*<sup>(27,34)</sup>.

### **Theoretical proposition of the concept of ambience for labor and normal institutionalized delivery**

The analysis of the defining attributes, of the antecedent and the consequent of the concept of ambience, proposed by critical analysis of the literature<sup>(4,7)</sup>, enabled the development of a novel theoretical proposition of this concept, as shown:

Ambience for labor and normal institutionalized delivery is a complex biopsychosocial process based on collective interaction of the mother with her companion and the staff; focused on obstetric care, triggered by the reception and empowerment of the woman and the protagonism of labor and delivery, followed by clinical assessment and interventions guided by the evidence of changes in the natural dynamics of labor and delivery, the judicious use of oxytocin, the amniotomy, episiotomy and early promotion of skin contact integrated into the use of Non-Invasive Technologies, such as the presence and continued support, favorable environment for relaxation, walking, bathing, Swiss ball, massage, compresses, ventilatory exercises, soft food intake and freedom of position during labor and delivery. The antecedent is made up of the meaning attributed to motherhood by the woman plus the self-esteem and confidence in her body, the birthing process and health professionals, besides the preference and willingness to surrender to the labor and delivery with good expectations regarding the Institution. It includes qualified staff with informative experience, clinical autonomy, critical thinking, emotional self-control and commitment of each professional in establishing

close relationship, trust, therapy and equal affection with the woman based on the recognition of her uniqueness, capacity for normal delivery and in stimulating the birth protagonism with development of teamwork process based on confidence in the clinical competence of professionals to ensure the safety of the mother, the Admission Assessment Program, the possibility of spontaneous onset of labor, the choice of companion by the woman, soft food intake and freedom of position during labor and delivery, contextualized in a qualified physical space. Pain management, relief and comfort associated with the promotion of the natural evolution of labor with outcome for normal delivery, the avoidance of early admission with effectiveness in meeting the needs of the woman, plus her delivery and protagonism in labor, satisfaction, well-being and safety, with feeling of relaxation and relief from anxiety, in addition to the reduced use of oxytocin, epidural analgesia and analgesic with decrease in the occurrence of episiotomy and promotion of perineal integrity, based on therapeutic communication and staff satisfaction, are consequences of the application of the concept of ambience for labor and normal institutionalized delivery<sup>(47)</sup>.

## **DISCUSSION**

The study identified in the literature, attributes of the concept of ambience for labor and normal institutionalized delivery. The first element includes antecedent conditions and actions that make up and set the ambience in care, such as the availability of material and human resources, knowledge and experience of professionals combined to interpersonal relationships. Given this context of establishment of ambience, health managers are also responsible for the establishment of a qualified delivery care environment, which should be suitable for the woman and her companion, as well as the staff<sup>(1)</sup>. However, in the process of search and validation of antecedent elements, no data were found regarding the health managers in the promotion of ambience for labor and normal delivery, showing a gap in knowledge about the performance of such professionals in the qualification of the idealized obstetric care.

The defining attributes of the concept of ambience for labor and normal delivery characterize the institutionalized assistance focused on the woman, and at the same time, the same woman in labor is the protagonist of the assistance process. It includes the presence of the woman's companion of choice, the use of NIT for pain relief, soft food intake, freedom of position during labor, the promotion of skin to skin contact between mother and child, among others.

Finally, the consequent of the concept of ambience is related to the pain of labor and delivery, the outcome for normal delivery, and to the woman in labor. The consequent related to the woman's pain is related to its management and coping process. From this perspective, the great villain of the normal delivery is the pain of the contractions and the delivery itself, being the one responsible for women choosing operative delivery. The application of the concept of ambience in the obstetrical practice does not guarantee the fallacy of a "painless delivery;" but it overcomes it. Therefore, the greatest contribution of the ambience is that it offers resources, explained by its antecedents and defining attributes, so that the parturient protagonist can face, manage, interact and relieve the pain in the labor and delivery process.

For this reason alone, the ambience would be characterized as a justification for professionals and health managers to seek ways to make this practice feasible in obstetrics.

The consequent of the concept of ambience, promotion of the natural evolution of labor with outcome for normal delivery, is characterized as the main goal to be reached in establishing the ambience in obstetric care. This result can be achieved more easily with the assistance focused on the woman by the use of NIT, with appreciation of her desires and expectations, especially with her protagonism in labor and delivery. And the protagonism of the woman is characterized as the main element of the concept of ambience; since the scope of such an element, as the antecedent, as a defining attribute and consequent, enables the establishment of the ambience in labor and normal delivery.

The data obtained in the literature distinguish conceptual boundaries of the "environment for labor and normal institutionalized delivery" with the concept of "humanization of care for the woman and her companion." Although they are considered as distinct concepts, they are complementary to each other, since the ambience in the assistance to labor and delivery is directly related to the humanization of care for the woman<sup>(2)</sup>. The proposal of humanization in obstetric care reinforces the need to soften the routine at time of hospitalization, through a relation of exchange between the woman, her companion and health professionals<sup>(48)</sup>. Another conceptual issue of the ambience for labor and delivery refers to the welcoming reception of the woman and her companion, which is presented as a guideline of humanization in health<sup>(2)</sup>. In the concept of ambience, the affective and resolute reception emerges as a defining attribute and as a consequent, being an element that promotes and, at the same time, is a result of the ambience in obstetric clinical practice.

### Limitations of the study

One of them occurred in the beginning of the search in the scientific literature, since there were no specific descriptors that contemplated the ambience in health, being necessary to use descriptors that, as a whole, permeated the humanization and the ambience for labor and normal institutionalized delivery. Another limitation, which at the same time expresses the relevance of this study, was that no reference dealt directly with the ambience, nor did it specifically describe the attributes of the concept, be they antecedent, defining attributes or consequent; naturally due to the novelty of the concept of ambience in practice.

### Contributions to the field of nursing, health or public policies

The identification of the concept of ambience through the attributes that define it and the factors that determine it and its consequent favor the concept of ambience in labor and delivery. In particular, the adoption of this concept aims to facilitate humanized health actions, through the valuation of the environment<sup>(49)</sup>. Thus, health professionals, including nurses, can improve the practice with the woman and the family. In addition, the content obtained in this study enables the labor and delivery assistance staff to be trained on interventions and activities that may be identified, assisting in the empowerment of the woman's protagonism in labor

and delivery. Furthermore, the implementation of the ambience in the childbirth assistance service favors the person-centered approach and the integrality of care, enabling reflections on the model of women's health care<sup>(1)</sup>. Given the importance of this concept to humanized care, this study may provide a better identification and understanding of the strategies applied to the promotion of the ambience for labor and normal institutionalized delivery; offering a new proposal in the way of making and producing spaces that are more welcoming, more resolute and more humane in the field of obstetrics<sup>(1)</sup>.

### FINAL CONSIDERATIONS

In addition to identifying attributes of the concept of ambience for labor and normal institutionalized delivery, this study elaborated an unprecedented theoretical proposition for the concept, representing a theoretical-conceptual advance to the obstetric discipline.

The concept of ambience for labor and normal institutionalized delivery helps managers and nurse-midwives to leverage transformations and consequent evaluations, aiming at the excellence of care. Nevertheless, the concept of ambience supports and expands the obstetric practice, but it is considered more comprehensive than the concept, that is, the practice is much richer and complex than the possibility of talking about it, and results or the consequent achieved speak louder in practice. The theologian and philosopher of the 13th century, St. Thomas Aquinas (1225-1274), mentions the complex process that permeates the theory versus practice and observes the dynamics of the concept of structure when he says "The reason is the imperfection of intelligence, because the practice goes beyond the concept".

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### ERRATUM

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