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# Production of knowledge about the care given to newborns in neonatal IC: contribution of brazilian nursing

PRODUÇÃO DE CONHECIMENTO SOBRE O CUIDADO AO RECÉM-NASCIDO EM UTI NEONATAL: CONTRIBUIÇÃO DA ENFERMAGEM BRASILEIRA

GENERACIÓN DE CONOCIMIENTOS SOBRE EL CUIDADO AL RECIÉN NACIDO EN UTI NEONATAL: CONTRIBUCIÓN DE LA ENFERMERÍA BRASILEÑA

Roberta Costa<sup>1</sup>, Maria Itayra Padilha<sup>2</sup>, Marisa Monticelli<sup>3</sup>

## ABSTRACT

The objective of this documentary study was to reflect on the state of the art of nursing in Brazil regarding care given to newborns in neonatal intensive care units (NICU). The data source used was the Brazilian Nursing Association base of theses and dissertations. Eighty-one studies were located. Data analysis was performed in two stages: first, the study's characterization was performed; second, the material was organized according to data evident in the study, resulting in thematic categories: care centered on the newborn's physiological aspects; care provided to the family accompanying their newborn in the NICU; and the health team providing care to the newborn in the NICU. It was found that nursing research seeks new forms of care and brings theory closer to practice, thus guaranteeing its support of the nursing profession and contributing to the production of knowledge in neonatology.

## KEY WORDS

Infant, newborn.  
Intensive Care Units, Neonatal.  
Neonatal nursing.  
Nursing research.

## RESUMO

Esta pesquisa documental teve como objetivo refletir sobre o estado da arte na Enfermagem brasileira acerca do cuidado ao recém-nascido em UTI neonatal. A fonte de pesquisa foi o Banco de Teses e Dissertações da Associação Brasileira de Enfermagem. Foram identificados 81 estudos. A análise dos dados foi feita em duas etapas: primeiro realizamos a caracterização dos trabalhos; após, organizamos o material a partir de dados evidentes nos estudos, dando lugar às categorias temáticas: cuidado centrado nos aspectos fisiológicos do recém-nascido; a família que acompanha os cuidados ao recém-nascido em UTI neonatal; e a equipe de saúde que atua no cuidado ao recém-nascido em UTI neonatal. Constatamos que a pesquisa em enfermagem busca novas formas de cuidar, e proporciona uma aproximação entre a teoria e a prática, garantindo sua sustentação enquanto profissão, e contribuindo na produção de conhecimento em neonatologia.

## DESCRIPTORES

Recém-nascido.  
Unidades de Terapia Intensiva Neonatal.  
Enfermagem neonatal.  
Pesquisa em enfermagem.

## RESUMEN

Esta investigación documental tuvo como objetivo reflexionar sobre el estado del arte de la Enfermería brasileña respecto de los cuidados al recién nacido en UTI neonatal. La fuente de la investigación fue el Banco de Tesis y Disertaciones de la Asociación Brasileña de Enfermería. Fueron identificados 81 estudios. El análisis de los datos fue hecho en dos etapas: primero, realizamos la caracterización de los trabajos, y luego organizamos el material a partir de datos evidentes en los estudios, dando lugar así a las categorías temáticas: Cuidado centrado en los aspectos fisiológicos del recién nacido, La familia que colabora con los cuidados al recién nacido en UTI Neonatal y El equipo de salud que actúa en el cuidado del recién nacido en la UTI Neonatal. Se constató que la investigación en enfermería busca nuevas formas de cuidar y proporciona una aproximación entre la teoría y la práctica, garantizando su sustentación como profesión y contribuyendo a la generación de conocimientos en Neonatología.

## DESCRIPTORES

Recién nacido.  
Unidades de Terapia Intensiva Neonatal.  
Enfermería neonatal.  
Investigación en enfermería.

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## INTRODUCTION

Neonatal care has undergone many changes and the advent of new technologies has created a broader universe for newborn care. The advancements in intensive care in recent decades have enabled better survival of extremely premature newborns<sup>(1)</sup>. Great changes have occurred in recent years in the environment of Brazilian neonatal units, following, somewhat, a world trend.

Newborn care is surrounded by paradoxes that are part of a daily routine of care and research. On the one hand, the accomplished advancements are immense such as the increasing survival rate of increasingly premature babies and those affected by malformations, previously considered incompatible with life. On the other hand, the survival of these babies impose an almost insurmountable challenge: the mission to return to families and to society a child capable of fully developing her/his affective, cognitive and productive potential<sup>(2)</sup>.

In the mainstay of the transformation that has occurred in nursing science, accompanied by the technological development that occurred in the health field in recent decades, especially in neonatology, the accumulated knowledge is notorious. Such a fact contributes to the fact that nurses who work in this specialty need to access bibliographic references to update and supplement their knowledge<sup>(3)</sup>.

Although neonatology is a specialized field of knowledge, it still is a new science in its relatively early stages in Brazil. Knowing the path taken by Brazilian nursing in the construction of knowledge of newborn care can contribute to the understanding of conflicts, advancements and setbacks, factors that interfere with the quality of health care, support the evaluation of education and training of professionals and also the development of research that can contribute to the improvement of the population's health<sup>(4)</sup>.

## OBJECTIVE

Seeking to understand and visualize such processes of production of knowledge, this article aims to reflect about the state of the art of Nursing in regard to newborn care in a Neonatal Intensive Care Unit (NICU) based on Dissertations and Theses produced between 1981 and 2006.

## METHOD

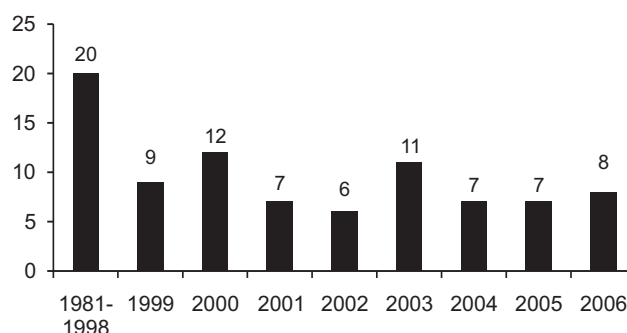
This study uses document research as method to analyze the scientific production of the Brazilian nursing about newborn care. The search was carried out in the Database of Theses and Dissertations of the Center for Studies and Research in Nursing (CEPEn) at the Nursing Association (ABEn). The search was initially directed to the abstracts of

manuscripts whose title evidenced any possibility of relation to the theme. We discovered that 87 Dissertations and Theses addressed the subject between 1979 and 2006.

The findings were quantitatively and qualitatively analyzed. In the first stage of data analysis, the manuscripts were organized in relation to type of study (Dissertation or thesis), year of publication and Institution of origin. As this classification phase was concluded, we proceeded to qualitative analysis. In the second stage, the material was organized according to data evident in the studies (component elements), grouped by similarities, which led to subcategories (3) from which the following categories emerged: care focused on newborns' physiological aspects, the family that accompany the newborn's care in the NICU; and the health team that delivers care to newborns' in the NICU.

## RESULTS AND DISCUSSION

By shedding light on Brazilian nursing production, we note that many studies have contributed to the production of knowledge of newborn care. Seventy-one (81.6%) theses and 16 (18.4%) dissertations were found. In relation to the annual number of publications, we observe that the studies are from the period between 1981 and 2006 and there was a significant increase in publications starting in 1999, as shown in Figure 1. The turning point is the thesis of Nely Pereira Gomes entitled *Systematization of temperature checking of newborns with low weight – a nursing instrument control* published in 1981 by the EEAN/UFRJ.



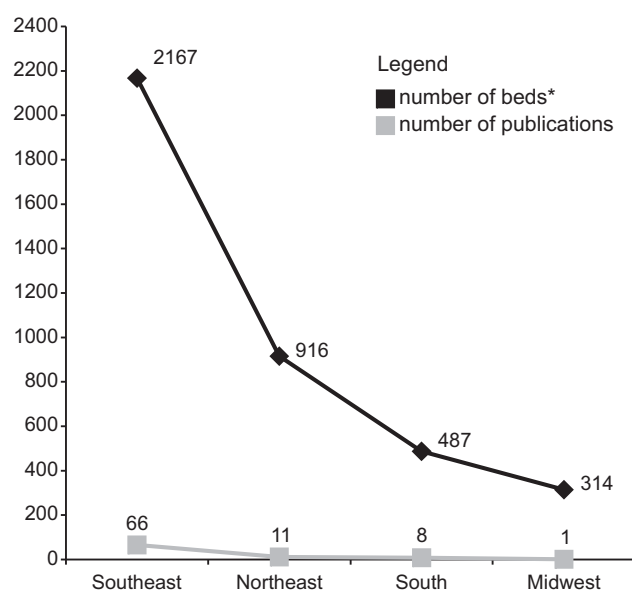
**Figure 1** - Distribution of studies by year of publication - Florianopolis, SC, Brazil - 2008

In regard to the institutions where these studies were carried out, we observe that the Southeast was the region that generated the highest number of studies (75.8%), mainly by the University of São Paulo – from the campuses in Ribeirão Preto and São Paulo (16.1% and 14.9%), followed by the Northeast with 12.6% (mainly from the Federal University of Ceará and Federal University of Bahia); the South with 9.2% (Federal University of Santa Catarina with 8%); and the Midwest region presents 1.2% of manuscripts represented by the Federal University of Goiás. A thesis de-

fended at the Chiba University, School of Nursing, Japan was also found.

The distribution of manuscripts by region can be explained by the *regional inequalities existent in the country regarding the availability of Graduate Programs and the quantity of qualified human resources at the Doctoral and Master levels*<sup>(5)</sup>. These unbalances are evidenced when one considers the regional distribution of programs, which indicates that the Southeast occupies the leadership in Graduate Programs (57%), the South presents 20.5% followed by the Northeast with 18% of the programs, while the Midwest presents a little more than 4% of the programs<sup>(6)</sup>.

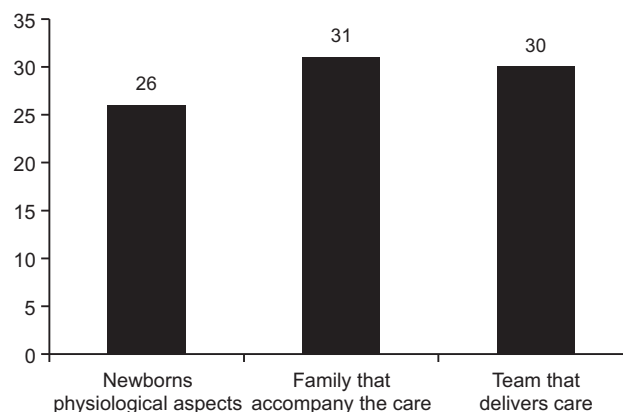
On the other hand, the distribution of neonatal beds across the country can justify the expressive majority of manuscripts in the South. We evidence that the distribution of studies varies according to the distribution of beds (Figure 2), which allow us to infer that the need for knowledge production emerges from the practice of health professionals in the NICUs. Coupled with these is the fact that the majority of studies are theses and a Master degree became an institutional requirement and not only a *professional goal* of faculty members<sup>(7)</sup>.



\* Source: Ministry of Health. National Register of Health Institutions in Brazil, Dec/2007

**Figure 2** - Distribution of publications and number of neonatal beds by region - Florianopolis, SC, Brazil - 2008

The analysis of data found by similarity originated three broad thematic categories: *care focused on newborns' physiological aspects, the family that accompany the newborn's care in the NICU and the health team that delivers care to newborns' in the NICU* (Figure 3) that expresses the way the theme has been addressed in the production of knowledge in Brazilian nursing studies.



**Figure 3** - Distribution of studies by thematic category - Florianopolis, SC, Brazil - 2008

Following, we present the three categories to provide a broad view of the theme and to contribute to the state of the art of knowledge produced by the Brazilian nursing.

*Care focused on the newborns' physiological aspects* – we included in this category the manuscripts that address the newborns' physiological aspects in NICUs (29.9%). Hence, these studies analyze variables such as: temperature, weight, heart frequency, respiratory frequency, oxygen saturation, behavioral answers and breastfeeding. We highlight the studies that analyze the weight development of preterm newborns included in Kangaroo care; control the body temperature of low-weight newborns; identify the physiological and behavioral responses of babies at the point of nursing care delivery; analyze the stimuli activities performed by nurses in the NICUs with preterm newborns; describe the care and difficulties found in the newborns' breastfeeding process; and identify the suckling skills (bottle and breast) of preterm newborns with very low weight and compare the effects on oxygen saturation, temperature and cardiac and respiratory frequencies.

Knowledge of the babies' physiological aspects guided the care delivered to this population. The acknowledgement of intercurrents presented by newborns in terms of poor physiological functions contributed to diminish infant mortality<sup>(8)</sup>.

There are, in this category, references to studies that describe and evaluate nursing procedures in NICUs. It is worth highlighting studies related to prevention strategies and control of hospital-acquired infections; care in the maintenance of umbilical catheterization; the use of Peripherally Inserted Central Catheters; investigating the relation between nursing care in tracheal aspiration, blood withdrawn and the behavioral and physiological responses of the newborn at risk; nurses' behavior in view of the pain caused to the baby by venipuncture; prevention of skin lesions on newborns; and feeding techniques prescribed for preterm babies.

Scientific knowledge and technical skills are essential for a rigorous control of vital functions to ensure the sur-

vival of newborns at risk<sup>(9)</sup>. Hence, the authors of these scientific articles highlight the importance of following and updating knowledge of the therapeutic and technological advancements in the field. They also contribute to the development of physiological parameters for newborns in NICUs and help to disseminate and evaluate procedures and techniques performed in the daily routine of these professionals. However, we did not find statistical studies on epidemiological data, socio-demographic profile and neonatal morbidity/mortality. On the other hand, we need to improve the development of care methodologies since these strategies are supported by actions, reactions and continuous constructions that involve nurses and their clients. They also involve decision-making, promoting an organized and individualized care, planning of actions and the generation of knowledge based on practice<sup>(10)</sup>.

*The family that accompany the care of the newborn in NICU* – we selected in this category the larger number of studies (35.6%). These studies mainly address mother-infant bonding and the analysis of aspects that either promote or hinder bonding between parents and newborns.

It is important that professionals develop effective interactions taking into account the experience of these parents in this phase of their lives, offering legitimate opportunities for them to express their feelings in addition to concrete and facilitative elements that can enable these parents to overcome barriers and move toward a relationship where there is closer proximity and interaction with their children<sup>(11-12)</sup>.

This category presents a large number of studies addressing the meanings and social representations of mothers of their children's hospitalization; the experiences, feelings and expectations of mothers of hospitalized newborns; the perceptions of mothers of their participation in their children's care; and the communication between mothers and the health team.

The object of care during hospitalization is the preterm infant. However, as measures in which actions depend on the mother to promote the child's well-being and health such as breastfeeding, visits and kangaroo care, maternal beliefs and feelings help to guide facilitating interventions in individualized care to newborns<sup>(13)</sup>.

In a smaller number, we find studies that seek to understand the functioning of family dynamics due to the permanence of the mother and child in the NICU and the repercussions for the families due to the newborn's hospitalization. It is equally important to highlight that we found only one study addressing the fathers' perspectives, seeking to know the meaning fathers attribute to the fact of having a child hospitalized in an NICU. This study stresses aspects related to the male figure and the impact of this gender approach on care delivered to the newborn. Although there are very few studies addressing this subject, their impact is striking in view of the current scenario, which still emphasizes the traditional care model, predominantly

focused on the maternal social role. From this perspective, we reinforce that this hegemonic position should be reconsidered and incorporate the fathers' presence in neonatal units so that they learn to deal with this reality and elaborate measures to define and ensure their role in the care of their children.

We observe in these studies that there is a large field to be explored in relation to the experience of families in NICUs. It is necessary to enlarge the participation of individuals in research, including the paternal figure and other people significant in the newborn's care. In relation to neonatal care, we have to keep in mind that our client is not only the newborn but also the nuclear and extended families. When we look at the family in the NICU, we enlarge the care to beyond the preterm infant because the people related to the infant interact and move in order to be close and useful in the usually challenging hospital environment<sup>(12,14)</sup>.

*The health team who provides care to the newborn in the NICU* – Brazilian nursing produced many academic studies about the theme (34.5%), especially in relation to the meaning health professionals of an NICU attribute to the care experience, about the daily routine of the nursing team of a neonatal unit and about the feelings and emotions of nurses in caring for sick newborns. We also found studies that identify why health professionals chose the NICU and attempt to understand the idealized world of the nursing team in the face of the reactions of the newborn submitted to a painful procedure.

We observe, in relation to the work process, that the studies discuss issues related to the workers' daily practice and the organization of the work in health care. They also identify satisfaction with work and the organizational climate in addition to aspects of the system of professional relationships that permeate daily care.

Studies that address this perspective reveal that professionals need to have instruments to deal with routine situations, receiving psychological help and learning to deal with feelings experienced during their practice<sup>(15)</sup>. These authors report that providing encouragement to the team and valuing professionals are essential measures to make them feel respected, valued and motivated as people and professionals and to enable them to establish more healthy interpersonal relationships with patients, family members and the multidimensional team.

Other dissertations and theses, in smaller numbers, present data about the planning and evaluation of care programs directed to newborns. We highlight studies that address the implementation and evaluation of the Brazilian government proposal to provide humanized care to the preterm newborn – kangaroo care. The identification of the work process of the nursing team in the NICU permits understanding the perception of the nursing team and observe the humanization measures adopted in the nursing care provided to newborns and whether these measures have an effect on the quality of nursing care<sup>(15)</sup>.



Two studies related to neonatal nursing education were also found. One evaluates the knowledge, practice and perception of undergraduate nursing students related to neonatal nursing, aiming to contribute to the re-formulation of nursing programs in the field. The other addresses nursing teaching in neonatology, relating it to the current nursing practice developed in newborn care in health care facilities. The studies in this category value the feelings and experiences of nursing professionals who care for newborns, though they show that much needs to be improved in issues related to the work process of these professionals.

The studies show that it is necessary to invest in the education of professionals working in NICUs and promote not only technical skills, but also sensitize them to plan care based on the foundations of humanization and integrality<sup>(a)</sup> of care<sup>(9,14)</sup>.

## FINAL CONSIDERATIONS

We found, in the course of this study that analyzed the production of knowledge concerning newborn care in NICUs disseminated in Brazilian nursing dissertations and theses, that the majority of manuscripts were produced between 1999 and 2006 (67 studies). We also observed the precocity of the first nursing publication. The Southeast is the region that presents the largest number of studies, especially in the state of São Paulo. The themes that stand out show a great effort in the production of academic studies at a graduate level about the predominance of the physiological dimension of the newborn care, probably due to the nature of risk and vulnerability involved in the health care provided to sick babies and in different stages of prematurity. There is, however, a need to deepen research related to the psychological development of newborns.

Another raised theme is related to the family who accompanies the care provided to hospitalized newborns,

mainly focusing on mother-infant bonding to the detriment of efforts and experiences of fathers and the incorporation of care centered on the family of the infant hospitalized in NICUs. These results show the urgent need to advance in research that involve the family and social support networks.

Finally, such studies focused on the neonatal team, producing knowledge about the meanings and daily experiences of nursing professionals when they care for severe and/or preterm newborns as well as aspects related to the organization of work in neonatology. The studies that address this subject are unanimous in indicating that there are many gaps of knowledge regarding issues related to the work process and professional education, since these professionals are required to work in an extremely specific field with multidimensional demands due to this very specificity.

In our view, it is relevant to highlight the absence of Brazilian studies addressing the history of the implementation of NICUs in Brazil as well as studies that describe experiences and organization and functioning of these units. It is worth emphasizing that nursing research legalizes practice, seeks for new strategies of care and at the same time promotes connections between theory and practice, ensuring its sustainability as a profession and effectively contributing to the production of knowledge.

We observe that the limitation of this study is that its review includes only the production of Brazilian graduate programs; further studies addressing the international production of graduate programs should be carried out. Another issue that also deserves attention is the production of knowledge outside graduate programs.

From this perspective, we believe that the results of this study can contribute to the understanding of the trajectory of the Brazilian nursing in the construction of knowledge about newborn care in NICUs because it provides safe, guiding information about the state of the art regarding this subject.

## REFERENCES

1. Carvalho M, Gomes MA. A mortalidade do prematuro extremo em nosso meio: realidade e desafios. *J Pediatr (Rio Janeiro)*. 2005;81(1 Supl):S111-8.
2. Procianoy RS, Guinsburg R. Avanços no manejo do recém-nascido prematuro extremo. *J Pediatr (Rio Janeiro)*. 2005;81(1 Supl):S1-S2.
3. Kenner C. *Enfermagem neonatal*. 2ª ed. Rio de Janeiro: Reichmann & Affonso; 2001.
4. Leite JL, Trezza MCS, Santos RM, Mendes IAC, Felli VEA. Os projetos de pesquisa em enfermagem no CNPq: seu percurso, suas temáticas, suas aderências. *Rev Bras Enferm*. 2001;54(1):81-97.
5. Brasil. Ministério da Educação. Coordenadoria de Aperfeiçoamento CAPES. Instruções para a Apresentação de Projetos do Programa Nacional de Cooperação Acadêmica – PROCAD. Brasília; 2001.
6. Brasil. Ministério da Educação. Coordenadoria de Aperfeiçoamento CAPES. Avaliação dos Programas de Pós-Graduação [texto na Internet]. Brasília; 2008. [citado 2008 maio 22]. Disponível em: <http://www.capes.gov.br/avaliacao/recomendados.html>
7. Secaf V, Kurcgant P. Doutores e doutorandos em enfermagem: motivos do mestrado em outras áreas. *Rev Lat Am Enferm*. 1999;7(1):5-10.

<sup>(a)</sup>NT. Integrality refers to the idea that individuals are historical, social and political subjects and should be considered as a whole during the care delivery process.

8. Scochi CGS. A humanização da assistência hospitalar no bebê prematuro: bases teóricas para o cuidado de enfermagem [tese livre-docência] Ribeirão Preto: Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo; 2000.
9. Reichert APS, Lins RNO, Collet N. Humanização do cuidado da UTI Neonatal. *Rev Eletrônica Enferm* [periódico na Internet]. 2007 [citado 2008 mar. 10];9(1):[cerca de 14 p.]. Disponível em: <http://www.fen.ufg.br/revista/v9/n1/v9n1a16.htm>
10. Silva VM, Oliveira TC, Damasceno MMC, Araújo TL. Linguagens da sistematização da assistência de enfermagem nas dissertações e teses dos catálogos do centro de estudo e pesquisa em enfermagem: estudo bibliográfico. *Online Braz J Nurs* [periódico na Internet]. 2006 [citado 2008 mar. 10];5(2). Disponível em: <http://www.uff.br/objnursing/index.php/nursing/article/view/328/72>
11. Oliveira MMC, Almeida CB, Araújo TL, Galvão MTG. Aplicação do processo de relação interpessoal de Travelbee com mãe de recém-nascido internado em uma unidade neonatal. *Rev Esc Enferm USP* [periódico na Internet]. 2005 [citado 2008 maio 22]; 39(4):[cerca de 7 p.]. Disponível em: <http://www.scielo.br/pdf/reeusp/v39n4/08.pdf>
12. Costa R. Reflexões da equipe de saúde sobre o método mãe-canguru em uma unidade de neonatologia: um diálogo fundamentado na abordagem problematizadora [dissertação] Florianópolis: Programa de Pós-Graduação em Enfermagem, Universidade Federal de Santa Catarina; 2005.
13. Correia LL, Carvalho AEV, Linhares MBM. Conteúdos verbais expressos por mães de bebês prematuros com sintomas emocionais clínicos. *Rev Lat Am Enferm* [periódico na Internet]. 2008 [citado 2008 maio 22];16(1):[cerca de 7 p.]. Disponível em: [http://www.scielo.br/pdf/rlae/v16n1/pt\\_10.pdf](http://www.scielo.br/pdf/rlae/v16n1/pt_10.pdf)
14. Lúcio IML, Pagliuca LMF, Cardoso MVLML. Diálogo como pressuposto na teoria humanística de enfermagem: relação mãe-enfermeira-recém nascido. *Rev Esc Enferm USP* [periódico na Internet]. 2008 [citado 2009 fev 11];42(1):[cerca de 8 p.]. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0080-62342008000100023&lng=pt](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342008000100023&lng=pt).
15. Oliveira BRG, Lopes TA, Viera CS, Collet N. O processo de trabalho da equipe de enfermagem na UTI neonatal e o cuidar humanizado. *Texto Contexto Enferm*. 2005 15(n.esp):105-13.