Technology and humanization of the neonatal intensive care unit: reflections in the context of the health-illness process*

TECNOLOGIA E HUMANIZAÇÃO NA UNIDADE DE TERAPIA INTENSIVA NEONATAL: REFLEXÕES NO CONTEXTO DO PROCESSO SAÚDE-DOENÇA

TECNOLOGÍA Y HUMANIZACIÓN EN LA UNIDAD DE TERAPIA INTENSIVA NEONATAL: REFLEXIONES SOBRE EL CONTEXTO DEL PROCESO SALUD ENFERMEDAD

Laura Johanson da Silva[1], Leila Rangel da Silva[2], Marialda Moreira Christoffel[3]

ABSTRACT
This article reflects on technology and humanization in care of newborns, having as theoretical premise the health-illness process. Some parallels are established among the several conceptions of health and illness, and their influences in the way we behave and think about the care spaces as subjects of the neonatal care. The Kangaroo Mother Care is presented as a relational technology that proposes to shelter the family-baby unity in the Neonatal Intensive Care Unit, valuing experiences and major needs of affection and comprehension.

KEY WORDS
Infant, newborn.
Infant care.
Humanizing delivery.
Neonatal nursing.
Intensive Care Units, Neonatal.

RESUMO
Trata-se de reflexão acerca da tecnologia e da humanização do cuidado ao recém-nascido, tendo como preceito teórico o processo saúde-doença. São estabelecidos alguns paralelos entre as concepções de saúde e de doença, e suas influências em nosso modelo de agir e pensar nos espaços da assistência, como sujeitos do cuidado neonatal. O método mãe-canguru é apresentado como tecnologia relacional, que propõe o acolhimento da unidade família-bebê na Unidade de Terapia Intensiva Neonatal, valorizando as vivências e necessidades primordiais de afetividade e compreensão.

DESCRITORES
Recém-nascido.
Cuidado do lactente.
Parto humanizado.
Enfermagem neonatal.
Unidades de Terapia Intensiva Neonatal.

RESUMEN
Se trata de reflexión acerca de la tecnología y de la humanización del cuidado al recién nacido, teniendo como marco teórico el proceso salud enfermedad. Son establecidos algunos paralelos entre las concepciones de salud y de enfermedad y sus influencias en nuestro modelo de actuar y pensar en los espacios de la asistencia, como sujetos del cuidado neonatal. El método madre canguro es presentado como tecnología relacional que propone el acogimiento de la unidad familia bebé en la Unidad de Terapia Intensiva Neonatal, valorizando las vivencias y necesidades primordiales de afectividad y comprensión.

DESCRIPTORES
Recién nacido.
Cuidado del lactente.
Parto humanizado.
Enfermería neonatal.
Unidades de Terapia Intensiva Neonatal.

* Extracted from the thesis "Encontros afetivos entre pais e bebê no espaço relacional da Unidade Neonatal: um estudo de caso à luz do Método Mãe-Canguru", Federal University of Estado do Rio de Janeiro, 2007.

[1] MSc. in Nursing. Nurse Manager of Neonatal Unit at Teaching Maternity, Federal University of Rio de Janeiro. Rio de Janeiro, RJ, Brazil. lauraenfa@yahoo.com.br [2] PhD. in Nursing. Adjunct Professor at Alfredo Pinto School of Nursing, Federal University of Rio de Janeiro State; Faculty in Master's Program at Federal University of Rio de Janeiro State. Rio de Janeiro, RJ, Brazil. rangel.leila@gmail.com [3] PhD. in Nursing. Adjunct Professor at Anna Nery School of Nursing, Federal University of Rio de Janeiro. Researcher in Research Group on Child Health - NUPESC. Rio de Janeiro, RJ, Brazil. marialdanit@gmail.com

Received: 03/04/2008
Approved: 10/20/2008

INTRODUCTION

The conceptions of health and disease, technology and humanization represent the conceptual pillars for rethinking our care models for the neonatal intensive care unit. Understanding nursing practice regarding health and disease is relevant, since it provides a contact with the concepts we hold regarding this phenomena. The construction consists of many aspects, not only from formal and scientific knowledge, but personal and family values systems, culture and society, life history, and the exchange and acquiring of experiences in daily relations. Therefore, the meaning given to health and disease is established dynamically, resulting from a variety of knowledge formats.

Interestingly, it is more common to find definitions explaining models, analysis proposals, and interpreting schemes on *disease* than health. Therefore, understanding disease as a continuous process refers to the challenge of breaking apart from the duality established by scientific and popular knowledge. These dualities are represented by notions between normal and pathological, those who cure and those who are cured, balance and unbalance. They define the condition of being healthy or sick as two separate poles within the same reality[1].

These opposing notions result from an explanatory model, guided by the biomedical thought still hegemonic in our society, defining health as the absence of disease. It is considered as a reductionist vision, since health and disease are conceived as isolated physical properties of a whole. In other words, they become real in the biological field, disregarding the other dimensions involved.

The meaning given to health and disease is established dynamically, resulting from a variety of knowledge formats.

This perspective is based on the homeostasis model. It states that health is the balanced state of an organism regarding its various vital functions; while disease is the breaking of this balance, establishing an organic dysfunction. Explanations for this are generally cause-effect, researched at the microscope, intra-cellular level, due to bio-physical-chemical reasons. Understanding the human body as a complex and sophisticated *machine* is a result of this. It is based on the mechanist paradigm of scientific medicine. The individual's participation in the phenomenon is denied, since its body and disease become intervention objects.

In different health care environments, more emphasis is given to the diseases' treatment and prevention than to the human experiencing the process of becoming ill. This perspective limits care to reestablishing health from acting exclusively on the disease, through technologies that control and dominate it. Most certainly, this issue carries an important paradox originating from scientific advancements and the current progression of technological sophistication. On the one hand are the positive effects of efficiency, effectiveness and accuracy increase on many diagnostic and therapeutic interventions, generating improvements in patient's prognosis and quality of life. On the other hand are the negative effects of excessive segmentation of the patient into organs and functions, unnecessary interventions, iatrogenic diseases, diagnostic and therapeutic procedures costs, and lack of attention towards psychosocial aspects of becoming sick[2].

Taking this into consideration, an important reflection is needed to guide neonatal nursing: which dimensions must be taken to different technologies and intensive care? Which concepts of health and disease support nursing care in the neonatal intensive care unit (NICU)? How can humanization be developed in the care routine?

TECHNOLOGY AND HUMANIZATION IN THE NEONATAL INTENSIVE CARE UNIT

The rising visibility of neonatal morbid-mortality rates has been a world challenge for public health. Every year, 20 million low-weight (under 2,500gr) babies are born, most of them in developing countries. The main factors are premature birth and intrauterine growth retardation. In developed countries, advances in perinatal care in addition to technical-scientific progress in neonatology have enabled the survival of these newly-born babies[3].

Diagnosis, sophisticated therapies, and surgical procedures have all ensured a chance of life for babies that, a few decades ago, were seen as unfeasible. While this group shows a survival increase due to the modern technologies and specialized professionals, there is an added burden to the world's health and social security systems. In addition, in developing countries, there is still a lack of technological resources in addition to a lack of qualified health professionals[3].

Certainly, the repercussions of these births go beyond such issues, and directly affect the family that experience difficulties during and after the baby's hospitalization. Much concern is generated from factors such as of the early and prolonged separation between baby-mother and the family, in addition to the reduced number of women in this group who breast feed, higher demands for special and high cost care.

Therefore, Neonatal Intensive Care Units are the technological environment where advancements and professional interventions, under different degrees of complexity, are mainly guided for the babies' recovery. Frequently, the main focus, which should be on babies (and their families), is shifted to the equipment and disease. In this urgent environment, dominated by specializations, the team is guided to control and handle technologies. Therefore, the challenge is to perceive the true dimension of high-technology in the care process. In other words, how can tech-

nology help health care and the well-fare of the children, the main subjects of ICU care and dedication[4].

The same environment also carries other important needs for the babies, such as including the family in the care and maintaining their quality of life. For that reason, babies must be considered and respected as subject-beings, with emotions and individuality, and not as intervention objects. Care must not only focus on the biological aspects, but also the stimulation of the psycho-affective development.

When merely technical care is considered, we separate the biological body from the social body. We lack seeing, feeling and perceiving the subjectivity. Hence, care that refutes emotions when interacting with the child is performed through technical procedures. On the other hand, care that includes affection demonstrates the human character of relating to people and the world[5].

When the focus is exclusively guided to equipment, procedures, and pathologies, the environment and the care become impersonalized and unwelcoming, since the human dimension receives no attention. Life stories, personal opinions, cultural and social contexts, and intense personal experiences shared by babies and their families as experiencing prematurity are then, denied or de-valued.

These parent-children experiences in the NICU emerge in a limited situation context, defined as a crisis situation for the families: a limited period of unbalanced time and/or confusion, in which parents can be temporarily incapable of responding appropriately[6].

The new and scary environment, a busy team, a real baby different from the imagined, and guilty feelings for the child's problem can generate an abandonment experience for parents. Babies also present the same experience, since they are restricted from their cuddle, their mothers' warmth and smell not found in the incubators' sheets, in addition to the lack of cuddling from their parents. Harmful environment stimulation as noise, continuous lights, sudden temperature alterations associated with sleep interruptions due to intense handling, and painful procedures also can harm their neuromotor development and the ability to interact with their parents[6].

Understanding parents and babies experience in such situations is to value the different paths that each one takes when facing difficulties, the unique shades of each interaction established, the ways they experience the suffering of being separated, falling ill and loosing body contact. Also, it involves being against harmful tendencies of familiarizing with the human pain and suffering, not thinking the routine as odd, not getting involved, performing impersonal actions that lack affection.

There is a very thin line between disease and suffering, however, suffering has a larger dimension since the questions, doubts, and pain originating from the diseases are sources of suffering. Furthermore, the objective nature of diseases does not determine the level of suffering experienced by people, or even by those who are related to them. Therefore, when providing care, we cannot restrict our actions to treating disorders. We must enhance horizons when talking care of people who are suffering. It is an invitation for a broader, richer, more humanly generous look than simply addressing the disease[7].

A more comprehensive perspective is based on the health and disease vision as a process, where the focus is not the biological disorder, but becomes the experience of being sick, where body and mind are integrated. The interpretation of each individual in this process originates from their relation with themselves and others. It is subjective and inter-subjective, therefore, and grounded in a social-cultural context. From these relations, people find meaning to the experience in the moment that will directly influence their coping mechanisms[8].

In the NICU, the team demonstrates difficulty in understanding reactions to the stress experience by the families. While some parents understand the newly-born babies' conditions and adjust to the unit's practice, others express contrary reactions as denial. When the health team's expectations are not met by the parents, the team becomes emotionally distant and reluctant in perceiving parents suffering with their baby[9].

This devaluation of singularities is an obstacle in understanding the other from his experiences and feelings. Understanding the meaning attributed by another person to suffering is only possible when we listen to them, verbally in addition to what is spoken by his body language and life. Words and all the means of expression are essential in nursing practice. They allow for the suffering that the 'subject' experiences to be expressed[7].

Dealing with the existing contradictions between over-valuing machines, diseases and human experiences in the search for integrating strategies where relations are valued represents the movement of humanization. This is the great challenge faced by professionals who work in intensive therapy[10].

Despite controversies involving the word humanization, we have used it to express commitment not only for working practices, but also to subjective and social dimensions of the life we take care of. Humanize is therefore, a new paradigm where doing and thinking about health are integrated, prioritizing the construction of relationships while meeting and welcoming, using autonomy and responsibility, where the subject's wholeness is fully ensured.

This concept is based on the Brazilian national policy, referred to as Humanize *SUS* (The Unified Health System). In this policy, humanization guides health care practice and management throughout the Unified Health System sectors. It is implemented through the collective construction of strategies to offer quality care where technological progresses are used as a way to welcome and improve the care environment. That can be possible due to the exchange of thoughts and knowledge in different spaces, generating political-aesthetic-ethical, creative and responsible attitudes[11].

It regards investing in producing a new kind of interaction between the subjects that comprise and use the health systems; welcoming them and motivating its actions. Thus, humanization must be understood as a cross-sectional policy that becomes effective and is translated into the actions from other public policies in health care.

To produce better interactions between subjects in care practice, combining technological and relational progress, technology must be used with a broader concept. In addition to the hard technology (equipment, devices, instruments) required and present in the health care environment, there is also soft technology, or a technology of human relationships. Soft technology is based on an approach to care in a relationship process, a meeting between people that act and are mutually influenced in an inter-subjective space. Such a place comprises interesting moments of speaking, listening and interpreting. In this environment, individuals become responsible for a problem yet to be handled, and share moments of trust and hope, generating attachment and acceptance[12].

Certainly, soft technology consists of the strategies that subjects (professionals and patients) build in their relationships in the health environment, humanizing the health care process. Under this perspective, 'humanized' quality is not printed in actions only by the fact that it is performed by human beings, but also, and mainly, by the relational character of health care in which the expression of subjectivity is exclusively from human beings.

Thus, humanization involves the process of building and improving human interaction for a more friendly relationship with others. Communication and dialogue are fundamental.

> Humanization is seen as an inseparable proposal for the good use of technologies as equipments, procedures and knowledge with a listening, dialogue, administration and affection potential proposal; a process of commitment with human happiness (these last two resources are also seen as relational technologies)[13].

Horizontal actions, sharing knowledge and valuing the other are basic aspects of this approach. Hence, the opinion and participation of active workers in health institutions, knowing the clients served, solving aspects of health care and the quality of relationships between professionals and clients are interdependant dimensions involved in the humanization of care. The importance of interpersonal relationships, among those, in care spaces implies the total rescue of subjectivity. This two-way process broadly benefits the involved subjects, professionals and clients. The first helps maintain the enchantment and pleasure for the work they perform. As for the clients, it provides them with the satisfaction of the care received. Therefore, humanizing is a construction process made effective mainly in the daily relationships between individuals[14].

The whole context leads to one of the most current themes in neonatology: humanization in perinatal care , combining strategies since the pre-natal stage and extending them to all the complex levels of neonatal care. Among these strategies, the Kangaroo Mother Method stands out as a policy regulated by the Department of Health through Regulation # 693 of July 05, 2000 – Regulation for the Humanized Care for Low-weight Newly-born babies[6].

The Kangaroo Mother Method involves health professionals and families that experience the birth and hospitalization of low-weight premature babies. These subjects interact and integrate themselves by integrating knowledge, attitudes and emotions in a process where the family and the baby are understood as a unit; with needs not only biological, but also social, emotional and cultural, all interconnected. Therefore, the method is also implemented by means of soft technologies, since it involves much more than technical procedures involving interpersonal relationships.

Humanized care actions are inserted in an intervention committed to integrity, health and quality of life throughout the hospital stay and after discharge. Is does not regard, therefore, refuting the importance of high technological progress, inherent to neonatal therapy environment, but values and provides the needed relational progress for health care.

Machine technology is crucial; however, it should not replace human beings and families. Thus, the Kangaroo Method is not applied as a substitute for intensive technology, but as a proposed convergence of both to improve the care for the babies and their parents. As a relational technology, the method aims to rescue affection through the warmth that is exchanged between parents and babies through increased and pleasurable skin-to-skin touch, followed by care support. The attachment relationship and breast feeding are stimulated and supported; and the family, once a mere listener, assumes a participation role in the therapy[6].

Adopting the kangaroo method aims, in essence, at changing attitudes regarding the care and handling babies and the participation of the families. This goal implies some questions regarding the professionals' knowledge and practice; such as creative and communicative approach, opening spaces and the relationship established for providing the care.

In the kangaroo method, the nursing team occupies a special position, since it holds a direct and continuous relationship with the babies and their parents throughout all stages of the program. It performs care guided for the comfort and better proximity between them. The nurse is an important agent in the promotion and implementation of such humanization strategies; along with other members of the professional team. Among them the following stand out: welcoming babies and their families in the Neonatal Unit; communication and expression of experiences lived through support groups, and the participation of parents in the care for the babies, such as bath and dipper changes.

This care relation is crucial to value the uniqueness of dealing with a human being. Every care involves values and commitment with a person and with a human life. It is re-

lated to inter-subjective human responses to health-disease conditions and person-environment interactions. There is great value in the internal-subjective world of the person and how this person relates to understanding the health-disease condition experience[15].

Nursing care is technological in itself, since it combines knowledge (science) and practice (art and ideal), and must include more attention towards improving human dignity. The use of technical and technological resources implies reviewing the bioethics involved in NICU routines. Interventions in the health-disease process must aim at developing life and care with dignity. From this perspective, welcoming anxiety and suffering can help give a new meaning to nursing work, where *knowing to care* is characterized by attachment and responsibility[16-18].

Hence, as nursing uses soft technologies to take care of babies and their parents, it provides broad sensibility, ethics, aesthetics, and human solidarity. Acknowledging the unique dimensions in the way each person experiences health and disease is a potential action transformed to rethink the practice. It is this context that provides nursing the chance to perform important roles in the research and development of creative technologies guided for human relations and health in a fully integrated way.

REFERENCES

1. Albarracin DGE. Saúde-doença na enfermagem: entre o senso comum e o bom senso. Goiânia: AB; 2002.
2. Ayres JRCM. Cuidado e reconstrução das práticas de saúde. Interface Comun Saúde Educ. 2004;8(14):73-92.
3. World Health Organization (WHO). Department of Reproductive Health and Research. Kangoroo mother care: a pratical guide. Geneva; 2003.
4. Caldas LMR, Figueiredo NMA. O cuidado que embala o berço: cinco olhares da enfermeira para tocar a criança. Cad Pesq Cuidado Fundamental. 1998;2(1):77-8.
5. Cabral IE. Aliança de saberes no cuidado e estimulação da criança-bebê: concepções de estudantes e mães no espaço acadêmico de enfermagem. Rio de Janeiro: Ed. Escola de Enfermagem Anna Nery; 1999.
6. Brasil. Ministério da Saúde. Secretaria de Políticas de Saúde. Área da Saúde da Criança. Atenção humanizada ao recém-nascido de baixo peso: método mãe-canguru: manual do curso. Brasília; 2002.
7. Hesbeen W. Cuidar no hospital: enquadrar os cuidados de enfermagem numa perspectiva de cuidar. Loures: Lusociência; 2000.
8. Gualda DMR, Bergamasco RB. Enfermagem cultura e o processo saúde-doença. São Paulo: Ícone; 2004. Processo saúde-doença: evolução de um conceito; p. 25-37.
9. Gomes MMFGO. O nascimento de uma criança de alto risco: significado e vivência dos familiares. Acta Paul Enferm. 1996;9 (n.esp):48-56.
10. Barbosa ECV, Rodrigues BMR. Humanização nas relações com a família: um desafio para a enfermagem em UTI pediátrica. Acta Scient Health Scienc. 2004;26(1):205-12.
11. Brasil. Ministério da Saúde. Secretaria Executiva. Núcleo Temático da Política Nacional de Humanização. Humaniza SUS: a humanização como eixo norteador das práticas de atenção e gestão em todas as instâncias do SUS. Brasília; 2004.
12. Merry EE. Em busca de ferramentas analisadoras das tecnologias em saúde: a informação e o dia a dia de um serviço, interrogando e gerindo trabalho em saúde. In: Merhy EE, Onocko R. Agir em saúde: um desafio para o público. 2ª ed. São Paulo: Hucitec; 1997. p. 113-50.
13. Deslandes SF. Humanização dos cuidados em saúde: conceitos, dilemas e práticas. Rio de Janeiro: FIOCRUZ; 2006. Humanização: revisitando o conceito a partir das contribuições da sociologia médica; p. 40.
14. Hoga LAK. A dimensão subjetiva do profissional na humanização da assistência à saúde: uma reflexão. Rev Esc Enferm USP. 2004;38(1):13-20.
15. Watson J. Enfermagem: ciência humana e cuidar: uma teoria de enfermagem. Loures: Lusociência; 2002.
16. Nascimento MAL. Tecnologias de enfermagem no cuidar de crianças: um ponto de vista. Rev Soc Bras Enferm Pediatr. 2004;4(1):5-9.
17. Shiratori K, Teixeira MS, Aguiar SS, Formozo G, Lessa T. Bioética e tecnociência: uma reflexão para a enfermagem. In: Figueiredo NMA, organizador. Tecnologias e técnicas em saúde: como e porque utilizá-las no cuidado de enfermagem. São Caetano do Sul: Difusão; 2004. p. 294-337.
18. Pinho LB, Santos SMA. Dialética do cuidado humanizado na UTI: contradições entre o discurso e a prática profissional do enfermeiro. Rev Esc Enferm USP. 2008;42(1):66-72.

Correspondence addressed to: Laura Johanson da Silva
Rua Barão de Itapagipe, 365 - Ap. 703, Bl. 2 - Tijuca
CEP 20261-005 - Rio de Janeiro, RJ, Brazil