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Contents

Editorial

- 257 **Virtual Health Library in Nursing for Colombia: a New Scientific Communication Portal**
Wilson Cañon-Montañez
-

Original articles

- 260 **Use of crack in pregnancy: repercussions for the newborn**
Daiani Modernel Xavier, Giovana Calcagno Gomes, Juliane Portella Ribeiro, Marina Soares Mota, Simone Quadros Alvarez
-

- 268 **The teacher's body elements that influence the teaching-learning process of university nursing students**
Paulo Sérgio da Silva, Nébia Maria Almeida de Figueiredo
-

- 276 **Gender Differences in Body Mass Index, Body Weight Perception, weight satisfaction, disordered eating and Weight control strategies among Indian Medical and Nursing Undergraduates**
Poreddi Vijayalakshmi, Rohini Thimmaiah, S. Sai Nikhil Reddy, Kathyayani B.V, Sailaxmi Gandhi, Suresh BadaMath
-

- 285 **Challenges of motherhood in the voice of primiparous mothers: initial difficulties**
Júlia Maria das Neves Carvalho, Maria Filomena Ribeiro Fonseca Gaspar, Alexandrina Maria Ramos Cardoso
-

- 295 **Preparation for motherhood during Pregnancy: a Concept Analysis**
Jhon Henry Osorio-Castaño, Gloria Carvajal-Carrascal, María Rodríguez-Gázquez
-

- 306 **Analysis of the concept of powerlessness in individuals with stroke**
Renan Alves Silva, Álissan Karine Lima Martins, Natália Barreto de Castro, Anna Virgínia Viana, Howard Karl Butcher, Viviane Martins da Silva
-

- 320 **Diferenças de gênero na percepção de qualidade de vida em pacientes com câncer colorretal**
Isadora Trinquinato, Rodrigo Marques da Silva, Sonia Betzabeth Ticona Benavente, Camila Cristine Antonietti, Ana Lúcia Siqueira Costa Calache
-

330	Development of coverage and its evaluation in the treatment of chronic wounds Marcia Diana Umabayashi Zanoti, Helena Megumi Sonobe, Sidney José Lima Ribeiro, Ana Maria Minarelli Gaspar
340	Impact of Applying a Learning Strategy to Improve the Sample Quality in Cervical Screening in Nursing Staff in Social Service Sandra Olimpia Gutiérrez Enríquez, Luis Fernando Méndez Donjuan, Yolanda Terán Figueroa, Darío Gaytán Hernández, Cuauhtémoc Oros Ovalle, Aracely Díaz Oviedo
348	Meaning of parenting as a teenager Carolina Antolinez Figueroa, Carlos Julio Saavedra Cantor, Ana Helena Puerto Guerrero, Carol Margeth Calderón Romero
356	In-depth Knowledge of the Role of the Clinical Mentor Claudia Soto Núñez, Lissette Avilés Reinoso, Camila Lucchini Raies, Paz Soto Fuentes
364	Puerperae bonding with their children and labor experiences Lara Helk Souza, Zaida Aurora Sperli Geraldés Soler, Maria de Lourdes Sperli Geraldés Santos, Natália Sperli Geraldés Marin dos Santos Sasaki



Virtual Health Library in Nursing for Colombia: a New Scientific Communication Portal

Wilson Cañon-Montañez^{1,2}

Scientific communication is understood as a set of socially shared dynamic processes and efforts, through which scientific knowledge is created, shared, and used. These processes also offer means and conditions for social interaction among the members of scientific communities, contributing to the production, dissemination, and use of knowledge and, consequently, to the advancement of science.

⁽¹⁾ With technological progress, new tools have emerged from communication and information technologies (CIT) to disseminate scientific knowledge. The Virtual Health Library in Nursing (VHL in Nursing) is part of these new scenarios as thematic cooperation network and is an initiative from the region of Ibero-America, which seeks to promote access to scientific information on nursing and establish alliances to maximize the shared use of CIT and collections of sources of information in Nursing.⁽²⁾

The VHL in Nursing, created in 2012, is coordinated by the School of Nursing at Brazil's *Universidade Federal de Minas Gerais* and supported by the Latin American and Caribbean Center on Health Information (BIREME), the Pan-American Health Organization (PAHO), World Health Organization (WHO), among other institutions. This international thematic collaborative network originated in Brazil and then other countries in the region (Argentina, Uruguay, Cuba, and Bolivia) joined the initiative to share nursing scientific information generated in each country. The work philosophy behind the VHL in Nursing to synthesize the process of scientific communication in Nursing involves the following activities: a) mapping of sources of information; b) identifying the strategies that enable the recovery or acquisition of the knowledge produced; c) storage or organization of knowledge; d) share communication and

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dissemination media and strategies; and e) outline cooperation strategies to create scientific research and enhance sources of information in Nursing.^(3,4)

Colombia is an important country in the region on scientific production in Nursing. It has scientific journals in Nursing indexed in internationally recognized databases and bibliographic indexes.⁽⁵⁾ Additionally, it has several graduate programs in Nursing (Masters and PhD), some with high academic quality accreditation. It also has diverse libraries and cooperation centers that are part of the general VHL Network coordinated by BIREME/PAHO/WHO. In relation to antecedents for the creation and implementation in Colombia of a virtual library on Nursing, in previous years some Colombian university institutions showed interest in the initiative, but it was not until 2015 that the project was readdressed and led during a meeting of the Regional Network for VHL in Nursing within the framework of the 13th Ibero-American Conference on Education in Nursing organized in the city of Rio de Janeiro by the Latin American Association of Nursing Schools and Faculties (ALADEFE). Thereafter, the project continued with support from the Coordination of the Regional Network for VHL in Nursing and BIREME/PAHO/WHO and in 2016 the VHL in Nursing Colombia Portal implemented on the WordPress platform was officially launched.⁽⁶⁾

Said web portal provides unified access to all the scientific production in Nursing in Colombia related to articles, monographs, theses, dissertations, and indexed journals available in SciELO Colombia, LILACS, BDEFN databases and the Rev@Enf - collection. Furthermore, visitors and users of this new resource and virtual library will be familiarized with the graduate programs in Nursing and the principal lines of research in Nursing in Colombia, as well as other health education resources, national and international scientific and academic events, and link to the Regional Network for VHL in Nursing to learn of the research production on Nursing in countries in the region. The creation of the VHL in Nursing, Colombia is a significant achievement to promote the dissemination of scientific knowledge in Nursing in Colombia,

showing visibility in the Regional Network for VHL in Nursing along with other member countries. The mission of the VHL in Nursing in Colombia is that of becoming a virtual patrimony and online resource of nursing information, easily accessed and driving processes of production, organization, and dissemination of the knowledge of all players involved in the generation of scientific and documentary information of nursing in Colombia.

The main objectives of the VHL in Nursing in Colombia are: a) strengthen the information networks in knowledge management and performance of the Nursing practice; b) generate conditions to explore, develop, broaden, consolidate, and strengthen cooperation networks and exchange of information on nursing in Colombia; c) review the current state of information resources on nursing, their processing, and flow, as well as the perspectives, possibilities, and proposals of institutional intervention or development, on the theme of nursing, to create cooperation networks through the national thematic VHL on Nursing; d) socialize and disseminate outcomes from nursing research projects, lines, and groups, as well as from directories of educational institutions and professional and scientific associations; and e) promote national autonomy for Nursing information management to support the development and articulation of the VHL in Nursing at country levels.

Some of the strategies used by the Coordination of the Regional Network for VHL in Nursing to promote continuous updating of information from the national VHLs on Nursing from member countries are through active participation in virtual and face-to-face meetings during the Ibero-American Conferences on Nursing Education by ALADEFE and the Pan American Nursing Research Colloquium, supported by BIREME/PAHO/WHO. These meetings are essential to establish interactions with the coordinators of the VHL on Nursing and learn of the difficulties, progress, and development strategies of each of the national virtual libraries. Within this context, it is necessary for the national VHLs on Nursing to work in cooperation with other scientific

communication networks already consolidated or under development and which carry out activities for visibility and dissemination of scientific knowledge on Nursing: a) Ibero-American Council of Editors of Nursing and Related Journals; b) Rev@Enf - collection SciELO Nursing, international portal linked to the VHL in Nursing; Ibero-American Network of Scientific Editing on Nursing; c) International Forum of Nursing Journal Editors; and d) different national and international networks of editors of nursing scientific journals.

Lastly, it is worth highlighting that now that the VHL in Nursing in Colombia is a visible reality in the region, we expect this national web portal to consolidate itself as a tool for social appropriation of Nursing knowledge generated in the country. Nevertheless, although a big step has been taken, the project needs continuity by maintaining collaborative work and in network with national and international leaders who participate in the production and socialization of scientific knowledge on Nursing.⁽⁷⁾ All this, seeking to sensitize and mobilize institutions, scientific associations, health services, and other players involved in the generation of scientific knowledge to maintain the technical and policy sustainability necessary to disseminate, provide visibility, and protect the scientific heritage on Nursing in Colombia and, thus, contribute to improving the Nursing formation and practice to act with ethical-social commitment in the areas of education, research, and health care of the population.⁽⁸⁾

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Use of crack in pregnancy: repercussions for the newborn

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Use of crack in pregnancy: repercussions for the newborn

Objective. To know the effects for the newborn of the use of crack in pregnancy. **Methods.** This is a qualitative study conducted in a university hospital in southern Brazil, in the first half of 2014. Fifteen mothers crack users and five grandparents participated. The data were produced through semi-structured interviews and later submitted to content analysis. **Results.** It was found that the use of crack in pregnancy leads to repercussions related to the health of the newborn and repercussions related to family restructuring. In relation to the newborn, prematurity, congenital malformation, hospitalization in an intensive care unit, use of care and feeding technologies through artificial milk formulas were mentioned. In the family context, it was evidenced the occurrence of abandonment of the child by the mother, causing the adoption of the newborn by relatives of the family nucleus or their institutionalization due to lack of family structure. **Conclusion.** It was found that the use of crack in pregnancy leads to repercussions related to

the health of the newborn and repercussions related to family restructuring. In this sense, the recruitment of pregnant users of crack by health/nursing professionals and referral for high-risk prenatal care, as well as early identification of the peculiarities of the newborns of these women, and the development of actions that minimize the repercussions of crack are imperative.

Descriptors: infant, newborn; pregnant women; postpartum period; cocaína crack; nursing.

Uso del crack durante el embarazo: repercusiones para el recién nacido

Objetivo. Conocer las repercusiones para el recién nacido por el consumo de crack durante el embarazo. **Método.** Estudio cualitativo realizado en un hospital universitario en el sur de Brasil, en el primer semestre de 2014. Participaron quince puérperas usuarias de crack durante la gestación y cinco abuelos. Los datos se recolectaron en entrevistas semiestructuradas y

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posteriormente se sometieron a análisis de contenido. Resultados. Para los participantes del estudio el uso de crack en la gestación llevó a repercusiones relacionadas con la salud del recién nacido, como prematuridad, malformación congénita, internación en unidad de cuidado intensivo, uso de tecnologías de cuidado y alimentación mediante fórmulas lácteas artificiales. Por otra parte, en el ámbito familiar produjo abandono del niño por parte de la madre lo que derivó en la adopción del recién nacido por parientes del núcleo familiar o su institucionalización por falta de estructura familiar adecuada. **Conclusión.** Se constató que el uso de crack en la gestación conlleva a repercusiones relacionadas con la salud del recién nacido y con la desestructuración familiar. En este sentido, se hace indispensable la captación de las gestantes usuarias de crack por los profesionales de la salud y por enfermería para la realización del control prenatal de alto riesgo, así como la identificación precoz de las necesidades de los recién nacidos y el desarrollo de acciones que minimicen las repercusiones del crack.

Descriptor: recién nacido; mujeres embarazadas; período de postparto; cocaína crack; enfermería

Uso de crack na gestação: repercussões para o recém-nascido

Objetivo. Conhecer as repercussões do uso de crack na gestação para o recém-nascido. **Método.** Trata-se de uma pesquisa do tipo exploratória e descritiva,

Introduction

The term “crack baby” was introduced to describe children exposed to cocaine before birth. ⁽¹⁾ The exposure to crack and other psychoactive substances by the pregnant woman significantly increase the rates of neonatal abstinence syndrome diagnosed in the prenatal and newborn. Newborns exposed to psychoactive substances during gestation presented on average lower birth weight, longer hospital stay after birth and a higher propensity to be preterm, to have alimentary and respiratory problems. ⁽²⁾ Maternal use of illicit psychoactive substances as crack is associated with considerable neonatal morbidity. According to the current guidelines, the need to prepare health professionals who attend these pregnant

com abordagem qualitativa, realizada em um hospital universitário no sul do Brasil. Participaram quinze puérperas usuárias de crack e cinco avós. Os dados foram produzidos por meio de entrevistas semiestruturadas e, posteriormente, submetidos à análise de conteúdo.

Resultados. Para os participantes de este estudo constatou-se que o uso de crack na gestação acarreta repercussões relacionadas à saúde do recém-nascido e repercussões relacionadas à desestruturação familiar. Em relação ao recém-nascido foram apontadas a prematuridade, malformação congênita, internação em unidade de tratamento intensivo, uso de tecnologias de cuidado e alimentação por meio de fórmulas lácteas artificiais. No âmbito familiar evidenciou-se a ocorrência de abandono da criança pela mãe, ocasionando a adoção do recém-nascido por parentes do núcleo familiar ou a institucionalização do mesmo por falta de estrutura familiar. **Conclusão.** Constatou-se que o uso de crack na gestação acarreta repercussões relacionadas à saúde do recém-nascido e repercussões relacionadas à desestruturação familiar. Nesse sentido, faz-se imperativa a captação de gestantes usuárias de crack pelos profissionais da saúde/enfermagem e encaminhamento para a realização do pré-natal de alto risco, bem como identificar precocemente as peculiaridades dos recém-nascidos dessas mulheres, tendo em vista o desenvolvimento de ações que minimizem as repercussões do crack.

Descriptor: recém-nascido; gestantes; período pós-parto; cocaína crack; enfermagem.

women to minimize the use of opioid analgesics during pregnancy is reinforced. ⁽²⁾

Physical examination in children of crack-dependent mothers has shown that the child’s respiratory tract becomes one of the most affected parts of the body. It also reveals the use of accessory muscles for breathing, hypoventilation and bilateral wheezing in the lungs. As for vital signs, tachycardia and tachypnea are present in the newborns of these women. ⁽³⁾ Also, prenatal exposure to crack and cocaine in newborns crosses the blood-brain barrier reaching brain concentrations that can cause cerebral malformation, changes in brain growth and cortical development, causing disorders in differentiation and neuronal migration. The

neurobehavioral effects of crack and cocaine are several, such as difficulty in eating and sleeping, changes in the regulation of states of consciousness, signs of stress, excitability, motor immaturity, altered reflexes and signs of abstinence.⁽⁴⁾

Preterm and full-term infants born of crack and/or cocaine-dependent mothers presented low birth weight and, at the time of the evaluation, lower birthweight than those of non-dependent mothers. Regarding the suction pattern, it was found a change in tongue movement and an arrhythmic suction.⁽⁴⁾ The children had cognitive impairment, a lower propensity to interact socially, and a higher propensity to die of sudden infant death syndrome.⁽¹⁾ Breastfeeding of newborns of crack-dependent postpartum women is discouraged due to the passage of the drug through breast milk, including the generation of clinical changes in infants, such as irritability, tremors, and sleep disturbances. Also, neonates of psychoactive substance-dependent women may have postnatal abstinence syndrome, prolonged hospitalization, eating difficulties, and respiratory problems.⁽²⁾

Being repeatedly in hospitals, taking treatment of the effects of the drug, as well as conducting frequent clinical and laboratory tests may cause discomfort and irritability in the cohabitation between caregivers and crack dependents, as well as emotional exhaustion for both, hindering the child to live in the social and family environment.⁽⁵⁾ Another issue experienced by these children is the possible orphanhood and, consequently, institutionalization, the passage through various family structures and organizations and the impossibility of family care, which may interfere with their healthy development.⁽⁶⁾ Brazil needs to adopt specific programs for the treatment of pregnant women dependent on psychoactive substances and newborns, requiring special care. This reality requires the efforts of health professionals to work with these women and children in prevention, early detection of cases and adequate treatment for the rehabilitation of the mother and newborn and prevention of complications of crack use.

In view of the complexity involved in the care of newborns in crack users, the question was: what

are the repercussions of the use of crack in pregnancy for the newborn? Knowledge about these repercussions may indicate appropriate forms of intervention, enabling an effective and humanized care to this people since this is not only a problem for the mother user, but also for the whole society. Thus, the objective of this study was to know the repercussions for the newborn of the use of crack during pregnancy.

Methods

This is an exploratory and descriptive research with a qualitative approach. A Pediatric Unit and a Neonatal Intensive Care Unit of a university hospital (HU) in southern Brazil were performed in the first semester of 2014. Fifteen puerperal crack users and five grandparents participated. Inclusion criteria were to be 18 years old or older and to be a puerperal user of crack or an accompanying family member of a newborn of a crack user attended at the time of production of the data, even if they returned to the hospital due to health problems of the puerperium or the newborn. Postpartum women who were under the effect of the drug were excluded.

The number of participants was defined by the saturation of the data defined when, in the researcher's evaluation, a certain redundancy or repetition occurs, and it is not considered relevant to persist in data collection. The participants were guided by the objectives and methodology of the study and signed the Free and Informed Consent Term in two copies.

Data collection was performed through semi-structured interviews with each participant. They were questioned about the repercussions for the newborn of the use of crack in pregnancy. The interviews were held in the waiting room of the Child-Friendly Hospital Program, for comfort, privacy and, by being attached to the Pediatric Unit of the HU.

The interviews were captured by an audio recorder to preserve the original content and increase the accuracy of the data obtained. Participants'

statements were identified by the letter P (puerpera) or F (family) followed by the interview number.

The data were submitted to content analysis. Finally, the results obtained for five puerperal users of crack were read, with the purpose of confirming the data found in the analysis, complementing them and validating them.

The research project was submitted to the Ethics Committee of the Federal University of Rio Grande/FURG and approved, through an opinion nº135/2013.

Results

The analysis of the data generated the following categories: Repercussions related to the health of the newborn and repercussions related to the family structure.

Repercussions related to the health of the newborn

It was found that four children born to women who used crack in pregnancy were premature. In the Intensive Care Unit, the high number of hospitalizations are premature newborns and the premature birth has a strong impact, both for the family and for the child: *By prematurity, he was born with low weight. He does not have a pound yet [P1]; He was born prematurely, with a lot of air [P3]; He was born moaning, with shortness of breath and very low weight. As soon as he was born he was taken to the neonatal intensive care unit to take better care of him [P5]; He was born premature. Due to my use of crack. I had problems with the placenta and it was born in 30 weeks. The doctor said that he had a serious respiratory problem [P10]; He had a cardiac arrest in the Neonatal ICU, but he recovered well. He was very quiet: he does not move and does not cry much. I think it is because he was born prematurely as well. They told me she's eight months pregnant [P8].*

Some children were born without any disease. However, four had a sexually transmitted infection of the mother: two had HIV/AIDS, one syphi-

lis, and one gonococcal conjunctivitis. One child had to be treated for tuberculosis because her mother had the disease without treatment and four had serious respiratory problems: *She was born and had asthmatic bronchitis [P2]; He was born and they soon told me that he has epileptic seizures and therefore, he trembled in the bath. I was scared, but they told me to calm down. He would take medication that would help in his crises [P10]; He was born with HIV. When I got pregnant, I did not know I had the disease. [...] my daughter did not deserve to be born with this virus. She has to take several medications! [P4].*

Because of the prematurity and malformations, some newborns need to use care technologies. These technologies include: endotracheal tubes, mechanical ventilators, heated cots and incubators, phototherapy devices, gold and nasogastric and jejunostomy probes, bells, oxygen catheters, among others: *He had respiratory insufficiency and has a tube in his mouth to breathe. He has low sugar and he is not able to maintain the temperature. He is always cold [P1]; They put him in a cot with the light on top. He was yellowing [P6]; He stayed in the ICU full of appliances and inside the incubator. The picture was very serious indeed. It was in the serum, in the oxygen, with a syringe in the mouth [P13]; He remained in the incubator, in the serum, with probe [P15]; With one hour of the life she was transferred to the ICU. He was short of breath and he moaned a lot. He is breathing with the aid of a device and has a nose probed [P11].*

Another repercussion of the use of crack in pregnancy is the birth of children with congenital malformations. Four of them presented different malformations. One was born with cleft palate and cleft lip; One was born with several anomalies, being the main ones of mandible and ear; Another one was born with microcephaly and another one was born without a lung, and the other malformed: *When my daughter was born, they did tests on her and told me that she has a cleft palate and a cleft lip [P11]; [...] malformation of the mandible and in the ear. He had a very different face, had a gum problem; The ears very small in relation to the size of the head. The little eyes*

were far from each other. His neck was very short, he almost did not have it [P6]; He had not the right lung and his left lung was smaller than normal. The picture was very serious [P15]; There were a cleft palate and a cleft lip. I was scared in the delivery room. I knew it was because of the crack that I used the whole gestation [P12].

None of the women in this study breastfed their children. That is why all children used artificial formulas to be fed, failing to receive the benefits of breast milk. Female crack users have to breastfeed contraindicated, as there are clinical evidence that demonstrate the adverse effects of crack through breastfeeding in these newborns. also, there were women disinterested in the child or with aggressive behavior due to the abstinence of crack, which could put the child at risk if they could breastfeed: *He feeds with milk from the hospital through a tube that goes to the stomach [P9]; From the moment he was born, they gave the hospital's canned milk from a thin hose through his mouth. They said it would go to his stomach so he did not get hungry. I could not breastfeed because of crack. She could pass the drug through breastfeeding [P14]; The study shows that the use of crack in pregnancy can lead to death at birth; The other was twin with this one. He died two days after birth because they are very premature [P9].*

Repercussions related to family restructuring

For the continued use of crack by the puerperal mother, there are cases where they disappear from the hospital and are reluctant to care for the child. Two were being taken care by the grandmothers at the time of the interview: *I am the one who stays here in the hospital because her mother disappears and appears from time to time. The state of the child is serious and I feel sorry for them. I'm her mother. If the child survives I will help to care [F1]; I'm her grandmother. I come at all times of visit here at the NICU. I know the case is very serious and if he is saved, he will have several sequels but I fought so hard for my daughter to get this child that it will not be now that I will give back. I do not know where her*

mother is for days. Her life is due to this crap. She is a crack user [F4].

The death of the mother by the use of crack causes the newborn to be taken care of by another relative. Family members join in to help with child care: *His mother, a crack user, died in childbirth. He will be with his father. His father works hard, so he does not have time to look after him. I'm a paternal grandmother and I'll move in with them to help with the care. Since their mother was ill during pregnancy, I was already helping with the care of other siblings. I feel sorry for my son because although she was thrown into the drug he was in love with her [F3]. When a punctured puerperal woman is killed, the newborn can be transferred to an institution because of a lack of family structure that sometimes gives care to more than one dependent child: Her baby goes to the orphanage. We do not know yet. We're still talking, here in the hospital, to the social worker to see where he goes. I already take care of two of her children, including one of them has a head problem and wants to beat everyone. I already have financial problems in taking care of them, I could not take care of another [F2].*

Besides to institutionalization, when the newborn is available for adoption also became a possibility considered by the family against the death of the crack-dependent mother: *She was complicated. She did not take care of his children well. His godmother, a very nice girl, wanted to be with him. But he is my grandson and has to stay with his father. It was a possibility this adoption issue [F5].*

Discussion

Regarding the repercussions for the child of the use of crack in pregnancy, it was observed that newborns of crack-dependent women are born with gestational age below 37 weeks, presenting prematurity and neonatal morbidity and mortality. The use of crack during pregnancy decreases placental uterine perfusion, impairing fetal growth, associated with significantly greater odds of preterm birth, low birth weight and smaller size for gestational age.⁽⁷⁾ The newborn may have affected her Neurological maturation, and may present problems in learning and development of

cognitive processes, increasing the risks of difficulties in school learning, increased risk of social adjustment disorders, family and maintaining healthy affective bonds.⁽⁸⁾

Diseases in the newborn, associated with the use of crack during pregnancy, are common. Exposure to psychoactive substances during pregnancy may increase the risk of sexually transmitted infections. Contamination of HIV to the fetus can lead to damage to the placenta, induction of preterm birth, and increased maternal plasma viral load, through a variety of possible mechanisms.⁽⁹⁾ Congenital syphilis is an important cause of pregnancy, especially among women who have not received prenatal care or inadequate treatment, as often the case for women who are dependent on crack. A study shows that 40% of the concepts infected by congenital syphilis develop into a spontaneous abortion before 22 weeks of gestation, or weighing less than 500 grams, stillborn after 22 weeks of gestation or weighing at 500 grams or above or perinatal death.⁽¹⁰⁾ About gonorrhea, newborns may be related to complications from gonococcal conjunctivitis, atypical interstitial pneumonitis, bronchitis and otitis media.⁽¹¹⁾

Care technologies are being increasingly implemented and used for newborns of crack-dependent women so they can survive. Nursing care of the newborn is based on the control and balance of several vital parameters, through the use of devices such as: monitors, infusion pumps, incubators, closed and open heated cribs, continuous positive pressure of the nasal routes (CPAP) or assisted ventilation, pulse oximeter, cardiac monitor, infusion pump, respirator, as well as essential procedures and procedures for the treatment of NB.⁽¹²⁾ These children are dependent on care technologies, which are characterized by dependence on technological and/or pharmacological artifacts indispensable for survival. In this sense, the approach of technological production with Nursing, comprises an alternative that the nursing team uses to overcome their difficulties in care.⁽¹³⁾

Anomalies, malformations, and deformations of newborns of crack-dependent women are defined to describe developmental disorders present at birth and the major cause of infant mortality. The main malfor-

mations of these children lead to the need for surgical treatment, such as: oral fissures, cleft palate, cleft lip, cheekbones, congenital heart anomalies, rectal atresia/stenosis, hip dislocation, hypospadias, spina bifida, hydrocephalus, microcephaly, anencephaly. Therefore, it can be stated that the teratogenic effects of crack use during pregnancy affect embryogenesis and fetal metabolism and may cause malformations.⁽¹⁴⁾ Breastfeeding of a crack-dependent mother is not advisable for the newborn because the exposure to crack by the mother's milk during the first month postpartum brings as adverse effects to the baby sedation or reduction of muscle tone, retardation in child growth, decreased motor and metabolic development of brain cells. Also, the use of crack by the puerperal mother during breastfeeding reduces the chances of newborn nutrition due to maternal malnutrition and the risk of psychiatric comorbidities from crack abstinence, such as aggressiveness and lack of maternal affection for the baby.⁽¹⁵⁾

The use of crack in pregnancy increases the toxicity associated with higher levels of active metabolites of the drug in the maternal circulation passing directly via the placenta to the fetus, causing vasoconstriction of the placental vascular bed and risk of births of stillbirths, neonatal deaths and abortions.⁽¹⁶⁾ Social marginalization and other challenges faced by puerperal dependents of crack can put them at greater risk of abandoning their children. A study reveals that acute drug abstinence and the mother's abstinence symptoms during and after childbirth contribute to the abandonment of the newborn in search of crack.⁽¹⁷⁾ Another repercussion of crack use is the death of the dependent mother. This fact may lead to the orphanhood of the newborn, who is then taken care by another relative or referred by a social worker from the hospital where he was born to social institutions to welcome them. The orphanhood to which these children are exposed is minimized when family members undertake to take care of the orphaned newborn.⁽¹⁸⁾ Otherwise, the child goes through the process of institutionalization or referral to adoption.⁽¹⁹⁾

Conclusion

It was found that the use of crack in pregnancy leads to repercussions related to the health of the new-

born and repercussions related to family disruption. In the newborn, prematurity, congenital malformation, hospitalization in an intensive care unit, use of care and feeding technologies through artificial milk formulas were mentioned. In the family context, it was evidenced the occurrence of abandonment of the child by the mother, causing the adoption of the newborn by relatives of the family nucleus or institutionalization due to lack of family structure. Given the repercussions highlighted in this study, it is imperative to capture pregnant women users of crack by the health/nursing professionals and referral for high-risk prenatal care, as well as to identify early the peculiarities of the newborns of these women, considering the development of actions that minimize the repercussions of crack.

Public policies ensuring the reception of these children should be implemented so they do not become homeless if they suffer from family neglect. Newborns of crack-dependent mothers upon discharge from the hospital must have been periodically monitored by health/nursing professionals and the Guardianship Council so they may have identified situations of vulnerability early. Family caregivers of crack-dependent women should be included in programs and receive social, psychological and economic support to be able to invest in their treatment and prevention of pregnancy, those women who want, and the sequels of crack use and dependence for women and the newborn.

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The teacher's body elements that influence the teaching-learning process of university nursing students

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The teacher's body elements that influence the teaching-learning process of university nursing students

Objective. To identify the body elements of the teacher that influence the teaching-learning process and to analyze their effects on university nursing students. **Methods.** Qualitative research with descriptive approach implemented through a dramatic play dynamics. In the second half of 2015, sixteen students from a private university center located in Rio de Janeiro (Brazil) participated in the study. The data processing was carried out by using Bardin's theoretical and analytical framework. **Results.** Four decoding units were created. They verse about the teacher's positioning, body movements, eyes, facial expressions as well as the clothes used to teach nursing. **Conclusion.** The teacher's elements are capable of generating effects that influence the process of learning nursing. This leads us to believe that the body should continue to be an object of study and discussion in the higher education of nurses.

Descriptors: education, nursing; faculty, nursing; students, nursing.

Elementos corporales del profesor que influyen el proceso de enseñanza - aprendizaje de los estudiantes de enfermería

Objetivo. Identificar los elementos corporales del docente que influyen el proceso de enseñanza-aprendizaje y analizar sus efectos en los estudiantes de enfermería. **Métodos.** Investigación cualitativa con abordaje descriptiva mediante la dinámica del juego dramático. 16 estudiantes de una universidad privada ubicada en el estado de Río de Janeiro (Brasil) participaron en el estudio. El tratamiento de los datos se realizó con el referencial teórico-analítico de Bardin. **Resultados.** Se encontraron cuatro unidades de decodificación que trataron sobre: posición y movimientos corporales, los movimientos de los ojos, las expresiones faciales y la ropa utilizada por el docente para enseñar enfermería. **Conclusión.** Los elementos corporales identificados

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en el docente producen efectos que influyen en el proceso de aprendizaje de enfermería. En este sentido, es fundamental el ejercicio del diálogo que incidan en la expresividad del cuerpo para enseñar y reconocerlo como objeto de estudio y discusión en la formación superior de la enfermería.

Descriptor: educación en enfermería; docentes de enfermería; estudiantes de enfermería.

Elementos corporais do professor que influenciam o processo de ensino-aprendizagem estudantes universitários de enfermagem

Objetivos. Identificar os elementos corporais do professor que influenciam o processo de ensino-aprendizagem e analisar seus efeitos nos corpos dos estudantes universitários de enfermagem. **Métodos.**

Introduction

Nursing teachers experience the challenges of modernity every day when teaching students or reflecting with them on the various issues related to the caregiving profession. In this way of thinking, teachers use body language in diverse teaching-learning scenarios to present to students the aspects inherent to nursing care. Specifically, gestures, smiles, and body movements are some examples of this expressiveness present in the teaching practice. Yes, it is necessary to decode all this expression located in the intimacy of the meeting established between the teachers and the university nursing students. In this light, it is necessary to open up to investigate the elements present in the body that teaches, which is revealed in the scope of a complex activity and produces subjective zones to think on the training of nurses in a perspective of producing effects and generating responses in the body who learns.⁽¹⁾

The dimension of the body is thus designed to elicit reflections regarding the process of training nurses and to find a whole theoretical substrate in the discourses of subjectivity. Specifically in nursing, the body can be understood as

Pesquisa qualitativa com abordagem descritiva induzida pelo jogo dramático. Participaram do estudo 16 estudantes de um centro universitário particular localizado no Rio de Janeiro. O tratamento dos dados foi realizado a partir do referencial teórico-analítico de Bardin. **Resultados.** Foram criadas quatro unidades de decodificação que versam sobre: posicionamento e movimento corporal do professor, movimentos dos olhos, as expressões faciais e as roupas utilizadas para ensinar enfermagem. **Conclusão.** Os elementos corporais identificados no professor foram capazes de gerar efeitos que influenciam o processo de aprender enfermagem. Nesse sentido, é fundamental exercitar diálogos que incidan na expressividade do corpo para ensinar, reconhecidos como objeto de estudo e discussão no âmbito da formação superior de enfermeiros.

Descritores: educação em enfermagem; docentes de enfermagem; estudantes de enfermagem.

the minimum space, owner of its own ideas, opinions, values, ambitions and worldview. It is the place of expression and creation, of meaning and representations, of production of images, power and product of subjectivity, instituted and instituting, that makes political movements of change.⁽²⁾ In this context, to stimulate the protagonists involved in the teaching to think about their professional identity, it is necessary to overcome the challenge of breaking with rigid curricular structures, evaluations that exclusively focus on contents that deal with diseases and automatism rooted in the pedagogical strategies adopted by teachers to teach.

It is necessary to consider the processes that naturalize the change of higher education in a commercial product, intensifying the precariousness of activities of the university teacher. Yes, the current context challenges those who teach. Languages, technology, and pedagogical practices, in general, through which subjectivities are produced in the modern world, are object of discussion.⁽³⁾ The challenge consolidated is the attempt to avoid trivializing the actions of caring and the human relations produced in university

banks. To think the solidarity, justice, economic issues; to live and dream about teaching with direct impacts on the world of work; never to neglect simple and possible practices at the expense of just believing in technologies. Teachers concerned by this problematic have located here their body-desire in a globalized society. Certainly, there is no separation between the phenomena that surround the world and the bodies that teach nursing care. It is in this aspect that the world penetrates into the soul of the teacher, and is consequently analyzed by students who learn nursing.

These connections between the body and the world, and between the world with teaching, authorize the presentation of the following guiding question of this investigative essay: what are the physical elements of the nursing teacher that influence the teaching-learning process? In order to respond to this question, the following objectives were defined: to identify the teacher's body elements that influence the teaching-learning process and analyze its effects on the bodies of university nursing students.

Methods

On the methodological orientation of the study and the characteristics of the researcher

The method used in this research was qualitative with descriptive approach induced by a dramatic game dynamics.^(4,5) In this methodological orientation, the male researcher was theoretically instrumented by disciplines, such as: knowledge theory, fundamental bases for qualitative studies and conversations with professors and nurses from the University of Évora and Bologna. At the time of the investigation, the interviewer had the degree of Master of Nursing enrolled in the second year of the Graduate Course in Nursing and Biosciences - Doctorate.

On the study site and ethical aspects of research

Regarding the study site: a nursing undergraduate course was selected from a private university center located in the mountain region of the state of Rio de Janeiro, Brazil, whose curriculum is guided by active teaching-learning methodologies. In the second half of 2015, the interviews were held in four different meetings with the participation of four students in a previously selected classroom. The duration of the meetings with each focal group were: first group, 1 hour and 18 minutes; second group, 58 minutes and 37 seconds; third group, 1 hour and 43 minutes and, finally, fourth group, 1 hour, 37 minutes and 18 seconds. Saturation in data production was observed in the third group of respondents.

In order to guide the interviews, five moments of game were created (A, B, C, D and E), with instructions for working with imagery resources.⁽⁶⁾ At the moment A, there was a meeting with four participants per game. They were invited to occupy the classroom area in a free and comfortable way. In step B, the imaginary password was distributed, which consisted of an inductive question with the purpose of retrieving the mental images experienced by the nursing students about the bodies of the teachers during graduation. This retrospective gymnastics of the imaginary was induced by the following unstructured questioning: based on academic experiences, highlight the elements of the nursing teachers' bodies that influenced your training process.

After the distribution of the imaginary password, the moment C was activated, characterized by the collective presentation and sharing of the mental images experienced by the students during the training process. When discussions were saturated, the participants were invited to enter the moment D, marked by the distribution of a fixed image, which depicts the meeting with the teacher's body in the upright position, touching with one hand the shoulder of the student that is sitting in the chair looking carefully to the notebook. After this, at the moment, the participants were invited to dialogue with the mental images experienced and with the fixed image, articulating new meanings to the teaching-learning process experienced with the teachers.

Repeated interviews were not taken into account and the interviewer was careful to organize all the speeches in the dramatic game, which were recorded in an MP3 player, transcribed and presented to the participants. After the reading of its contents, the use of the recordings for scientific purposes was authorized by them. It should be noted that the impressions during the production of the data were recorded in a field diary to aid in the discussion of the findings. Regarding the ethical aspects, the study was sent to the coordinator of the nursing course for appreciation. Once approved, the project was submitted to the Research Ethics Committee (REC), where was approved under Opinion registered with memorandum number 804.017. It should be noted that all participants in this research signed the Free and Informed Consent Term following the guidelines of Resolution 466/2012 of the National Health Council.

On the selection and relation between participants and the researcher

The study sample was intentionally selected taking into account the nursing graduation time; the last class of the course was prioritized because of the greater contact with the institutional teaching staff. Participants were invited to participate in the study on the first day of class. At this meeting, the telephones and electronic addresses of the interested parties were collected for the scheduling of dates, times and rooms where the interviews would take place. Fifteen participants declined to participate in the study, claiming that they were unavailable for the meeting, ashamed to speak in group and shy about the audio recorder. There was no withdrawal among the 16 participants included during data collection. Regarding the relationship established between the interviewer and the participants included in the research: the only meeting occurred prior to the production of the data during the official invitation to participate in the study. Thus, the nursing students had no previous pedagogical contact with the researcher during the nursing training.

On data analysis and nursing vision for research

The data from the dramatic game were analyzed according to their content, under the theoretical framework of Bardin.⁽⁷⁾ This analysis was done manually by two researchers separately who in a third moment met to match the findings. Therefore, no software was used for data processing. All the contents arranged in the manuscript derive exclusively from the data production and the authors provide a description about the decoding tree based on the teacher's body elements that produced effects in the nursing students when they learning the work of providing care. After the conclusion of the final thesis report, the participants had access to reading the entire study and authorized the publication in Nursing periodicals. The statements of the participants in the manuscript were presented, and in order to guarantee their confidentiality, the identification word "Student" was assigned followed by the ordinal number from the investigative pathway experienced in the data production.

The contents were arranged in four decoding units in order of expressiveness of the investigative findings, from highest to lowest. The data were compared with studies published in national and international journals that deal with the object of study, that is, the teacher's body. Here, we recognized the investigations local coverage as a methodological limitation. Certainly, this raises the desire of the study to be expanded and replicated in other contexts of higher education in nursing. This is because this investigative experience allowed us to think about the teaching-learning process in nursing as a permanent movement of reflection on the process of subjectivities, that is, to train and to produce. In this case, the process of producing nurses. This is not possible without an adventure in the field of subjectivity. In this way, the teacher's body has, conceptually, a broader meaning, which is a body that individualizes itself. A collective body of teachers from a higher education institution, but also a theoretical-conceptual corpus of this Nursing that enters into a training process to meet the demands of health in its different magnitudes and contexts.

Results

The content analysis of the nursing students' testimonies identified the positioning, body

movements, the way of looking, the appearance and the facial expressions of the teacher as body elements that should be thought, problematized and discussed in the scope of the superior education of nurses. Some statements that represent the four decodified units identified are presented below:

First unit: the teacher's positioning and body movement

[...] the teacher, when sitting, is closer to you ... it is that person who is not there just to pass on knowledge, but to listen to what you have to say (Student 13); [...] the teacher sitting next to you favors learning [...]. You are closer, have more freedom to ask, willingness to listen and participate [...] (Student 16); [...] the teacher with a crooked posture in the chair [...] shows disinterest in what the student is saying (Student 2); [...] the teacher standing on the board, the very position of the body in front of the group facilitates learning (Student 10); [...] the teacher is standing, interested in seeing the student searching [...] (Student 12); there was a teacher in particular that used to move through the room space. He used to get up, walk, sit down ... this makes the discussions dynamic and we get more connected [...] (Student 9); He would saty on the wall, cross his arms, sit, walk. These movements then created dynamism in the group (Student 14).

Second unit: the teacher's eyes

The way the teacher looks, with attention, with respect, everything is transmitted in the form of looking (Student 4); it was a teacher who, when you were wrong, you would already get from the look (Student 5); the teacher would look at you, encouraging you [...] (Student 13); the confident look. Everything that is passed with confidence, you feel the learning (Student 15); the teacher looks around, he shows disinterest in what the student is saying (Student 2); [...] you are convinced that that is right, you have studied and with suspicious eyes, the teacher puts everything down (Student 5); [...] the teacher's gaze showed a seriousness that would scare us [...] (Student

7); [...] the teacher only takes a look and does not say whether it is right or wrong. What happens: it discourages us to get exposed e (Student 8).

Third unit: the teacher's facial expressions

Just in the expression: there were teachers who seemed calm, you were in a line of reasoning, doing very well [Student 6]; [...] facial expressions, evolving for you to conclude your reasoning, it facilitates (Student 7); we see on the face that the teacher is upset, then all the students tried to grow [...] (Student 11); [...] the very expression of dissatisfaction on the teacher's face when the group did not do well at that moment, encouraged students to go back to the questions and search [Student 12].

Fourth unit: the teacher's appearance

[...] teachers need to have a respectful way of dressing: no cleavage, no short skirt (Student 4); [...] the teachers put on a suit that does not attract attention, discreet [...] (Student 5); [...] teachers dress in light clothes, neutral tones to teach [...] (Student 11).

Discussion

The decoding units identified portray the assemblies that occur when nursing students learn the work of caring with the teacher's body. The word assembly refers to this mixture of bodies in a society, comprising all the attractions and repulsions, sympathies and antipathies, changes, alliances, penetrations and expansions that affect people of all kinds.⁽⁸⁾ In this perspective, the availability to capture the subjective body elements involved in the higher education of nurses needs to be discussed. This is because the body contains a multiplicity of communications, capable of influencing the teaching-learning process, and therefore, must be taken into account in the performance of academic activities.⁽⁹⁾

The first decoding unit refers to the positioning and movements performed by the teacher's

body in the teaching scenario. In the analysis, three pedagogical situations were found: sitting, standing and the movements performed by the teacher in the classroom.

With regard to the position of the teacher's body in the classroom, the distance between the bodies may mean social distance. It is proper for students to say that teachers must seek equality with them. There is an indication to the bodies that teach to be more attentive to the positioning adopted in the physical space, so that this may be no longer a negative factor in learning but, on the contrary, a factor that arouse attention and interest in learning.⁽⁹⁾ When the body of the teacher was seated in the teaching scene, that is, at the same level as the students, there were divergences in the statements, which led to the discussion of the effects of this position in facilitating and inhibiting the learning.

The main pleasant effects in the nursing students' opinion pointed to the freedom of expression, creation of bond, active listening; learning from the exchange of experiences and knowledge. The sitting position allowed the student to participate in the discussions about the curricular texts. Desire as the production of a professional identity, creation of the nurse, confrontation of powers, construction of new knowledge, power and life.⁽¹⁰⁾

When we analyze the contents of the statements, we notice that the positioning of the teacher's body in the chair was the object of observation of the students in the teaching-learning scenarios. The body of the teacher in the crooked sitting position was signified as disinterest in the discussions and had a negative impression on the apprehension of the curricular contents that were being collectivized. The teacher's position when teaching caring activities is a differential point of quality in the training of nurses to adopt ethical and political stances. If the professional adopts positions of little appreciation of pedagogical actions, there will be another kind of consequence for the educational practice.⁽⁹⁾

Regarding the standing position adopted by the teacher's body: curiously, this position, when taken

in the classroom, produced pleasant effects in students to learn nursing. In this type of encounter, the bodies of the students were considered mere receptacles of knowledge, accustomed to receiving curricular contents related to diseases, health policies, care and management processes, among other notions applied to the different areas of the nursing profession. This vertical manner of training nurses takes place under a marked influence of a positivist model of science, centered on a pedagogical practice with a strong technical influence, where spatially specific health content focused on biological aspects emerges.⁽¹¹⁾ In fact, this discourse invites us to think of the teacher's body as a vehicle transmitting power with movements that identifies him as a health professional daily affected by various control devices hatched in the network of life and that are analyzed by the nursing students in the classroom.

From the moment that the teaching-learning scenes were conducted by body movements, that is, the teacher dynamically walking, sitting, standing, crossing and uncrossing the arms, the nursing students had their attention awakened and learned the contents with greater ease. Yes, the teacher transmits information through gestures, postures, body orientations, organization of objects in the scenario, and even through the relationship of distance maintained with the students. All this gestures end up being used to facilitate the task of understanding messages that are quite significant in the learning process.⁽¹²⁾ The second decoding unit creates the opportunity to affirm that looking and seeing are different things. The students during class took time to see the teacher's body. In this observation, they identified the eyes as determining elements in the teaching-learning process in nursing. This is due to the fact that the teacher's gaze carries messages ranging from stimulus to disinterest for the contents discussed in the classroom. Consequently, the students were influenced by the movements of the teacher's eyes as well as the locations of the learning setting in which his visual field was designed to teach.

Be it the empty scenario or towards the bodies that learn, the way of looking was able to reveal

approximations and distances with respect to the reception of a curricular message to be apprehended.⁽¹³⁾ Body that to create the role of being a nurse is not only communicated through the eye-retina, eye-sclera, eye-pupil, but by invisible and sensitive orders, since they are perceived by the vibrating body.^(14,15) Thus, the main pleasant effects to students based on the way of looking of the teacher were loaded by messages of: welcome, attention, encouragement, confidence and clarity in the content taught. Contrarily, the sense that nursing students wanted to give in saying that some teachers do not look in the eyes when they teach was represented by: inhibition, fear, devaluation and reprobation of the contents considered in the classroom. Eyes, now understood as elements of power, where subjectivity is scrutinized and penetrated by discipline, and which are able to neutralize students in the teaching-learning scenes.

The third decoding unit refers to the facial expressions of the teacher. Body, understood as a sign, once the face starts to enact curricular texts that are projected with different meanings and effects on students. The statements showed that the teacher's facial expression changes constantly and can be decoded as positive from the moment that the students understand it as: quiet, to the point of stimulating the uninterrupted search for scientific knowledge in the field of nursing. On the other hand, they produced negative effects when they carried messages of discouragement, fear and retraction. In these encounters, nursing teachers-students, the signs need to be perceived, seen in different ways to account for the signifier and the expressed meaning. In this aspect, to look well means to concentrate on peculiar elements of the face, which presupposes a mental effort to decode their different forms and movements.⁽¹⁶⁾ It is in this context that the teacher's facial expression is able to transmit many messages, which are perceived and interpreted by the students, and that guide their behavior in the classroom.⁽¹¹⁾ Based on this, the importance of the teacher in knowing this form of non-verbal communication stands out as a way of identifying the interest of the class, and of analyzing their

own behavior, which also influences the learning of the students.^(17,18)

The fourth and final decoding unit represented by the clothes induced effects in the nursing students. The use of light, discrete and neutral tones transmitted messages of respect. The indicatives point that the teachers' clothes should be used with good sense, in a simple, informal, comfortable and discreet way. In addition, colors should be used as a resource, in accordance with the teacher's state of mind and with the social conventions of the institution in which the work is done.⁽¹⁹⁾ Before pausing the reflections, it is essential to exercise these dialogues focusing on the expressiveness of the body that teaches. Let us say that it is an opportunity to intensify the bets of contemporary thought, that is, to think about the limit between the domains of knowledge: art and health, objectivity and subjectivity. Thinking, then, on this border area based on a local context allowed to overcome the isolation of the knowledge and promptly raises the curiosity to know the reverberations of this investigation in other institutional contexts of superior education of nursing as a way of amplifying the problems and the questions that pervade the practice of teaching.

The findings of this study indicate that nursing students look at teachers during everyday encounters and identify elements in their bodies that influence the learning of curriculum texts delivered in the classroom. In this sense, the positioning, the body movements, the eyes, the face and the clothes of the teachers were determinants in the learning process of nursing students. The word "body" is believed to extrapolate beyond its organic limits, giving way to new readings in nursing higher education. The teacher's body attracts or rejects the student, that has desires, acts, feels and thinks from an intimate connection with life, and in this connectivity with the other generates effects and prints marks capable of giving shape to the nursing profession. Generalizing was not yet possible. Based on this, we considered the investigation of data from a single Higher Education Institution and the contemplation of the reality of students regularly

enrolled in the last academic period as a limitation of the study. Therefore, these findings portray a specific reality that may differ from other contexts, curricula, and periods of training, in which the body of the teacher comes into contact with the training of nursing students.

With the certainty of the unfinished, the need to change the way of seeing and living the relationships between teachers and students is undeniable, based on the recognition of the body as an expressive element and unit of induction in the teaching-learning process. Thus, we recommended carrying out further studies on this phenomenon in other research scenarios, with the purpose of proving or refuting these findings. It is also important to point out the importance of opening spaces in universities for the discussion of the object "the teacher's body" with university students, teachers and managers, in order to enhance the teaching-learning processes in the Nursing field.

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Gender Differences in Body Mass Index, Body Weight Perception, weight satisfaction, disordered eating and Weight control strategies among Indian Medical and Nursing Undergraduates

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Gender Differences in Body Mass Index, Body Weight Perception, weight satisfaction, disordered eating and Weight control strategies among Indian Medical and Nursing Undergraduates

Objective. To assess gender disparity in body weight perception, Body Mass Index (BMI), weight satisfaction and role of depression among undergraduate Medical and Nursing students. **Methods.** A descriptive cross sectional descriptive study was conducted in conveniently selected medical ($n=241$) and nursing ($n=213$) students of Bangalore, South India.

Data was collected using self-administered SCOFF questionnaires. **Results.** Our findings revealed that men had a significantly higher BMI than women ($t=5.403$, $p<0.001$). More number of women compared to men, perceived themselves as over weight (74.8%) and not satisfied with their weight status (81.6%). More men than women scored positively for disordered eating behaviors on SCOFF (45.4% vs. 31.1%) and EAT scale (16.5% vs. 8.7%). While, 48.2% of the women practice binge eating, 41.2% of the men practice it ($p<0.004$); more men (47.4%) than women (25.4%) exercised for more than sixty minutes ($p<0.001$) to control their weight. **Conclusion.** Findings indicate

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small differences between the genders that have to be taken in consideration in planning interventional programs to prevent eating disorders in this population.

Descriptors: body mass index; weight perception; cross-sectional studies; students, nursing; students, medical; feeding and eating disorders.

Diferencias por sexo en el índice de masa corporal, percepción del peso corporal, satisfacción con el peso, desórdenes de la alimentación y estrategias para el control de peso en estudiantes de medicina y enfermería de la India

Objetivo. Evaluar la disparidad por sexo en el índice de masa corporal, la percepción del peso corporal, la satisfacción con el peso, los desórdenes de la alimentación y estrategias para el control de peso en estudiantes de medicina y enfermería de la India.

Métodos. Se realizó un estudio descriptivo de corte transversal con una muestra tomada a conveniencia de estudiantes de Medicina ($n=241$) y de Enfermería ($n=213$) de Bangalore, en el sur de India. Los datos se recolectaron usando los instrumentos auto-administrados SCOFF y EAT-26. **Resultados.** Los hombres tenían un IMC significativamente mayor que las mujeres ($t=5.403, p<0.001$); un mayor porcentaje de mujeres, en comparación con los hombres, percibía que pesaba más (74.8%), sin embargo, no estaban satisfechas con su peso (81.6%). Los hombres y las mujeres tuvieron puntajes que mostraban riesgo de tener trastornos de conductas alimentarias en el SCOFF (45.4% vs. 31.1%) y en el EAT (16.5% vs. 8.7%). Mientras que el 48.2% de las mujeres practicaba el atracón, el 41.2% de los hombres lo tenía ($p <0.004$); más hombres (47.4%) que mujeres (25.4%) se ejercitaban por más de sesenta minutos ($p<0.001$) para controlar su peso. **Conclusión.** Los hallazgos indican pequeñas diferencias por sexo que deben ser tenidas en cuenta en la planeación de programas de intervención para prevenir los trastornos en la alimentación en esta población.

Introduction

Prevalence of eating disorders has become growing concern among college students in India. Eating disorders are the common psychiatric illnesses

Descritores: índice de masa corporal; percepción del peso; estudios transversales; estudiantes de enfermería; estudiantes de medicina; trastornos de alimentación y de la ingestión de alimentos.

Diferenças por sexo no índice de massa corporal, percepção do peso corporal, satisfação com o peso, desordens da alimentação e estratégias para o controle de peso em estudantes de medicina e enfermagem da Índia

Objetivo. Avaliar a disparidade por sexo no índice de massa corporal, percepção do peso corporal, satisfação com o peso, desordens da alimentação e estratégias para o controle de peso em estudantes de medicina e enfermagem da Índia. **Métodos.** Se realizou um estudo descritivo de corte transversal com uma amostra tomada a conveniência de estudantes de Medicina ($n=241$) e de Enfermagem ($n=213$) de Bangalore, no sul da Índia. Os dados foram coletados usando os instrumentos auto-administrados SCOFF e EAT-26. **Resultados.** Os homens tinham um IMC significativamente maior que as mulheres ($t=5.403, p<0.001$), mas um maior número de mulheres em comparação com os homens, percebiam que pesavam mais (74.8%) e não estavam satisfeitas com seu peso (81.6%). Os homens e as mulheres tiveram pontuações que mostravam risco de ter transtornos de condutas alimentar no SCOFF (45.4% vs. 31.1%) e no EAT (16.5% vs. 8.7%). Enquanto que 48.2% das mulheres praticavam o excesso, já os homens 41.2% ($p <0.004$); mais homens (47.4%) do que mulheres (25.4%) se exercitavam por mais de sessenta minutos ($p<0.001$) para controlar seu peso. **Conclusão.** As descobertas indicam pequenas diferenças por sexo que devem ser tidas em conta no planejamento de programas de intervenção para prevenir os transtornos na alimentação nesta população.

Descritores: índice de massa corporal; percepção de peso; estudos transversais; estudantes de enfermagem; estudantes de medicina; transtornos da alimentação e da ingestão de alimentos.

with a persistent disturbance in eating patterns or other behaviors intended to control weight, body size or shape.⁽¹⁾ Eating disorders also affect physical and nutritional health, psychological functioning and if untreated, they can be fatal.⁽²⁾ Earlier studies

have shown that eating disorders have the highest mortality rate of any mental illness.⁽³⁾ According to DSM-5, the types of eating disorders are Anorexia Nervosa, Bulimia Nervosa, Binge Eating Disorder, Pica, Rumination Disorder, Avoidant/Restrictive Food Intake Disorder (ARFID), Other Specified Feeding or Eating Disorder (OSFED).⁽⁴⁾

Epidemiological studies have shown that anorexia nervosa (AN) and bulimia nervosa (BN) are more common among females than males.⁽⁵⁾ Generally, it is believed that body weight and its perception play an important role in the physical and mental well-being of a person.⁽⁶⁾ Widely published literature indicates gender differences in relation to body weight perception, weight dissatisfaction and disordered eating behaviors.⁽⁷⁾ Though, both women and men suffer from eating disorders, men with eating disorders have been overlooked, understudied, and underreported.⁽⁸⁾

Published research report that young academics in the area of health such as nutrition, physical education, nursing and medicine were high risk for Eating Disorders.⁽⁹⁾ Further, in a survey it was revealed that two-thirds of psychiatrists had seen at least one case of ED, indicating that EDs are not uncommon in urban India.⁽¹⁰⁾ In India, research on issues related to EDS mainly focused either among adolescents or female university students are well documented.⁽¹¹⁾ However, there is dearth of literature available among health science students.⁽¹²⁾ In addition, there are no studies that examined gender differences related to eating behaviors from India. Thus, the present study was aimed to assess gender differences in Body Mass Index, body weight perception, weight satisfaction, disordered eating and weight control strategies among Indian Medical and Nursing Undergraduates

Methods

This study was carried out among medical and nursing undergraduates from renowned colleges from Bangalore, South India between August to October 2014. This was a descriptive cross sectional study conducted among conveniently selected sample.

The study criteria include students those were enrolled in to medical and nursing undergraduate courses. Students those were diagnosed to be having psychiatric illnesses and below 18 years were excluded from the study. There were 494 individuals were eligible to participate in to the study. The students who had not volunteered (refused consent) ($n=12$), absent during data collection period ($n=18$) and incomplete questionnaires ($n=10$) were excluded out from the study's population. Hence, the final sample for the present study comprised of 454 undergraduate medical ($n=241$) and nursing ($n=213$) students with high response rate (91.9%).

Definitions

In the present study, eating attitudes include thoughts, beliefs, feelings, behaviors and relationship with food.⁽¹³⁾ Body weight perception refers to the personal evaluation of one's weight as "underweight" or "normal weight" or "overweight" irrespective of actual body mass index⁽¹⁴⁾ Body Mass Index (BMI) in this study was calculated based on self-reported height and weight. The BMI was calculated by dividing body weight in kilograms by the square of height in meters and BMI classification was according to Asian population by the WHO (2004). A BMI ≥ 27.50 indicates a higher risk for obesity, a BMI = 23.00 – 27.50 an increased risk of being overweight, a BMI = 18.50 – 23.00 defines the normal range, and a BMI of less than 18.50 is considered as underweight.

Measures

Socio-Demographic Questionnaire. This questionnaire collected socio-demographic variables regarding participants' back ground information i.e. age, gender, education, year of education, religion, background, current weight, height, weight satisfaction(with three responses, 'satisfied', 'not satisfied', 'not sure'), and weight perception (with three responses 'underweight', 'normal weight', 'over weight').⁽⁶⁾

SCOFF questionnaire. The SCOFF (Sick, Control, One, Fat, Food) questionnaire developed by Morgan *et al.*⁽¹⁵⁾ It is a short and simple screening

tool for eating disorders with five items. Every 'yes' answer to a question is equivalent to one point. A score of two or more points indicates the patient may be suffering from an eating disorder. This is a highly effective in screening tool for suspicion of eating disorders with good psychometric properties (kappa statistic=0.73 to 0.82).⁽¹⁶⁾

Eating Attitudes Test –26. The Eating Attitude Test-26 (EAT-26) is a self-reported questionnaire widely used to identify the presence of any eating disorder.⁽¹⁷⁾ This scale has two sections. **Section A** consists of 26 items to assess eating attitudes with three subscales namely; Dieting (13 items-1,6,7,10,11,12,14,16,17,22,23,24,26), Bulimia & Food Preoccupation (6 items-3,4,9,18,21,25) and Oral control (7 items-2,5,8,13,15,19,20). Options for the responses are in four-point Likert-scale (3 = always, 2 = usually, 1 = often, 0 =sometimes/rarely/never), where higher scores indicating a higher likelihood of maladaptive eating attitudes and behaviors. The total sum of EAT-26 scores ranges from 0 to78. A score of 20 or above is regarded as at risk of eating disorders and diagnostic follow-ups are required.⁽¹⁸⁾ **Section B** consisted of six items to assess various aspects of distorted eating behavior, including bulimic tendencies, body image perception and degree of willful control over eating behavior.

Patient Health Questionnaire. The PHQ-9 is a self-reported, nine-item questionnaire specific to depression with good psychometric properties.⁽¹⁹⁾ This is a four-point Likert-scale (0 =not at all, 1 =several days, 2 =more than half the days, or 3 =nearly every day) with score range 0-27 (0 indicating no depressive symptoms and 27 indicating all symptoms occurring nearly daily). The score <4 indicates minor depression, 5-14 suggests moderate depression and >14 indicates severe depression.

Data collection procedure

After obtaining permission from college administrators, the participants were approached by the primary author after their regular lectures. The students were informed about the aims

of the research. After acquiring verbal consent from the participants, English versions of the questionnaires were administered. The students took approximately 15–20 minutes to complete the questionnaires.

Ethical considerations

The study protocol was approved by Institute Ethics committee. Permission was sought from the administrators of the colleges where the study was conducted. The participants were explained that participation in to the study is purely voluntary and their responses would have no influence on their semester exams. Data collection tools contained no identifying information and therefore kept the individual responses confidential.

Data Analysis

The data were analyzed using appropriate statistics and results were presented in narratives and tables. Descriptive (frequency, percentage, mean and standard deviation) and inferential statistics (Chi-square test, t- test) was used to interpret the data. The results considered statistically significance if the p value is less than 0.05.

Results

The present study comprised of 454 individuals of whom majority (n=357, 78.6%) were females. The mean age for the men was 20 yrs (SD=2.04) and for the women was 19 yrs (SD=1.32). Men (M±SD, 23.06±4.34) had a significantly higher BMI than women (M±SD, 23.06±4.34, t=5.403, p<0.001). Table 1 shows that, women in relation to men were younger (71.7% vs. 58.8%), nursing students (58.3% vs. 5.2%), with rural back ground (30.5% vs. 15.5%) and have less Weight status according to BMI of overweight (20.7% vs. 47.4%); these differences were statistically significant. The self-perception of overweight was very similar in both genders (28.9% in men and 23.2% in women) as well as the non-satisfaction with the weight (33% in men and 39.8% in women).

Table 1. Characteristics of the participants

Variable	Group	Gender						x ² value	p value
		Men (n=97)		Women (n=357)		Total (n=454)			
		n	%	n	%	n	%		
Age	18-20yrs	57	58.8	256	71.7	313	68.9	25.109	0.001
	21-23yrs	34	35.1	101	28.3	135	29.7		
	>23yrs	6	6.2	0	0.0	6	1.3		
Education	Medicine	92	94.8	149	41.7	241	53.1	86.383	0.001
	Nursing	5	5.2	208	58.3	213	46.9		
Back ground	Rural	15	15.5	109	30.5	124	27.3	10.387	0.006
	Semi-urban	24	24.7	91	25.5	115	25.3		
	Urban	58	59.8	157	44.0	157	47.4		
Weight status according to BMI	Underweight	13	13.4	101	28.3	114	25.1	29.491	0.001
	Normal weight	38	39.2	182	51.0	220	48.5		
	Overweight	46	47.4	74	20.7	120	26.4		
Perception of weight	Underweight	18	18.6	65	18.2	83	18.3	1.463	0.481
	Normal weight	51	52.6	209	58.5	260	57.3		
	Overweight	28	28.9	83	23.2	111	24.4		
Satisfaction of weight	Satisfied	60	61.9	192	53.8	252	55.5	2.018	0.365
	Not satisfied	32	33.0	142	39.8	174	38.3		
	Unsure	5	5.2	23	6.4	28	6.2		

Table 2 shows association between gender and SCOFF, EAT scores. More men than women scored positively for disordered eating behaviors on SCOFF scale (45.4% vs. 31.1%) and for problematic behavior on EAT scale (16.5% vs. 8.7%). Severe depression in men was the double than in women (9.3% vs. 4.5%), but this difference was no significant.

With regard to weight control behaviors, more number of women (48.2%) than men (41.2%) practice binge eating and this difference was statistically significant. Most of the men and women disagreed that they made themselves sick by vomiting (91.8% and 93.8% respectively) and used laxatives, diet pills or diuretics to control their weight (95.9% and 97.5% respectively).

Table 2. Association between gender and SCOFF, EAT, Depression scores

Variable	Group	Gender						x ² value	p value
		Men		Women		Total			
		n	%	n	%	n	%		
Scoff scores	Negative <2	53	54.6	246	68.9	299	65.9	6.906	0.009
	Positive >2	44	45.4	111	31.1	155	34.1		
EAT Scores	Non-problematic behaviors <20	81	83.5	326	91.3	407	89.6	5.015	0.025
	Problematic behavior >20	16	16.5	31	8.7	47	10.4		
Depression scores	Minor depression (<4)	50	51.5	179	50.1	229	50.4	3.883	0.143
	Moderate depression (5-14)	38	39.2	162	45.4	200	44.1		
	Severe depression (>14)	9	9.3	16	4.5	25	5.5		

However, 47.4% of men compared to 25.4% of women endorsed that they have exercised more than sixty minutes ($p < 0.001$). More men (9.3%) than women (3.4%) lost their weight more than

10 kgs in the past six months and 8.2% of men and 3.6% of women agreed that they were treated for eating disorders. These differences were statistically significant. (Table 3).

Table 3. Gender wise weight control behaviors of the participants

Variable	Group	Gender				χ^2 value	p value
		Men		Women			
		n	%	n	%		
Gone on eating binges	Never	57	58.8	185	51.8	11.591	0.041
	Once a month or less	17	17.5	105	29.4		
	2-3 times a month	12	12.4	28	7.8		
	Once a week	7	7.2	29	8.1		
	2-6 times a week	4	4.1	2	0.6		
	Once a day or more	0	0	8	2.2		
Ever made yourself sick (vomited)	Never	89	91.8	335	93.8	2.497	0.777
	Once a month or less	5	5.2	11	3.1		
	2-3 times a month	1	1.0	4	1.1		
	Once a week	1	1.0	4	1.1		
	2-6 times a week	1	1.0	1	1.1		
	Once a day or more	0	0	2	0.6		
Ever used laxatives, diet pills or diuretics (water pills)	Never	93	95.9	348	97.5	3.015	0.551
	Once a month or less	3	3.1	4	1.1		
	2-3 times a month	1	1.0	2	0.6		
	Once a week	0	0	2	0.6		
	2-6 times a week	0	0	1	0.3		
	Once a day or more	0	0	0	0		
Exercised more than 60 minutes	Never	51	52.6	266	74.6	21.819	0.001
	Once a month or less	20	20.6	39	10.9		
	2-3 times a month	8	8.2	9	2.5		
	Once a week	2	2.1	11	3.1		
	2-6 times a week	9	9.3	18	5.0		
	Once a day or more	7	7.2	14	3.9		
Lost 10 kg or more in the past 6 months	Yes	9	9.3	12	3.4	6.053	0.014
	No	88	90.7	345	96.6		
Treated for an eating disorder	Yes	8	8.2	13	3.6	3.668	0.055
	No	89	91.8	344	96.4		

Discussion

The present study was aimed to examine the gender differences in magnitude of eating disorders, body dissatisfaction and depression among Indian nursing and medical undergraduates. The findings indicate that more number of women than men were dissatisfied with their body weight, perceived themselves as overweight. But more number of men than women shown to be high risk for

development of eating disorders on EAT and SCOFF scales. It is particularly noteworthy that 48.2% of women and 41.2% of men practiced binge eating to control their weight.

In the present study sample, mean BMI was significantly higher in men than in women. This is in consistent with earlier studies.⁽²⁰⁾ In line with previous research,⁽²¹⁾ more number of women in this study was underweight. However, the number

of women those were overweight was higher than men. These findings differ from a study that examined gender differences in body mass index (BMI), body weight perception, eating attitudes and weight loss strategies among undergraduate students in Malaysia.⁽²¹⁾ Earlier research indicates that female adolescents tend to perceive their body weight inaccurately when compared to BMI.⁽²²⁾ Similarly, in our study, approximately equal percentage (13.1%) of men and women perceived themselves as under weight or over weight. While men underestimate their weight, women felt that they were obese. These findings also were supported by a recent study among Korean high school students.⁽²³⁾ These findings indicate an urgent concern as these individuals may engage in undue weight loss practices and may put themselves at risk of nutritional deficiencies.⁽²⁴⁾

Body weight dissatisfaction is common in many modern societies and it appears to have grown over time.⁽⁷⁾ Widely published literature⁽²¹⁾ indicates that females were more dissatisfied with their body weight than males. In a study among adult Americans found that women were around twice as likely as men to be dissatisfied with their body size.⁽²⁵⁾ Our study findings also were in concordance with these studies as 81.6% of the women were dissatisfied with their weight compared to 18.4% of the men. However, more empirical evidence is needed in this regard to identify the gender differences in relation with body weight satisfaction.

Early published literature⁽²⁶⁾ report females are at high-risk of eating disorders as compared to males. However, our study revealed more men than women scored positively for disordered eating behaviors on SCOFF (45.4% vs. 31.1%) and EAT scale (16.5% vs. 8.7%). These findings were also comparable to a recent study among undergraduate and post graduate students found that men with overweight had greater eating disorder risk (males OR=3.5; females OR=2.0), binge eating (males OR=2.1; females OR=1.9), and use of compensatory behaviors (males OR=1.5; females OR=1.3).⁽²⁷⁾ Surprisingly, in this study 9.3% of men reported severe depression

compared to 5.5% in women. However, this difference was no significant. These findings indicate the need of conducting further studies to screen for depression for earlier intervention to prevent disordered eating behaviors in women.

Earlier studies report that females were generally more concerned about body weight, body shape and eating than males. They diet more frequently, had self-induced vomiting, and used laxatives and exercise as their weight-loss strategies⁽²¹⁾ In line with previous research,⁽²⁸⁾ our findings also observed that nearly half of the women practice binge eating to control their weight. These findings differed from previous studies that showed no gender differences in the prevalence of binge eating.⁽²⁰⁾ On the contrary, nearly half of the men exercised more than sixty minutes and lost weight more than 10kgs in the past six months. Previous studies also found similar findings.⁽²⁹⁾ Furthermore, 8.2% of men stated that they had undergone treatment for eating disorders. These findings could be due to the stigma attached to eating disorders⁽³⁰⁾ or women don't want to disclose about their experiences about eating disorders.

The limitations of the present study include cross sectional design, convenient sampling and data were collected using self reported questionnaires including BMI was calculated by height and weight measures reported by the participants. Hence, the findings cannot be generalized to all health science students in India. Future studies with random sampling and qualitative designs could be conducted in different regions in India. Despite these limitations, the present study sample was from two universities from South India and larger sample provided interesting findings that could be helpful in planning interventional programs to prevent eating disorders in this population.

Conclusion. The findings indicate that gender differences exist in body weight perception, satisfaction, eating attitudes and weight control behaviors in Medical and nursing undergraduates. Women were more dissatisfied, perceived themselves as overweight and practiced binge eating than men. Though there were small

differences between the genders, cannot be ignored as men agreed that they have undergone treatment for eating disorders. Further, more in depth studies are required to explore the reasons for these gender differences and to develop gender based intervention programs to prevent eating disorders in these populations.

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Challenges of motherhood in the voice of primiparous mothers: initial difficulties

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Challenges of motherhood in the voice of primiparous mothers: initial difficulties

Objective. To identify the main difficulties first-time mothers experience in the postpartum period, during the first six months of the baby's life. **Methods.** Level I qualitative, exploratory-descriptive study. The sample consisted of 11 first-time mothers of full-term healthy newborns. The data were collected through the “focus group” method. The mothers' discourse was subject to content analysis, categorizing the registry units. **Results.** Three categories emerged from the data analyzed that indicate the mothers' main difficulties in this period: postpartum recovery; baby care; marital relationship. **Conclusion.** The results indicate that, although motherhood is an event marked by positive emotions, the difficulties that emerge in the mothers' daily life can interfere negatively in the quality of parenthood. In this scenario, the nurses play a determinant role in the enhancement of interventions that are sensitive to these needs and that, at the same time, favor these mothers

and their families' empowerment, thus optimizing the children's development trajectories.

Descriptors: adaptation; focus groups; mothers; parenting; postpartum period.

Desafíos de la maternidad en la voz de las primíparas: dificultades iniciales

Objetivo. Identificar las principales dificultades de las madres primíparas en el posparto y durante los primeros seis meses de vida del bebé. **Métodos.** Estudio cualitativo de nivel exploratorio-descriptivo. La muestra estuvo constituida por 11 madres primíparas de recién nacidos saludables a término. Se utilizó el grupo focal como método de recolección de los datos. Los discursos de las madres se sometieron a análisis de contenido, categorizando las unidades de registro. **Resultados.** Del análisis de los datos emergieron tres categorías indicadoras de las principales dificultades

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de las madres en este período: la recuperación del posparto, el cuidado del bebé, y la relación conyugal.

Conclusión. Los resultados obtenidos indican que, a pesar de que la maternidad es un acontecimiento marcado por emociones positivas, las dificultades que surgen en el cotidiano de las madres pueden interferir negativamente en la calidad de la maternidad. Los enfermeros tienen, en este escenario, un papel determinante en la dinamización de intervenciones sensibles a estas necesidades y, simultáneamente, favorecedoras del empoderamiento de estas madres y de sus familias, lo que optimiza de este modo las trayectorias de desarrollo de sus hijos.

Descriptor: adaptación; grupos focales; madres; responsabilidad parental; período posparto.

Desafios da maternidade na voz das primíparas: dificuldades iniciais

Objetivo. Identificar as principais dificuldades sentidas por mães primíparas no pós-parto, nos primeiros seis

Introduction

The birth of a child, mainly the first, plays a determinant role in the passage to a new phase in the lifecycle, involving the restructuring of the family system, with the consequent redefinition of roles and tasks. Thus, the parental tasks modify the couple's daily life, especially the mother's, who assumes most of the responsibilities in care for the baby. She enters an universe that is sometimes unknown, highly demanding, imposing constant learning and a profound adaptation to the new situation as a mother and caregiver for the baby.

⁽¹⁾ In this respect, Mendes⁽²⁾ underlines that "*the postpartum is a period marked by great emotional vulnerability for both parents in general and for the woman in particular*". The author adds that, although great physiological and psychosocial changes are observed during the pregnancy, the birth and postpartum entail new events (inexperience in care for the child; changes in the daily routine; consolidation of the mother/child, father/child, marital and family relationships) that

meses de vida do bebé. **Métodos.** Estudo qualitativo de nível I do tipo exploratório-descritivo. Amostra constituída por 11 mães primíparas de recém-nascido saudável de termo. Foi utilizado como o método de recolha de dado "*Focus Group*", sendo os discursos das mães sujeitos à análise de conteúdo, categorizando-se as unidades de registo. **Resultados.** Da análise dos dados emergiram três categorias indicadoras das principais dificuldades das mães neste período: a recuperação pós-parto; o cuidar do bebé; a relação conyugal. **Conclusão.** Os resultados obtidos indicam que, apesar da maternidade ser um acontecimento marcado por emoções positivas, as dificuldades que surgem no quotidiano das mães podem interferir negativamente na qualidade da parentalidade. Os enfermeiros têm, neste cenário, um papel determinante na dinamização de intervenções sensíveis a estas necessidades e, simultaneamente, favorecedoras do *empowerment* destas mães e de suas famílias, otimizando deste modo, as trajetórias de desenvolvimento das crianças.

Descritores: adaptação; grupos focais; mães; poder familiar; período pós-parto.

can aggravate preexisting situations and lead to marital conflicts, divorces and maternal depression.⁽³⁾

Throughout this period, the mothers feel weakened and any change in the normal routine or any deviation from what is supposed to happen entails implications for her emotional condition. If mothers are unable to take care of the baby or even breastfeed for any reason, they feel impotent, sad and tearful.^(4,5) This emotional vulnerability is one of the characteristics of the postpartum, particularly in the first weeks.^(4,5) Thus, mothers and fathers need to develop a set of behaviors to face the requirements this new phase imposes, which relate to care for the baby (breastfeeding, hygiene, etc.),^(4,6) or to the new marital life routine⁽⁷⁾ that imply the restructuring of both partners' role in the couple. Hence, the transition process to parenthood demands skills from the couple to jointly balance the tensions and difficulties that emerge.⁽⁸⁾

We conceive this transition to parenthood according to Meleis⁽⁹⁾ Theory of Transitions, which presents

the adjustment model centered on the concept of Transition, understand as the “*passage from one life phase, condition or status to another (...)*”, and which can involve more than one person and is part of a certain context and situation. This model implies a change in the individuals’ needs, requiring the integration of new knowledge and skills, modification of behavior and therefore a (re)definition of roles.

Therefore, Nursing as a discipline plays a preponderant role, as its focus is related to the study of the human responses to the transitions of life, periods of great vulnerability and risk for the individuals’ health. Hence, we believe that the use of the Theory of Transitions strengthens the importance of Nursing care in this transition of life marked by the birth of the first child, concretely in the support for the parental figures to gain competences related to the performance of their parental role. Thus, the study presented in this article, based on the Theory of Transitions, intends to give voice to the primiparous mothers, aiming to identify the main difficulties they feel after the discharge from the maternity during the first six months of the infant’s life. The article integrates results from the first study of a doctoral project in Nursing Science on this theme.

Methods

A level I exploratory-descriptive study was undertaken to answer the following question: “What difficulties do first-time mothers feel after leaving the maternity hospital during the first six months of the baby’s life?” The information was collected through a focus group, a research tool in the form of a structured discussion that involves the sharing of ideas and opinions on the same phenomenon. The research this study is part of obtained a favorable opinion from the Ethics Committee of the Health Sciences Research Unit – Nursing (UICISA: E) at *Escola Superior de Enfermagem de Coimbra* (ESEnfC). The participants were recruited through intentional sampling, in the preparatory courses for parenthood, offered at a maternity, ward of the central region of Portugal. The group consisted of 11 first-time mothers after full-term pregnancies and without obstetric complications. The Focus Group took place in December 2015, in a classroom at

the *Escola Superior de Enfermagem de Coimbra*, Portugal, as this was a space that provided appropriate acoustic and thermal conditions, both for mothers and babies. Previously, the researchers have introduced themselves, as they were not known to the participants, and presented the investigation project, where the main objectives and goals of the study were clarified.

The participants received guarantees of information confidentiality and secrecy. First, authorization was requested to record the focus group, and the mothers were asked to sign the free and informed consent form. They were also asked to complete a questionnaire, aimed at collecting information on theirs and the infants’ sociodemographic characteristics. The focus group session was moderated by the researcher, being the primary author of this paper, with the cooperation of two other researchers who served as observers and registered the field notes. The session started with an introductory question as the general discussion theme to give the participants the opportunity to reflect on their experiences. Then, new questions were gradually introduced, based on the research developed and in accordance with the study objectives, aiming to facilitate the participants’ discourse.

During the session, some non-directive interpellations took place, aiming to engage all participants and guarantee more fluid and continuous discourse and thoughts. The focus group session took one hour and 50 minutes and was closed off when the researchers considered that all information had been exhausted. Then, the mothers’ discourse was heard and fully transcribed simultaneously by two researchers to avoid transcription errors. To guarantee the secrecy of the participants’ identity, their names were replaced by the letter “M” (mother), followed by a number corresponding to each participant’s identification. An expert, who was a researcher with proven experience in qualitative research, validated the transcription. As, during the session, the participants’ opinions were validated either by the moderator or by the observers, returning the transcriptions to the focus group participants was unnecessary.

The data saturation was discussed during a meeting with the primary researcher, the two observers and a guest expert, after fully reading the focus group transcripts. For the data treatment, the content analysis method was chosen, in line with Bardin,⁽¹⁰⁾ using the string tool in SPSS (Statistical Package for Social Science), Word and Excel.

Results

The mothers who were part of this study were aged between 27 and 46 years old, with an

average age of 32 years. To what the marital status is concerned, the large majority of the mothers were married or lived with a fixed partner. Most mothers held a higher education degree. Concerning the infants, the youngest was one month old and the eldest five months old. With regard to the type of feeding, most infants received mother's milk. Three categories emerged from the participants' discourse that constituted the main themes, related to the difficulties the mothers felt in this period: **Postpartum recovery**, **Baby care** and **Marital Relationship**.

Table 1. Analytic categories, subcategories and sub-subcategories

Category	Subcategories	Sub-Subcategories
1 – Postpartum recovery	Postpartum complications	Dealing with fatigue Dealing with pain
	Breastfeeding complications	Cracking nipples Breast engorgement
	Discomfort due to perineal surgical wound	Dealing with perineal pain Regularization of bowel movements
	Self-image	Recovery of physical shape Management of emotions Availability for self-care
2 – Baby care	Breastfeeding	Doubts Effective attachment Identification of baby's signs of satiety
	Hygiene care and comfort	Thermal environment Bathing and skin hydration Care for umbilical cord stump
	Understanding rhythms	Related to sleep and rest Related to baby's crying
	Colic	Pain relief Massage
	Safety	Fear of accidents Choking
	Feeding	Introduction of supplement Introduction of diversified foods
	3 – Marital relationship	Sharing of daily tasks
Restart of sexual activity		Pain and discomfort Fear

In the category **Postpartum recovery** (cf. Table 1), one of the main difficulties the mothers expressed in the context of their recovery were the **postpartum complications**, concretely the pain and fatigue motivated by the energy spent during the birth and postpartum, *huge back pain and fatigue, great physical and psychological fatigue* (M1), *I was very tired too (...) the first weeks were really very complicated* (M11). These complications resulting from the immediate postpartum made the mothers' physical recovery very difficult and, at the same time, limited their capacity to take care of the babies.

The **complications during breastfeeding** were also identified as one of the difficulties the mothers experienced, namely the cracking nipples *I had cracking nipples in both breasts* (M3), the breast engorgement, *although he drank every two hours, the next session I had two stones in my breasts, it was horrible* (M3).

Another subcategory that emerged from the mothers' discourse refers to the **discomfort due to the perineal surgical wound**, concretely the difficulties to cope with the pain in the perineal region. *Episiotomy! I only had two small stitches, but (...), auch! auch! very strong pain* (M3) and difficulties related to the regularization of the intestinal movements, *I thought I'd tear as soon as I pushed* (M10).

The **self-image** was another subcategory that emerged in this study, concretely the difficulty to return to the physical form the women had before the pregnancy. Some mothers mentioned they had started gaining weight early in the pregnancy, but the majority indicated difficulties to lose weight in the postpartum. Therefore, at the physical level, *I faced some difficulty to cope with my self-image (...) after 2 months I was still unable to wear my jeans* (M5), as well as the emotional level, *one of the things that moves us and even the couple's relationships, I felt that I wasn't the person I used to be and that this could disappoint my partner* (M8). The emotions and negative feelings related to their self-image were also present in other mothers' discourse, *it undoubtedly affected*

me emotionally, I felt inferior (...) or, better, I felt belittled (M5), *I was really feeling desperate (...) I only wanted to cry* (M3), *and I also looked in the mirror (...) I feel like, it seems as if I was run over* (M3). The fact that they dedicated themselves almost exclusively to the care for their babies made them have little time available to take care of themselves, *it has been difficult to make time for myself* (M7), *I remember that the first waxing I had was (...) after two months, (...) you can hardly notice, (laughs) I look like a monkey* (M6). In this category, the mothers' discourse revealed difficulties related to the initial phase of motherhood, such as the pain and fatigue associated with the postpartum and breastfeeding complications, as well as the limitations related to the presence of a perineal surgical wound and to their self-image.

The category **Baby care** (cf. Table 1) was very significant in this group of mothers. The difficulties related to **breastfeeding** the baby were highly evident in this category, concretely the doubts related to the breastfeeding. *I had to turn to Nurse X a couple of times (...) mainly during the first weeks at home with breastfeeding doubts* (M5), *I had no idea, if he could regurgitate* (M3), *The first time I went to the health center (...) I went home full of doubts, I left there worse than I entered* (M8). The mothers also mentioned that breastfeeding was very difficult, because the baby did not attach effectively, *he didn't hold onto my breast, I had very small nipples and it was a struggle from the start* (M2), *breastfeeding (...) he didn't attach* (M4), *the nurses put it in the baby's mouth, but nothing!* (M9). The identification of signs that the baby was full was one of the difficulties for the mothers. *I had no idea if my milk would be sufficient or not* (M9), *not being able to give what he needs (...) afraid that I am not taking care well of my child* (M10), *(...) he would not be feeding enough* (M4).

The difficulties related to providing **hygiene care and comfort** to the baby were evidenced in the perception of the thermal environment, *it was difficult to perceive the temperature at home (...) we discovered that he felt cold* (M3), *perceiving*

the right temperature (baby's environment) I also found it hard to perceive (M11). During the baby's bath and skin hydration as well. If we were holding the baby well, sometimes they say to put, sometimes not to put soap on the head (M8), Ah! He gave the first bath, he has very small and fat hands so holding a baby made him feel confused (M1), not putting cream, putting cream, if he has a rash, if he doesn't have a rash, the information we had is that the babies do not need cream and I, on the first day, the nurse at the hospital told me – this little one needs cream, put cream on top. (M8). The care for the umbilical cord stump was another difficulty frequently mentioned in the mothers' discourse, I felt confused by the umbilical cord because it looked different (...) I didn't know if I was cleaning it well, if I had to clean it more (M3), it was the umbilical cord that made me feel most confused, (M1), (...) at night, the umbilical cord was stuck by a little string that looked very strange, we panicked (M11). In short, what the provision of hygiene care and comfort to the baby is concerned, in this group of mothers, difficulties emerged related to maintaining the appropriate environmental temperature for the baby, as well as the fear of handling the baby safely during the bath and care with proper skin hydration. Care for the umbilical cord stump was also identified as a situation that was difficult for the parents to manage.

Understanding the rhythms of the baby also stood out as a difficulty in the mothers' discourse, concretely coping with the sleep and rest, *Sometimes he sleeps, sometimes he doesn't (M1), he sleeps one hour at most (M4), I don't know anymore what it means to sleep a whole night (M3). Understanding the baby's crying was also described as anguishing for the mothers, he was very calm at first but not that much now (M3), he always cried very quietly (...) we end up feeling psychologically tired that stress that wears us out (M10), one of my main difficulties is to put her in her cradle, because she seems to have peaks (...) when I'm going to put her in her cradle she starts crying (M4).*

Another great difficulty the mothers identified were the babies' **colic**, due to the lack of knowledge

on how to act on them, dealing with the colic is very hard, you truly need many strategies, some nights he doesn't sleep, (...) there are moments of despair (...) the colic is hard, isn't it baby? (M5), My main difficulty is the colic, (...) Mariana has plenty of colic and I don't know what to do anymore (M6), she had plenty of colic, it was very difficult (M11). Not knowing how to put relief strategies like massage in practice, I try massages and I've bought I don't know how many books to know how to massage, but (M6), I don't know how they do it (...) she did come calm and quiet (M7).

Daily parental practice requires that the parents keep the baby **safety**, a state of constant alertness to assure their baby's wellbeing. Issues related to the baby's safety were present in some mothers' discourse when they revealed some unrest in the practice of their role, concretely the fear of accidents. *Whether he's sleeping well or not, we're always there watching over him, until today (M3), When he's going to his grandma's home, watch out! Don't leave the baby alone! Don't put him in your bed! He might fall! (M2), I'm very afraid of what might happen to the baby, we're always very alert (M10), and also situations in which the babies suffocate during their sleep and we (...) we're always watching to see if the baby's breathing (...) that's anguishing (...) nobody told us that and about the care we need to take (M7). The difficulties to know how to act on unexpected situations like Choking, what to do if he choked (M4), he really choked a lot. (M2), I'm afraid he'll choke on his soup (M5).*

Equally significant for the mothers, around the age of 4/6 months were the difficulties related to **feeding**. The transition from exclusive lactation to the introduction of solid foods was very hard for some mothers, as well as the replacement and/or complementation of mother's milk by formulas. The difficulties related to the introduction of supplements were manifested in different manners: *they gave it with all feeding sessions there, then I got home and they told me I'll only give it once at night (M2), then the pediatrician: no, that's the triple of what it should be (...) then this little girl's stomach expands and widens and I said: oh my God I'm creating an obese girl (M9). What*

the introduction of diversified foods is concerned, *I found the soups very difficult because I didn't know well how to do it some people said I should start at the age of 4 months others at 5 and you're in doubt (M1), plenty of contradictory information (...) I often felt insecure and confused (M11), as for the way to make the soups and mashes (M5), (...) mashes and soups oh, I feel really confused, I have this flyer to tell me how (...) I just don't know the amounts of vegetables and water for the soup, it's hard! (M9), it was kind of liquid, hm, I don't know, if I noticed something bad, but the baby actually ate it (M9)*. Part of the information received from the health professionals is not always clear and concise and may even leave the mothers not know what interval to respect between the introduction of foods, leading to difficulties at that level.

In summary, in this group of mothers, the daily parental tasks required understanding and solving some issues related to the baby's wellbeing, which caused difficulties and insecurities in the performance of this function. Most of these difficulties were related to care for the baby since, as they were first-time mothers, these situations were new to them. Hence, they mentioned difficulties related to breastfeeding, including doubts and insecurities to identify the baby's satiety and nutritional needs and correct attachment. Other difficulties were related to hygiene care and comfort, concretely in the thermal environment, bathing and hydration and the umbilical cord stump. In addition, there were difficulties to understand the babies' sleep and rest rhythms, to decode the causes of crying and colic. Other difficulties identified concerned safety aspects, which were very important for the mothers and crossed the baby's development cycle. The changes in the baby's eating patterns, particularly the introduction of diversified foods, also caused doubts and concerns.

The final category that emerged from the mothers' discourse was **Marital relationship (cf. Table 1)**, specifically concerning the sharing of daily tasks by both partners and the restart of sexual activities. The mothers in this category mentioned the difficulties related to the **sharing of daily tasks**. Some mothers referred that, at first, marital conflict

increased, sometimes causing discussion, *At first it was very complicated, we started to discuss about everything (...) sometimes about insignificant things (M3), at first A. was really upset with me (M5), sometimes due to the lack of communication and lack of time between the mothers and their partners. The mothers also mentioned that sharing the daily tasks with their partner was not always as balanced as expected Ahm right, the housework, so I do everything, my husband says he doesn't like it and doesn't know how to do it (M2), Ahm sometimes it didn't work that well when he arrived feeling more tired (...) so, but you (mother) didn't do anything? (M9), but he (husband) does not always give up one or two things, I don't know, playing soccer (M6)*. On the other hand, one of the mothers had her partner's active participation in daily tasks, *since I've come home he practically does everything (...) sometimes he prefers to do the housework (M9)*.

The **restart of sexual activity** was one of the difficulties the mothers strongly highlighted, often associated with pain and discomfort, particularly in those situations in which the delivery involved episiotomy, *that's still very complicated, I feel some looseness, not everything has returned to its place, there (M3), ah! I had a cesarean section, so it's still very early, this zone here is still very painful (M7), Because I feel great pain (...) I used some ova to help, but nevertheless it's very difficult. (M10), ah! It's still uncomfortable and I don't know. I am waiting for the day it stops, but it still is for now (M9), and still because of my self-esteem perhaps, I feel that I don't have the same desire, his desire is stronger than mine. (M6)*. The fear also created difficulties in this group of mothers to restart the sexual intimacy, *return to the relationship, ah! I can't say it has been that easy, (...) I didn't feel very well yet (...) that has to go little by little (M6), the restart of the sexual activity was even more complicated (...) it's a big deal (M10), ah! He was really anxious for the six weeks to arrive and I wasn't. Until today, Zé Pedro is five months and a half and it's still complicated (M9), no way, because I don't feel prepared for this yet (M2) and I'm scared to hurt myself, because I totally feel like a virgin (M1)*. These mothers' discourse revealed that the

great barrier to experience the couple's intimacy is essentially related to the fear of the unknown, how things are going to happen, motivated in our belief by a lack of knowledge.

Discussion

Motherhood and fatherhood are events that modify the couple's life, particularly the mother's, who usually assumes most parental responsibilities in care for the child. These changes are even more demanding for first-time mothers.⁽¹¹⁾ Being a "Mother" is not an easy task, it entails a whole adaptation to a new lifecycle that can be more or less stressful, that can contain more or less difficulties that will dominate the mother's daily life and, consequently, change their entire routine. The discourse of the mothers who participated in this study strengthens this experience of motherhood as a transition, mirroring difficulties that conditioned their life as mothers, women and wives/partners. In this study, the difficulties related to "Baby care" were highly evident in this group of mothers. The difficulties with the baby's daily care routines were highlighted, concretely those related to the doubts and insecurities about breastfeeding, hygiene care and comfort, namely the care for the umbilical cord stump, maintaining a thermal environment appropriate to the baby's needs and bathing and skin hydration.

During the first week of the infant's life, the difficulties related to care for the umbilical cord stump were particularly clear, as this is a new situation that mothers had never had contact with, arousing feelings of incapacity and sadness because they did not know how to take care and because they might be putting their baby's health at risk.⁽¹²⁾

Some of the difficulties that were demonstrated in our study were also present in Strapasson and Nedel's⁽¹³⁾ study about the meaning of motherhood. The authors⁽¹³⁾ found that "breastfeeding has been one of the main difficulties the participants found in the immediate postpartum due to social, cultural and esthetic issues" (p. 524). Difficulties were also mentioned to understanding the baby's rhythms, concretely regarding sleep and crying. The baby's colic was identified as a source of great anguish

for these mothers, concretely because they did not know pain relief strategies and when performing massage. The difficulties related to the care for the baby the mothers mentioned are frequently referred in the literature.^(4,6,14,15) In a study by Resta⁽¹²⁾ that was intended to identify the implications of motherhood in adolescence, it was also verified that most of the mothers' difficulties and insecurities were related to care for the infant, particularly for the umbilical cord stump, breastfeeding, bathing and the baby's sleep. Another study showed similar results, concretely difficulties to deal with the baby's crying,⁽¹⁶⁾ which caused feelings of impotence and frustration in first-time mothers.⁽¹³⁾

The aspects related to the baby's safety, how to act, how to protect in case of an accident, were also present in some mothers' discourse in our study. Similar difficulties were observed in Castillo-Espitia and Ocampo-González's⁽¹⁷⁾ study about the mothers' experiences in care for their premature infants during the first night after discharge. The mothers' main anguish was the fear that the baby would stop breathing. With the help of small lanterns or even using the light of their mobile phone, these mothers spent the night monitoring the baby's respiratory movements. As the baby grew and developed, other difficulties emerged in the mothers' routine, specifically when to start diversified food, which revealed to be complex task that raised doubts. This same aspect was identified in a study by Elliott,⁽¹⁸⁾ in a sociological approach to women's return to work after motherhood. The category "postpartum recovery" also emerged from the mothers' discourse with a very strong impact. In an initial phase, the difficulties related to the physical or breastfeeding complications were also emphasized more strongly, including fatigue, pain, cracking nipples and breast engorgement. The results of a quantitative study by Munhoz, Schmdt and Fontes⁽⁵⁾ support these results. The presence of the perineal surgical wound was considered one of the main sources of discomfort the woman felt during the postpartum, not only due to the discomfort the pain provoked, but also to the limited mobility it imposes, conditioning their physiological readiness to perform other types of activities.^(19,20) All of these complications made the mothers' physical recovery and ability to take care of the babies more difficult. The husbands' help was

fundamental and represented an important source of support in this phase.⁽¹¹⁾

The difficulties related to the self-image also emerged from the mothers' discourse very strongly. The mothers described the bodily changes associated with motherhood as a discontinuity between the person they were and the person they became after giving birth. Despite the perception that the changes in the maternal body result from the whole pregnancy-postpartum process, they nevertheless provoked some dissatisfaction and even some annoyance resulting from their self-image. They found themselves different as women and minimized in a society where the culture of beauty and the perfect body is predominant. Other studies strengthen these results when they found that the bodily changes associated with motherhood provoked discontent and dissatisfaction in the mothers, motivated by the lack of availability for self-care.^(2,11) In the category "Marital relationship", the mothers' discourse revealed difficulties related to the sharing of daily tasks and the restart of sexual activity. Although sharing daily tasks between the couple is a reality in most families today, in these mothers' discourse reports contrary to this sharing emerged, some with "macho" characteristics, sometimes motivating discussions in the couple. Other studies⁽¹⁴⁾ also identified the mothers as the main responsible for the housework and child care, motivating greater fatigue and limited willingness to restart their sexual activity. In a systematic literature review,⁽⁸⁾ it was also demonstrated that the couples tend to become more traditional in the division of tasks after a child is born, thus motivating the conflict between both. We know today that the couple's sexual activity is an important element of the marital relationship and that, during the time after birth, it is common for the woman to be less motivated for sexual relationships, for reasons of physical recovery, hormonal reasons and fatigue. Nevertheless, if the father cooperates in the daily routines, the mother will obviously be less tired and may return to her sexual activity more easily. The couple's sexual/affective relationship is inevitably influenced by the baby's birth, which can entail conflicts.⁽²⁾ Therefore, it is important for them to be aware that they need to dialogue, share difficulties and mutual anguish in order to find strategies of mutual understanding and cooperation.

In conclusion, according to the results of our study, we can affirm that this group of mothers report many difficulties during the first six months of motherhood. The difficulties related to postpartum and breastfeeding complications stood out, the recovery of their physical shape and the limited availability to take care of their self-image. The difficulties related to baby care were also very significant in our study, concretely those related to feeding, the baby's hygiene and comfort and colic. Difficulties related to safety, feeding and understanding the baby's rhythms were also strongly present in the mothers' discourse. The couple's relationship also went "back and forth" according to these mothers, particularly concerning the sharing of daily tasks, marked by the partners' hardly cooperative attitudes, and also concerning the restart of sexual activities, essentially marked by feelings of fear and insecurity. In fact, dealing with all of these requirements, particularly imposed on the mother when she is responsible for taking care of a child, can hinder her capacity to answer effectively and simultaneously make her more vulnerable to physical or emotional disorders, which interfere in hers and the baby's wellbeing. In that sense, the studies by Cardoso, Silva and Marín⁽²¹⁾ reveal that, despite the existence of preparatory courses for birth and parenthood during pregnancy, mothers and fathers still need to integrate new knowledge and skills to guarantee the care for their child as (s)he grows and develops. The mothers and fathers' learning needs are not concentrated within a specific period but distributed over time. Therefore, extended interventions over time are a need to promote parenthood.⁽²¹⁾

The results of our study strengthens this idea, about the need for extended interventions, as they revealed a set of difficulties the first-time mothers expressed, which can raise barriers for the healthy development of motherhood. With a view to a salutogenic perspective of the motherhood experience, investments are needed in these mothers' empowerment, in their knowledge, skills, motivation, so that they feel more autonomous and confident in the course of their motherhood. The nurses' effective intervention in this area can change this scenario by creating and promoting parental intervention programs that are sensitive to all of these difficulties, capable of providing these mothers with

knowledge, capacities, attitudes and interpersonal skills that promote parental efficacy and contribute to the promotion of healthy parenthood.

As a limitation in this study, we should mention the intentional sampling, which does not permit generalizations, as well as the fact that this group of mothers possesses specific characteristics that are not representative of the general population. Therefore, for the sake of future research, we suggest comparative studies between first-time and multiparous mothers, studies that also include the fathers' voice, as well as other types of families, such as single-parent and homosexual families, among others.

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Preparation for Motherhood during Pregnancy: a Concept Analysis

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Preparation for motherhood during Pregnancy: a Concept Analysis

Objective. This work sought to identify the attributes of the concept of preparation for motherhood during pregnancy. **Methods.** Concept analysis with the method by Walker and Avant, which conducted a literature review in databases and other sources. Inclusion criteria were defined and a database was created with the articles included for the analysis. The information was integrated, responding to the eight steps proposed in the method. **Results.** The concept of preparation for motherhood during pregnancy is defined as an intermediate process of active and conscious participation defined by the cultural, social, and historical contexts, which favor lifestyle changes to optimize health and whose attributes are classified into physical and psychological preparation. **Conclusion.** The attributes identified contribute to understanding the preparation for motherhood during gestation as a multidimensional concept. These results could be used to design care actions to evaluate pregnant women and prescribe nursing care beyond purely biomedical issues.

Descriptors: pregnancy; maternal-child nursing; nursing theory; maternal behavior.

Preparación para la maternidad durante la gestación: un análisis de concepto

Objetivo. Identificar los atributos del concepto de preparación para la maternidad durante la gestación. **Métodos.** Análisis de concepto con el método de Walker y Avant en el que se realizó una revisión de la literatura en bases de datos y otras fuentes. Se definieron criterios de inclusión y se creó una base de datos con los artículos incluidos para el análisis. Se integró la información dando respuesta a los ocho propuestos en el método. **Resultados.** El concepto de preparación para la maternidad durante la gestación se define como un proceso intermedio de participación activa y consciente delimitado por el contexto cultural, social e histórico de la mujer, que favorece cambios en el estilo de vida para optimizar la salud y cuyos atributos se clasifican en preparación física y psicológica. **Conclusión.** Los atributos identificados contribuyen a la comprensión de

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la preparación para la maternidad durante la gestación como un concepto multidimensional. Estos resultados podrían ser empleados para el diseño de acciones de cuidado tanto para la valoración de la gestante como para la prescripción de cuidados de enfermería más allá de los asuntos puramente biomédicos.

Descriptor: embarazo; enfermería materno-infantil; teoría de enfermería; conducta materna.

Preparação para a maternidade durante a gestação: uma análise de conceito

Objetivo. Identificar os atributos do conceito de preparação para a maternidade durante a gestação.

Métodos. Análise de conceito com o método de Walker e Avant no que se realizou uma revisão da literatura em bases de dados e outras fontes. Se definiram critérios de inclusão e se criou uma base de dados

Introduction

Making the decision of becoming a mother can be made through a conscious and reflexive planning process⁽¹⁾ or through acceptance within a context of an unplanned or unwanted gestation;⁽²⁾ given that becoming a mother is one of the principal transitions in a woman's life,⁽³⁾ which brings along the responsibility of caring for and maintaining life. One of the most recent theories that explain motherhood as a process is that proposed by Ramona Mercer, denominated "Becoming a Mother".⁽⁴⁾ The author indicates that women transit through four stages: commitment, attachment and preparation, acquaintance, learning and physical restoration, moving toward a new normal and, finally, achievement of the maternal identity. In the first stage, women use two strategies: prepare and deal with reality, but no conceptual development is done on the meaning of preparing and no propositions are proposed between this and other concepts of the theory.⁽⁵⁾

Preparation for motherhood starts during the gestation period and this concept gains importance, given that in the experiences and perceptions of pregnant women, motherhood

com os artigos incluídos para a análise. Se integrou a informação dando resposta aos oito propostos no método. **Resultados.** O conceito de preparação para a maternidade durante a gestação se define como um processo intermédio de participação ativa e consciente delimitado pelo contexto cultural, social e histórico da mulher, que favorece mudanças no estilo de vida para otimizar a saúde e cujos atributos se classificam em preparação física e psicológica. **Conclusão.** Os atributos identificados contribuem à compreensão da preparação para a maternidade durante a gestação como um conceito multidimensional. Estes resultados poderiam ser empregados para o desenho de ações de cuidado tanto para a valorização da gestante como para a prescrição de cuidados de enfermagem mais além dos assuntos puramente biomédicos.

Descriptor: gravidez; enfermagem materno-infantil; teorias de enfermería; comportamento materno.

arrives without proper preparation;⁽⁶⁾ whether it is because of a gap between that informed and that experienced⁽⁷⁾ or because the information provided by the professionals does not comply with the real expectations of motherhood as a way of life and lifestyle. Although the literature review evidences a conceptual analysis of the preparation for motherhood, this extends to the first year of the child's life, it only contemplates the preparation within the context of a wanted and planned gestation and in the presence of being in a relationship. These elements do not favor the application of the concept specifically in scenarios in which the pregnancy was unplanned or unwanted and in the absence of a significant companion.

Likewise, the scientific literature on the preparation for motherhood is quite limited to the gestation period,^(1,10) is inconclusive in the face of the constituent elements⁽⁹⁾, and much of it is oriented at the preparation for delivery⁽¹¹⁻¹⁴⁾ and although the preparation can be understood as a continuum even after the gestation,^(10,15) the requisites, resources, and results can be different during this period.

Additionally, for many Latin American countries, prenatal care focuses specially on

the physiological changes and management of morbid events, leaving aside the psychological and social changes experienced by women during gestation,⁽¹⁶⁾ ignoring that this stage represents a bigger challenge for the woman's psychological and social function through development tasks that include, for example, relating the fetus as part of her and then seeing herself as a mother.⁽¹⁷⁾ Hence, it is indispensable to not only distinguish its use from scientific knowledge within the nursing discipline and specifically in the field of maternal-perinatal nursing, but also identifying those attributes that comprise the concept and which permit providing comprehension that facilitates development and validation of an instrument that has repercussions in the practice, reorientation of prenatal care, and prescription of nursing interventions that permit satisfying the needs and expectations of professional support the pregnant women require.⁽¹⁸⁾ The following presents the concept analysis of preparation for motherhood during gestation whose aim is to identify its attributes during this stage of the process.

Methodology

Concept analysis: used the methodology proposed by Walker and Avant,⁽¹⁹⁾ which examines the structure and function of the concept, besides defining its possibilities of use. A search was conducted for articles (original, reviews, editorials) in the scientific literature through Lilacs/BIREME, Pubmed/Medline, EMBASE, Science Direct, Ovid, EBSCO, CUIDEN, and Psycinfo databases, using as search strategy in Spanish (“preparation” AND (“motherhood” OR “gestation”)), as words because these do not exist as MeSH terms and in English (“preparation” OR “preparedness”) AND (“motherhood” OR “motherhood” OR “pregnancy”)), not as MeSH terms, except for “pregnancy”. In addition, the search criteria defined words in abstract/title, articles in Spanish, English, or Portuguese available in complete text. No year of publication limit was applied. A fundamental criterion was defined to include articles for the concept analysis whose theme of the preparation for motherhood during gestation had been central

of the article, independent of the methodology used in the case of the original articles.

A manual search was also performed, which included textbooks on motherhood to identify if the concept of preparation appeared as constituent element of this process in the theoretical explanation offered by the authors. Furthermore, the work revised the bibliographies of the articles included to identify pertinent articles for analysis. Lastly, the study revised the definitions of the meaning of preparation in Spanish in the dictionaries from the Spanish Royal Academy and for English in the Oxford dictionary. A database was designed to consolidate the information from the articles and from other sources that included the following variables: title of the article or source, authors, year of publication, publication journal, volume and number in case of articles, editorial or web page; country of publication, type of article, results or principal discussions around the concept selected and step of the methodology of the concept analysis to which the results contributed.

Integration of the information from the literature review was accomplished through the steps proposed for the concept analysis by Walker and Avant:⁽¹⁹⁾ identify the uses of the concept, determine the attributes, identify model cases, limit and contrary, identify antecedents and consequences of the concept, and define the empirical references. Figure 1 shows the specific procedure in the collection of sources of information.

Results

Definitions and uses of the concept

Definitions from dictionaries

Preparation is defined as the action and effect of being prepared. It has its etymological origins in the Latin word *praeparatio* composed of the prefix *prae* that means before, the verb *parare* that means to do, make or leave ready, and the suffix *tio* that refers to the action and effect.⁽²⁰⁾ The Oxford Living Dictionaries for Spanish⁽²¹⁾ defines

that preparation is the disposition or arrangement of the necessary things to carry out something or for a given purpose. Likewise, it states that it may be understood as the set of teachings, advice,

and practices with which one prepares another to achieve the physical or psychological conditions necessary to perform a future action or confront an unpleasant or negative situation.

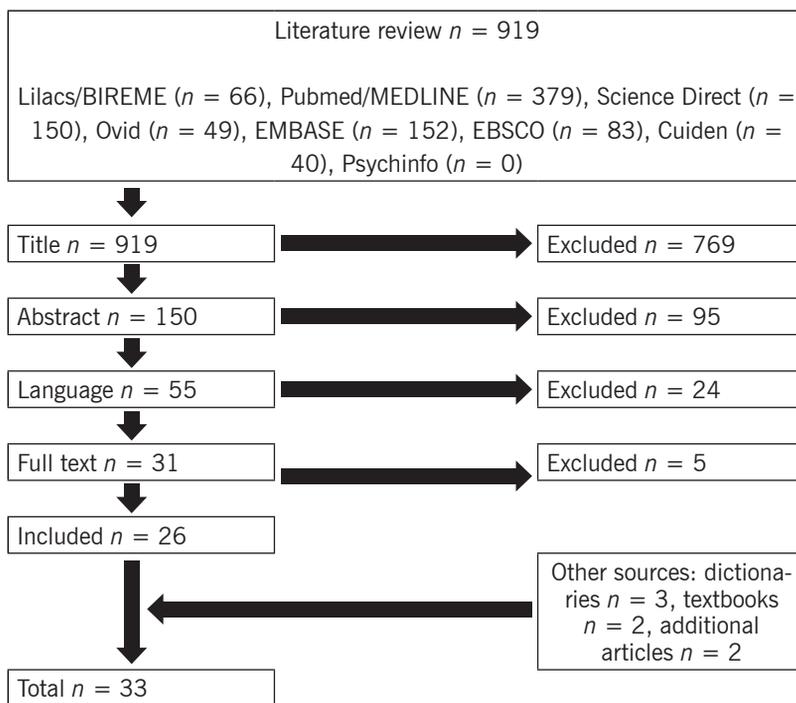


Figure 1. Flow diagram of sources included.

Uses of the concept in literature

For Meleis,⁽³⁾ preparation and knowledge are facilitators of transitions. Anticipated preparation facilitates the transition experience, while the lack of preparation is an inhibitor. The author adds that knowledge is inherent to preparation. Lederman and Weis⁽²²⁾ indicate that preparation is a component of identifying with a motherhood role. The authors argue that preparing for the new role occurs through two paths: fantasizing and dreaming. Fantasizing implies thinking about the characteristics desired as a mother and anticipating the life changes necessary in the future. Dreaming relates to reliving childhood, trusting maternal

skills, and dreaming with the child's health. Preparation through these two paths takes place by taking classes and pertinent reading material; it also implies confronting fears and anxieties, talking to other women, and observing how other women execute the tasks. For Pérez,⁽²³⁾ preparation for a motherhood role implies active, positive, and conscious participation in the gestation, delivery, and puerperium processes to favor the relationships of the neonate and the family unit with repercussions on the newborn's proper biological, psychological, and social development.

Preparation is one of the four steps for a motherhood role identified in the study by Underwood⁽²⁴⁾

with Afro-American mothers. It indicates that preparation is learnt in the family of origin, it is a practice started during childhood through caring for siblings or younger relatives and is begun by the older female relatives. In their concept analysis on the preparation for a parenthood role, Spiteri *et al.*,⁽⁹⁾ do not define the concept, but propose that being fathers and mothers requires preparation from various perspectives. The state that preparation has always focused on labor and on delivery and propose that individuals can choose to make changes in their lifestyles and this includes changes to optimize their health, like eating healthy, doing exercise, and eliminating cigarette smoking and consumption of alcohol. In consonance, Smith⁽²⁵⁾ established that the preparation for maternity during gestation is a symbiotic process that implies the woman's intimate connection with significant others and facilitates the emergence of a new role as mother.

Riedmann⁽¹⁾ describes the preparation for maternity as a process consisting of a series of steps that present unique challenges and dilemmas. These steps include the decision of becoming parents or discovering gestation within an unplanned scenario, elections related to the mode of delivery, the impact of the new maternity or paternity, and the issues of childcare that can be social, cultural, and spiritual. Likewise, Hernández⁽²⁶⁾ proposes that gestation is a woman's preparation process and that it is achieved through enlistment for birth and some appropriate eating practices. Mansfield⁽²⁷⁾ discusses two important aspects required during the preparation for maternity: material and personal preparation. This involves the organization of oneself to become a person receptive to changes and being ready financially for this responsibility. Among the preparation material, consumption rituals, as exposed by Afflerback *et al.*,⁽²⁸⁾ help the woman feel prepared, adding that preparation is for the child and that this includes patterns commonly shared and highly symbolic practices that involve consumption.

Related concepts

The concept most-often related to preparation for maternity has been that of preparation for

delivery. For Lederman and Weis,⁽²²⁾ preparation for delivery is a preparation for stress. It implies reaching an adequate mental and emotional state and a physical preparation through concrete actions and imaginary trials. For Tostes⁽¹¹⁾ and Hollins,⁽⁷⁾ it is comparable to the preparation for maternity in the sense that the sensation of being prepared is insufficient. Additionally, it has been considered that the preparation for delivery implies identifying the institution for the delivery care,⁽²⁹⁾ knowing the warning signs,⁽¹⁰⁾ saving some money, and preparing essential elements for the delivery.⁽¹⁴⁾

Antecedents of the concept of preparation for maternity during gestation

Preparation for maternity begins with the decision to become a pregnant woman or after discovering an unplanned or unwanted gestation for the moment.⁽¹⁾ Educational activities and prenatal controls also become an antecedent of the preparation for maternity. Although for some women these activities are not sufficient,⁽⁸⁾ others consider that prenatal classes prepared them well for labor, delivery, and some aspects of maternity,⁽³⁰⁾ but not all, like – for example – caring for the newborn.^(15,31) In spite of this situation, women in the study by Ho and Holroyd⁽⁸⁾ considered that the prenatal period is the ideal to get prepared on matters related to maternity. McVeigh⁽³⁰⁾ proposes that anticipated preparation for maternity is required in its own social environment and that society needs to actively prepare its youth for one of the most demanding social roles, as shown by Thomas and Bhugra⁽³²⁾ who identified that young people recognized a need to have programs for preparation for maternity to learn to solve problems on this issue before assuming their role as parents.

Consequences of the concept of preparation for maternity during gestation

Women who are well-prepared for maternity tend to have solved their conflicts regarding gestation and the imminent maternity and crystallize a new

role for themselves that can be expressed as a need to bond to their child.⁽²²⁾ Further, George⁽⁶⁾ proposes that the lack of preparation can cause an overwhelming sense of responsibility, unclear expectations of the role, and deficit of knowledge. Women who are not prepared to go through maternity may have difficulties assuming the maternal role, besides feeling incapable of caring for the child, of not having the resources to offer proper care, or having the sensation of lack of experience in the role.⁽³³⁾ Lack of preparation may also contribute to the emergence of depressive and anxious symptoms⁽³⁴⁾ with what consequently could become post-partum depression.^(35,36)

Definition of the concept

Preparation for motherhood during pregnancy is defined as an intermediate process of active, conscious, and positive participation that favors the transition toward motherhood and that it is defined by the social, historical, and cultural contexts. In this process, each woman can visualize herself as a mother and anticipate the necessary life changes, solve conflicts with herself and with significant others, and generate lifestyle changes that permit optimizing health by acquiring knowledge through the search for information, attendance to educational activities, prenatal controls, and the presence and support from significant others that can be reinforced by the availability of financial resources.

Attributes of the concept

The following are considered the attributes that permit accounting for the concept of preparation for maternity during gestation:

Psychological preparation

- It is an intermediate process of active and conscious participation.^(1,3, 23,24,26,27)
- It is defined by the historical, social, and cultural contexts.^(9,22,30)
- It is a stage that favors resolution of personal conflicts and conflicts with significant others.^(22,23,25)

- It is determined by the presence and support from other significant individuals.^(22,25,28)
- It is a period that anticipates the characteristics desired as a mother and the necessary life changes for it.⁽²²⁾

Physical preparation

- Implies the search for information about gestation, delivery, caring for and upbringing the child.^(3,22-24)
- Demand availability of resources, among them, financial.^(9,27,28)
- Requires lifestyle changes to optimize health.^(9,26)
- Reinforced with attendance to educational activities and to prenatal controls.^(8, 15 30-32)
- Includes preparation for labor and delivery.^(22,26)

The following describe the model, limit, and contrary cases from the personal and professional experience in caring for pregnant women. The names were changed to protect the identity of the cases.

Model case

Carol is a 25-year-old woman, living in common-law manner with her partner and not long ago discovered she was pregnant; although she had not planned it, being a mother was part of her life project. Ever since she found out, she began changing her eating practices and started to exercise three times per week. She began her prenatal controls, participates in preparation courses for delivery, and has sought information about the gestation process, delivery, puerperium, and caring for the child. Her partner accompanies her to all the activities related to her gestation process. She constantly sees herself as a mother and, together with her partner, has started a special savings fund to have resources that favor purchasing the necessary elements to receive the newborn and cover her needs.

Limit case

Sandy is a 35-year-old woman in her second marriage. Currently, she has two children from her

first marriage and lives in a neighborhood where most women are homemakers. Since she got married, she wanted to have a child, but waited one year to do it. Not long ago, she discovered she was pregnant and her happiness could not have been greater. She began her prenatal controls, but could not attend the preparation activities for delivery and motherhood because of a shortage

of time. Her husband accompanies her to most of the prenatal controls. Sometimes, she considers she should change some practices as a mother to avoid repeating them with her new child, but thinks it is quite difficult. Although she has some savings with her husband, she always thinks that soon there will be three children to support and that is costly.

Preparation for motherhood during pregnancy		
Antecedents	Attributes	Consequences
<ul style="list-style-type: none"> • Caring for others. • Planned and/or wanted gestation or not. • Active participation in educational activities. 	<p>Psychological preparation</p> <ul style="list-style-type: none"> • Active, conscious, and positive participation. • Defined by the historical, social, and cultural contexts. • Conflict resolution. • Presence and support from other significant people. • Anticipation. <p>Physical preparation</p> <ul style="list-style-type: none"> • Search for information and acquisition of knowledge. • Availability of financial resources. • Lifestyle changes to optimize health. • Preparation for labor and delivery. 	<ul style="list-style-type: none"> • Conflict resolution. • Crystallization of the role. • Responsibility. • Knowledge. • Trust. • Self-efficacy. • Security.
<p>Definition</p> <p>Preparation for motherhood during pregnancy is defined as an intermediate process of active, conscious, and positive participation that favors the transition toward motherhood and which is defined by the social, historical, and cultural contexts; within this process, each woman can visualize herself as mother and anticipate the necessary life changes, solve conflicts with her and with significant others; and generate lifestyle changes that permit optimizing health; via the acquisition of knowledge through the search for information, attendance to educational activities, prenatal controls, and the presence and support from significant others that can be reinforced by the availability of financial resources.</p>		

Figure 2. Conceptual model of the preparation for motherhood during pregnancy

Contrary case

Alba is a 21-year-old woman who got pregnant by her boyfriend with whom she has been involved for two years. She is very concerned because in her house they expected her to be married before getting pregnant, besides because her boyfriend has to go off to the army for at least two years; she decided not

to tell him or anyone else. This decision keeps her from entering prenatal control; due to her worry, she does not eat because she is not working or studying. After some days, she decided to tell her closest friend and adds that she does not want to be a mother, not under these circumstances and not alone, she feels very insecure and scared, thus, with her friend's help she decided to give up this new being for adoption.

Empirical references

Table 1 displays different instruments identified that measure in tangential and limited manner some attributes of the preparation for maternity.

Discussion

The aim of this concept analysis was to provide a clear and comprehensive definition of preparation for maternity during gestation. In spite of having identified a varied amount of attributes, all converged in particular manner to understand the complexity and multidimensionality of preparation during the gestation period to becoming a mother.

Although the literature review was exhaustive, the production of knowledge is scarce on the preparation for maternity during the gestation period and the studies included in this concept analysis were few and some of them were conducted with a qualitative approach in which the preparation was not consistently developed as category, subcategory, theme, or pattern. Additionally, the quantitative studies did not measure preparation as a concept, but that evaluated was a program configured as preparation to accomplish some outcomes, specially maternal and perinatal. Many of the quantitative studies aimed more exclusively to measuring the preparation for the delivery.

Table 1. Empirical references of the concept of preparation for maternity during gestation

Authors	Year	Empirical reference	Measurement scale
Ruiz <i>et al.</i> ⁽³⁷⁾	2006	Physical preparation: Lifestyle changes to optimize health.	Care practices women carried out with themselves and with the expected child during the prenatal stage
Lederman and Weis ⁽²²⁾	1979	Psychological preparation: Anticipation.	Prenatal Self-evaluation Questionnaire
Lin <i>et al.</i> ⁽³⁸⁾	2009	Physical preparation: Preparation for labor and delivery	Prenatal Self-Evaluation Questionnaire short-form
Coleman <i>et al.</i> ⁽³⁹⁾	1999	Psychological preparation: Anticipation.	Prenatal Maternal Expectations Scale
Lippincot ⁽⁴⁰⁾	1980	Psychological preparation: Anticipation.	Identification with the Mothering Role

The few revisions included, all thematic, and the book chapters make a brief description of preparation as an additional step for the transition to maternity and involve aspects that go beyond the gestation period, suggesting the preparation as a *continuum*, but not managing to define what corresponds to the gestation stage. Although the prior statements can be considered limitations in this concept analysis, it is also true that the sources included and reviewed permitted perceiving two big components of this concept. A first component is psychological preparation that seeks to place women in two essential scenarios; the first, within an imaginary scenario of the mothers they can become⁽²⁸⁾ and the second, the retrospective scenario of what their perception was about their mothering role in the

upbringing.⁽²²⁾ Both situations pose a race toward the equilibrium between that received and what will be provided and offers a unique opportunity to the woman to rethink and reorganize aspects of her past and future life with her and with her close and significant beings.

The second component is the physical preparation that favors in future mothers behavioral changes and habits for their health and that of the child expected⁽³⁷⁾ through knowledge mediated by the information consulted or received through participation in support groups, group education activities, or attendance to prenatal controls.⁽³²⁾ Additionally, through the availability of financial resources that favor the acquisition of care giving elements and the adaptation of spaces⁽⁹⁾

and the preparation for labor and delivery.⁽²²⁾ In other conceptual developments, preparation for maternity has other legal, spiritual, and historical dimensions;⁽⁹⁾ but is placed within a context reduced to the presence of a relationship between a man and a woman, with a planned pregnancy and extended to the child's first year of life. This definition generates restrictions upon understanding the concept in practice and in the daily lives of many women who are not in a relationship and who have an unplanned pregnancy. Furthermore, the moments in the transition to maternity, as exposed by Mercer⁽⁴⁾, differ in the activities that consolidate this role. Hence, managing to separate the constituent elements of the preparation for maternity during gestation from the preparation that may occur in other stages, like postpartum or the child's first year of life, is fundamental because – currently – programs for the care of women who will be mothers focus mostly on the prenatal period. In consonance, this concept analysis provides a clear conceptual framework that can be transferred to practice by constructing assessment items in the nursing prenatal consultations. It also offers the design of scales for research on the preparation as a multidimensional process or application in maternal nursing practice, as an evaluation element of the current conditions of a woman's preparation for her transition to maternity.

At the same time, it provides huge intervention possibilities by nurses. Mercer⁽⁴¹⁾ had already identified some of these, but this conceptual development favors more detailed comprehension of those essential elements that must be kept in mind to promote, strengthen, and intervene in pregnant women around preparation as a vehicle to achieve optimal results in physical and psychological sufficiency and, thus, confront the care and protection of a new being and their relation with it and the other people who make up their life circle. The evidence incorporated in this concept analysis permits proposing that it is during gestation when the initial and most-transcendental preparations must be carried out and to assume maternity as a new way of life. Mercer⁽⁴⁾ indicates that preparation during the

antenatal period has important repercussions in the lives of the woman and child in subsequent phases of the process of becoming a mother; thus and in sum, it did not manage to contribute theoretically to understanding the preparation within its first stage toward the process of becoming a mother.

In the theory by Mercer,⁽⁴⁾ preparation appears as a word that accompanies another two: attachment and commitment; it is conceived that the re-conceptualization task will offer elements that would favor understanding these words as concepts, their propositions, and the relations among these and the other concepts of the theory, as proposed by Fawcett.⁽⁴²⁾ The case is that this has not happened to date, nor do the different articles included show a connection of their reflections with the theory proposed by Mercer. Consequently, this concept analysis contributes to clarifying theoretically what is understood as preparation for motherhood during gestation, which matches the first stage proposed by Mercer⁽⁴⁾ that according to her new theory occurs during this period. This work can be the starting point for research related to the design of instruments, with correlational studies and all those that permit validating, refuting, rethinking, and transforming the propositions proposed herein; especially, studies with qualitative approach where the participants are women during their gestation period, not postpartum women with retrospective interviews.

Finally, some limitations exist in this analysis. First, only the principal researcher reviewed the articles, which is why this situation is probably considered as selection and information bias. Second, exclusion of articles in languages different from English, Spanish, or Portuguese can contribute to selection bias, given because this does not permit understanding a phenomenon of universal nature in its full cultural spectrum. Third, limited clarity in many of the articles on preparation hindered somewhat the abstraction and elaboration of the attributes and the definition of the concept. It may be concluded that nursing professionals dedicated to maternal care meet numerous pregnant women daily and focus their

assessment and interventions on the physical changes derived from the physiological process of gestation. The results of this concept analysis will help to broaden the corpus of theoretical and practical knowledge around the preparation for maternity during this gestation period, as well as to provide a path to broaden the care actions within the evaluation and prescription beyond focusing on purely biomedical issues.

According to the findings, as much as the limitations, there are various suggestions for future research, like, for example, identify the behavioral patterns, perceptions, and practices around the meanings of the preparation for maternity during gestation in different contexts and different groups of women. Likewise, quantitative studies need enhancement regarding correlational and causal techniques that permit explaining the preparation as an outcome and its relation to results in the short, mid, and long term. Finally, this work favors the elaboration and validation of instruments that permit measuring this concept that contribute not only to the theory and to the research, but also to the nursing practice.

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Analysis of the concept of powerlessness in individuals with stroke

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Analysis of the concept of powerlessness in individuals with stroke

Objective: To identify and analyze the concept of the powerlessness in individuals with stroke, according to the NANDA-I Taxonomy. **Methods.** Concept analysis from online access of four databases using the descriptors: impotence; helplessness, learned; Stroke, depression in languages: Portuguese, English and Spanish. **Results.** The critical attributes of the feeling of powerlessness are: fragility, helplessness, lack of control, and power to achieve the proposed results for recovery and adaptation. Eleven new antecedents were found. It is recommended to reformulate three antecedents present in the taxonomy. Fourteen consequent were found. It is suggested to amend three consequential from the review. **Conclusion.** With the analysis, a more complete concept of the powerlessness was elaborated allowing clarifying the critical attributes that, in turn, will help the rehabilitating nurse to recognize the

signs and symptoms and to strengthen mechanisms of tolerance and resistance to stress.

Descriptors: helplessness, learned; stroke; standardized nursing terminology; concept formation; nursing diagnosis.

Análisis del concepto de Sentimiento de impotencia en individuos con accidente cerebrovascular

Objetivo. Analizar el concepto de sentimiento de impotencia en individuos con accidente cerebrovascular, según la Taxonomía de NANDA-I. **Métodos.** Análisis de concepto a partir del acceso on-line a cuatro bases de datos utilizando los descriptores: *impotencia; desamparo aprendido; accidente vascular cerebral, depresión* en los idiomas portugués, inglés y español. **Resultados.** Los atributos críticos del sentimiento de impotencia son: fragilidad, desamparo, falta de control y el no poder

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alcanzar los resultados propuestos para la recuperación y adaptación. Se encontraron once nuevos antecedentes. Se recomienda reformular tres antecedentes presentes en la taxonomía. Se evidenciaron 14 consecuencias y se sugiere alterar tres a partir de la revisión. **Conclusión.** Con este análisis se elaboró un concepto más completo del sentimiento de impotencia, permitiendo clarificar los atributos críticos que, a su vez, ayudará al enfermero rehabilitador a reconocer las señales y síntomas, como también a fortalecer los mecanismos de tolerancia y enfrentamiento al estrés.

Descriptor: desamparo adquirido; accidente cerebrovascular; terminología normalizada de enfermería; formación de concepto; diagnóstico de enfermería

Análise do conceito de Sentimento de impotência em indivíduos com acidente vascular encefálico

Objetivo. Identificar e analisar o conceito do sentimento de impotência em indivíduos com acidente vascular

Introduction

In this study, the objective was to analyze the concept, defining characteristics, related factors of the powerlessness (Nursing Diagnosis 00125) in individuals who survived to stroke. A delimitation of the study in this population is supported, since is a serious health problem around the world, with high rates of mortality, morbidity and acquired incapacity.⁽¹⁾ This fact becomes worrying for nursing care, because, this neurological disorder has a negative impact in the way of life; making the patient dependent on caregivers, constantly. The referred diagnosis is established according to NANDA International, Inc. Nursing diagnostic improvement is important for clinical practice because the nurse uses the nursing process while caring for a patient; take data by means of techniques, materials and instruments identify the main affected human responses in which they are to be solved, plans what results need to be achieved and maximized to trace effective, adequate and timely interventions in the process of neurological rehabilitation and evaluation if interventions were satisfaction in the resolution of the previous trial.⁽²⁾

encefálico, segundo a Taxonomia da NANDA-I. **Métodos.** Análise de conceito a partir de acesso on-line a quatro bases de dados utilizando os descritores: *impotência; desamparo adquirido; acidente vascular cerebral, depressão* nas línguas português, inglês e espanhol. **Resultados.** Os atributos críticos do sentimento de impotência são: fragilidade, desamparo, falta de controle e poder para alcançar os resultados propostos para recuperação e adaptação. Encontrou-se onze novos antecedentes. Recomenda-se reformular três antecedentes presentes na taxonomia. Evidenciou-se quatorze consequentes; sugere-se alterar três consequentes a partir da revisão. **Conclusão.** Com a análise elaborou-se um conceito mais completo do sentimento de impotência permitindo clarificar os atributos críticos que, por sua vez, auxiliará ao enfermeiro rehabilitador reconhecer os sinais e sintomas e fortalecer mecanismos de tolerância e enfrentamento ao estresse.

Descritores: desamparo adquirido; acidente vascular cerebral; terminologia padronizada em enfermagem; formação de conceito; diagnóstico de enfermagem.

For the accomplishment of this study, a concept analysis was performed. This method must be performed to identify particular and characteristic attributes. In Nursing, a range of models of concept analysis stand out, highlighting that described by Walker and Avant.⁽³⁾ These authors propose a modified and simplified analysis based on previously constructed models. Furthermore, this model has direct reference to nursing and language classification systems.

Among the nursing diagnoses experienced by patients after stroke, there is the powerlessness, in which NANDA-I defines as the “lived experience of lack of control over a situation, including a perception that the actions themselves do not affect, in a significant way, a result”.⁽²⁾ This study started from the premise that the conceptual definition does not present precise and clear attributes for the rehabilitating nurse to infer this diagnosis in the referred study population. Thus, it is essential to identify possible adaptations or changes in the definition of nursing diagnosis, defining characteristics and related factors, since,

is observed, in recent years, considerable attention to the development of systematized nursing knowledge as a science, discipline and profession. This nursing diagnosis interferes negatively in nursing care planning due to functional deficiencies; repercussions on low levels of rehabilitation and quality of life. It presents a high incidence rate, recurrence and mutilation ranging from 20% to 50%, persisting from three to six months in the chronicity period.⁽⁴⁾

The relevance of this study is based on the scarcity of studies of concept analysis and in the understanding of the need for diagnostic refinement studies in specific populations, such as those individuals who survived after a stroke. Also, studies that evaluate the defining characteristics and related factors contained in the NANDA International taxonomy are insufficient to infer this nursing diagnosis. Thus, the validation of nursing diagnoses already accepted is fundamental for the growth of nursing as a care science and also to provide greater social visibility to the professional practice of nurses. To develop the stages of concept analysis proposed by Walker and Avant, it is indispensable to broaden the search in the literature by means of a solid, specific revision with the aim of identifying relations or theoretical components that underlie the construct and base the formulation of each item of the tool in construction.⁽³⁾ In this study, it was decided to guide the steps proposed by Whitemore and Knaff⁽⁵⁾ for the literature review. This method synthesizes results from relevant and globally recognized research facilitating the incorporation of evidence for the nursing diagnosis, which is, speeding up the transfer of new knowledge to practice.

In this sense, the clear and precise definition of concepts solves possible problems of understanding between professionals of the nursing team and in relation to other professions. Moreover, the emphasis on concept analysis plays a relevant role in the development and application of knowledge in practice. The clarification of concepts promotes the organization of the experience, facilitating communication between individuals. So, when the definition or attributes of a concept are unclear, its ability to assist in tasks is impaired. For this reason it is necessary

the interest of nurses to develop the theme, so that the desired degree of clarity of the concepts of interest can be clarified to the maximum.⁽⁶⁾

Diagnostic accuracy based on related factors and defining characteristics that represent the concept is a key part of designing a care plan that describes the patient's health needs. Therefore, concept analysis constitutes the initial stage of validation studies of nursing diagnoses for providing a broader understanding of the topic of interest.

Methods

An integrative literature review was carried out with the purpose of synthesizing the essential scientific findings to the evolution of nursing science.⁽⁵⁾ Since this study is about presenting the knowledge produced about the powerlessness establishing causality and prognosis, was used a PICO strategy, which represents an acronym for Patients, Intervention, Comparison and Outcomes: P- Patients who survived stroke; I- nursing diagnosis powerlessness; C- nursing diagnosis powerlessness; and O- antecedents and consequents. In this sense, it was formulated as a guiding question: What is the definition, antecedents and consequent of the diagnosis of nursing feeling of impotence in individuals with stroke?

For the bibliographic selection, the following databases were used: Latin American and Caribbean Health Science Literature (Lilacs), National Library of Medicine National Institutes of Health (Pubmed) and Cumulative Index to Nursing and Allied Health Literature (Cinahl). The controlled descriptors used to survey the studies were: *Impotence OR Learning Disability OR Depression AND Stroke*, in Portuguese, English and Spanish. It is noteworthy that the key words learned helplessness and depression were inserted, due to the main consequence related to the diagnosis being studied, being identified in most articles referenced by NANDA-I, Inc.

The following inclusion criteria were established: complete articles available electronically; Studies published after 2005, year in which the concept

was modified by the Diagnostic Development Committee (DDC) of NANDA-I in the city of Chicago, United States of America, until the last full year of 2015; research with individuals over 18 years of age. The characteristics adopted as criteria for eligibility were: answer the guiding questions, be written in Portuguese, English or Spanish. As criteria for exclusion: studies in editorial formats, letters to the editor, book chapters, guidelines, reviews and secondary studies. The selection of the articles was carried out between July and September 2016. The evaluation of the studies was performed by means of the classification of evidence forces.⁽⁸⁾ In this stage, the information extracted from the studies was identified and documented in a concise manner, which possibilities explore identification

data of the study, methodological characteristics, results obtained and conclusions. This step was performed after the selection of the primary studies. After the characterization of the selected articles, were proceeded with the steps proposed by the concept analysis model to answer the guiding questions of this study during the months of October and November of 2016.

The search was performed with the crossing of the selected descriptors, initially 3007 references were found in PUBMED, 138 in LILACS and 1005 in CINAHL. After reading the articles and applying the inclusion criteria, 35 studies grounded the analysis of the Concept powerlessness in individuals with stroke, being 23 of Pubmed / Medline and 12 of CINAHL.

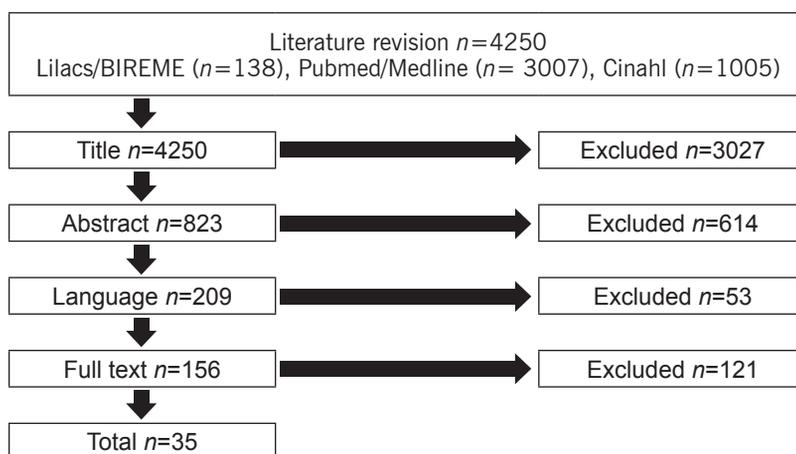


Figure 1. Flowchart of included studies.

The nursing diagnosis review was developed based on the concept analysis, which is the first step in the validation of the process and corresponds to the theoretical structure, in which it is sought to build knowledge about the phenomenon from the establishment of critical attributes, antecedents and consequents of

the concept that wants to study. To assist the execution of the analysis of concepts were used the model proposed by Walker and Avant.⁽³⁾ This model clarifies the knowledge about the concept, distinguishes the true defining characteristics and identifies the attributes considered irrelevant. It is composed of eight stages that interact with one

another: concept selection; determination of the objectives of the analysis; identification of possible uses of the concept; determination of critical or essential attributes; construction of a model case; identification of additional cases: borderline, related, contrary, fabricated and illegitimate; antecedent and consequent identification;⁽³⁾ with this, every nursing diagnosis is a concept that needs to be elaborated by systematic means, since it allows to know its structure and use in the different practices and disciplines.⁽³⁾

In this study the first seven stages of the conceptual analysis model were performed. Next, were established relations between the antecedents found in the literature with the related factors contained in the Taxonomy of NANDA International; as well as consequent and defining characteristics of the diagnosis presented in tables.

Results

Most of the articles were developed in North America (31.4%) and Asia (31.4%), and were produced by doctors (51.4%) and nurses (20%). The United States of America had the highest percentage of production (28.6%, $n = 10$). From 2008, 32 studies (91.3%) were published. Regarding the subjects' age range, the majority of studies involved the elderly (62.9%), followed by older adults. Among the research scenarios were: hospital (45.8%), followed by the rehabilitation unit (34.3%). Most were cohort and case-control studies, well delineated (62.9%). The strength of evidence of most of the articles analyzed was distributed in levels III and IV, emphasizing that there was scientific evidence considered strong; since no systematic review or meta-analyses were analyzed, due to the criteria defined from PICOT. Following the steps proposed by the concept analysis, were proceeded with the identification of possible uses of the concept and the best scientific evidence about the powerlessness in individuals with cerebrovascular events due to clinical morbidity. In continuity, were followed the other steps of the Walker and Avant model.⁽³⁾

Identification of possible uses of the concept

It was evidenced in the 35 analyzed studies that the concept of powerlessness is a response to the process of recovery and/or adaptation to stressful or traumatic events. This concept is used by health professionals, especially medicine, nursing and psychology; since this response is dysfunctional affective, behavioral or emotional.

Critical or essential attributes of the concept of "powerlessness"

Among the 35 publications analyzed, 65.7% ($n = 23$) defined the concept of powerlessness; evidenced by the clinical observation of this phenomenon or the use of instruments or scales to track depressive events, suicidal tendencies, life purpose and self-esteem. The critical attributes of the diagnosis under study are: fragility, helplessness, lack of control and power to achieve proposed results in the process of recovery and/or adaptation.

Construction of a model case

C.A.V.M, 60 years old, male, married, ex-councilor, accompanied by the Family Health Strategy to perform daily self-care activities in relation to skin, bladder catheterization and nasal oxygen administration. Client enrolled in the Home Care Program with hemorrhagic stroke, with lower and upper limb impairment, as well as visual and auditory acuity, in addition to the areas of Wernicke and Broca. He performs intensive physical and motor rehabilitation activities five times a week with the physiotherapist. During the home nursing consultation, when an instrument of evaluation of the degree of incapacity was applied, it was observed a total dependence on the basic and instrumental activities of daily living, with constant reporting of frustration and the expression of dissatisfaction with life. As a result of stroke, he presents hemiplegia, hemiparesis, homonymous hemianopsia, ataxia, dysarthria, hypotonia, postural imbalance; making difficult to exercise the social function assigned

before the neurological episode, demonstrating resentful, angry, feeling guilty and sad. The wife claims change in partner behavior, reporting two suicide attempts in the past month. The patient presents suicidal ideation and feeling of less value constantly. When questioned about the purpose of life, there was frustration about the value given to it. Facing the process of home care is very common the presence of children, neighbors, friends encouraging cooperation before the interventions carried out by the multiprofessional team of the reference service of the municipality, faced himself with this situation is ashamed. The eldest son helps in the execution of self-care activities by encouraging him to brush his teeth as he pleases; when challenged to perform this care, the son reports that he is aggressive. C.A.V.M. cannot achieve the minimum expected results nor monitor progress in the care process.

Construction of an otherwise

M.N.L.V., 58, female, teacher, divorced, accompanied by the Family Health Strategy to monitor blood pressure and glycemic levels, activities to encourage daily self-care, medication administration, special care for continuous thrombolytic therapy and control of weight. Client enrolled in the Home Care Program for patients with ischemic stroke, with involvement of the lower and upper limbs. The team carries out a weekly home visit in order to identify and control adherence to the pharmacological and non-pharmacological therapeutic regimen. M.N.L.V is in the sixth month of post-acute rehabilitation. During the home nursing consultation, a disability assessment instrument was applied, and functional independence was observed in basic, instrumental and advanced activities of daily living. The patient is motivated to return to her professional activities as soon as possible. She is willing, enthusiastic to participate in activities related to the control of the therapeutic regimen, describes actions to reduce risk factors, expresses desire to control and prevent the onset of neurological sequela, accepts her own decisions about her state of health, follows a careful and healthy diet, practice light to moderate physical exercise as established by the doctor of the

service. In relation to the purpose of life, perceives satisfaction as to the value given to her. Throughout home visits is very common, the presence of children, neighbors, friends encouraging cooperation and participation in the interventions made by both the nursing and the multiprofessional team of the referral service of the municipality, shows joy and receptive to all that the visit.

In this case, it is explicit that M.N.L.V does not present the nursing diagnosis powerlessness. In this way, are perceived critical attributes contrary to fragility (exercises that gradually restore mobility and body balance, functional independence in the accomplishment of basic, instrumental and advanced activities of daily life, being willing to participate in the care); to helplessness (Satisfaction with life) and lack of power and control (enthusiastic to participate in activities related to the control of the therapeutic regime, expressed desire to control and prevent the onset of neurological and cognitive sequela, making decisions appropriate to her state of health).

Identification of antecedents and consequents

In the current NANDA-I taxonomy, the nursing diagnosis under study is composed of three related factors and eight defining characteristics. With this study, it is recommended to modify the factor related health care environment to offer unsatisfactory care; as well as the dismemberment of unsatisfactory interpersonal interaction in two antecedents: lack of social support, lack of social participation. Regarding the disease-related regimen in three antecedents: low self-esteem, lack of motivation and lack of interest. Also, were suggested the inclusion of the new antecedents: type of injury, severity of the injury, unpredictable course, location of the lesion and limitation of body mobility.

Regarding the defining characteristics the inclusion of three consequent is indicated: fatigue, cognitive impairment existing in time or progressive, time of physical and motor rehabilitation. Were suggested disaggregating the frustration report about the inability to perform previous activities

in three, namely: basic activities of daily living, instrumental activities of daily life and advanced daily life; as well as the dismemberment of lack of control in suicide attempts and life purpose. Also, it is indicated that the change in the defining characteristic does not participate in care by level of participation in rehabilitation.

It is observed that the antecedents most cited in the literature (type of injury, severity of the injury, unpredictable course and lack of social

support) (Table 1), as well as the consequent ones (difficulties to express thoughts verbally and decide on their state of health, existing cognitive impairment in time or progression, level of participation in rehabilitation and time of physical and motor rehabilitation) (Table 2), do not make up the NANDA-I, Inc. indicators. In addition, two defining characteristics (level of rehabilitation participation and Suicide attempts) were evidenced in the literature with nomenclatures different from those in NANDA-I.

Table 1. Related factors and antecedent found in the analysis of the studies

Related factors of NANDA-I	Antecedents - concept analysis
There are no correspondents	Type of injury (<i>n</i> =9)
There are no correspondents	Severity of injury (<i>n</i> =6)
There are no correspondents	Unpredictable course (<i>n</i> =6)
There are no correspondents	Location of the lesion (<i>n</i> =5)
There are no correspondents	Limitation of body mobility (<i>n</i> =5)
Unsatisfactory interpersonal interaction	Lack of social support (<i>n</i> =6)
Unsatisfactory interpersonal interaction	Lack of social participation (<i>n</i> =3)
Health care environment	Unsatisfactory care offers (<i>n</i> =4)
Regime related to the disease	Low self-esteem (<i>n</i> =3)
Regime related to the disease	Lack of motivation (<i>n</i> =3)
Regime related to the disease	Lack of interest (<i>n</i> =1)

Table 2. Definitive and consequents characteristics found in the analysis of the studies

Defining characteristics NANDA-I	Consequences - concept analysis
Dependence on others	Dependence on others (<i>n</i> =6)
Depression due to physical deterioration	Depression due to physical deterioration (<i>n</i> =7)
Report of doubt about function performance	Report of doubt about function performance (<i>n</i> =5)
There are no correspondents	Report of frustration about the inability to perform the basic activities of daily living (<i>n</i> =3)
There are no correspondents	Report of frustration about the inability to perform the instrumental activities of daily living (<i>n</i> =3)
There are no correspondents	Report of frustration about the inability to perform the advanced activities of daily living (<i>n</i> =1)
There are no correspondents	Fatigue (<i>n</i> =3)
There are no correspondents	Existing or progressive cognitive impairment (<i>n</i> =7)
There are no correspondents	Physical and motor rehabilitation time (<i>n</i> =4)
Non-participation in care	Level of participation in rehabilitation (<i>n</i> =5)

Table 2. Definitive and consequents characteristics found in the analysis of the studies. (Cont.)

There are no correspondents	Difficulty to express their thoughts verbally and to decide on their state of health ($n=8$)
Report of lack of control	Suicidal attempts ($n=1$)
There are no correspondents	Purpose of life ($n=1$)
Report of shame	Shame ($n=1$)
Report of alienation	There are no correspondents

Based on the appreciation of the definitions of powerlessness and the critical attributes essential to this concept evidenced in the literature is constituted from the model cases and contraries presented a unique definition, objective and clear that contemplates the results of this conceptual analysis: *Perceived emotional response faced with the process of coping with the disease or physical disability, presenting fragility, helplessness and lack of control and power to achieve the proposed results during functional recovery and/or adaptation.*

Discussion

In recent years there has been an exponential increase in the production of nursing knowledge through the analysis of concepts, validation studies and diagnostic differentiation. Most of the selected studies have been published in countries in North America and Asia. Regarding the year of publication, almost all the articles are from the 2000s, with a growing increase after 2008. It is noted that one of the decisive factors for the production of knowledge was the consolidation of postgraduate programs worldwide.⁽⁷⁾

The production of knowledge, on the studied concept, involved different areas of health (medicine, nursing, psychology, physiotherapy and physical education). In some articles these were from several areas of health. Identifying this human response is essential for all the professions involved in rehabilitation, no restricting to just one profession.⁽⁸⁾ Similarities were found in these areas in the use of the concept from the analysis of the components, because it was identified conceptual elements of the theory of learned helplessness

postulated by Seligman.⁽⁹⁾ It is envisaged that conceptual definition of diagnosis contained in NANDA-I Taxonomy uses elements of this theory.

Hence, the partnership between nurses and other health professionals is indispensable, as this performs their work as a team, and the exchange of experience strengthens the clinical practice and the look on the patient's situations. In this context, stroke patients with powerlessness may benefit if there is a multidisciplinary team capable of strengthening the mechanisms of coping and tolerance to stress.

In Nursing, it is observed that the NANDA-I diagnostic classification system is one of the most well-known, widely and used worldwide, since it contributes to the standardization of nurses' language, with the purpose of assisting in clinical judgment and enhancing development of nursing as science, discipline and profession.⁽¹⁰⁾ It is also seen that in this taxonomic classification system all diagnostic categories are derived from concepts and present theoretical models or formulations⁽¹¹⁾ to give meaning to the observations of physiological, psychic, social, religious and spiritual phenomena, going through continuous analyzes according to studies found in the literature.⁽¹²⁻¹⁹⁾

As already mentioned, the conceptual definition of powerlessness (00125) standardized by NANDA-I is "lived experience of lack of control over a situation, including a perception that one's actions do not significantly affect a result."⁽²⁾ In previous studies whose objective was to highlight the concept of impotence, the authors did not indicate changes in the definition of the studied

concept, reinforcing most of its elements as defined by NANDA-I. They emphasized that this response is the absence of power, capacity, authority to act, influence own life, and control events.⁽²⁰⁻²⁶⁾ However, should be considered that this human response is due to chronic health conditions and congenital or acquired physical disability.

The present study identified elements of the concept already existing in previous studies presented to DDC of NANDA-I (5), as well as new elements that make up the concept of powerlessness. Among the findings of the literature⁽²⁰⁻²⁶⁾ and those of the present study, were verified differences in relation to the attributes of the concept and temporal characteristics pointed out (antecedent, consequent), as well as differences in the relation of ideas regarding the concept of impotence.

It should be noted that the concept defined in this study is evolutionary, since it considers the defining characteristics “Dependence of others” and “Depression by physical deterioration”, “Report of doubt about role performance”, “Difficulty to express verbally thoughts and decide on their specific health”, specific to infer this diagnosis. It should be noted that these indicators were not considered critical in the diagnostic definition presented by NANDA-I.⁽²⁾

Twenty three definitions of powerlessness were identified. It is observed that this nursing diagnosis presents a broad concept with many critical attributes: fragility, helplessness, lack of power and control, which cannot always be measured. It should be noted that the contributions of this study to the improvement of the nursing diagnosis of interest is the inclusion of two new attributes: fragility and helplessness. These findings are in line with a study developed in Brazil that constructed an instrument to measure feelings of impotence, classified in three dimensions: inability to perform behaviors, loss of control in relation to decision making and interpretation of events, and emotional response to control of situations.⁽²⁷⁾

According to some authors, the powerlessness is the common state experienced in the process

of illness, resulting from the burden caused by the change in the social and family role, having an impact on the effective performance of rehabilitation and functional dependence.⁽²⁸⁾ It can be conceptualized as emotional response due to functional and cognitive deficiency, with reports of weakness, lack of physical vigor to perform daily activities, inhibition of impulsive behavior to participate in the rehabilitation process.⁽²⁹⁾ It is stated that it is the low ability to develop basic activities of daily living, reduction in social participation, showing unwillingness to participate in planned activities, poor recovery, and reduced rehabilitation, and a lack of interest in returning to work.⁽³⁰⁾ In this way, getting sick is a global process involving physiological and emotional responses. These findings go against the results that power and control are determined by physical vigor, psychological resilience, social support, positive self-concept, energy, knowledge, discernment, motivation, and belief system.

Fragility becomes an essential attribute to infer the powerlessness among individuals affected by stroke. It can be measured by observing unintentional weight loss, greater than 4.5 kg or greater than 5% of body weight in the last year; self-reported fatigue; decreased palmar grip strength, measured with dynamometer and adjusted for sex and body mass index; low level of physical activity, measured by weekly energy expenditure in kcal (based on self-report of activities and physical exercises performed) and adjusted by gender; decrease in gait activity in seconds: distance of 4.5 m adjusted for sex and height.⁽³¹⁾

The attribute “helplessness” is verified by verbal reporting. It presents as indicators common feelings of depressive mood: marked and unhappy discouragement throughout the day; pessimism about the future; constant reports that his life is synonymous of failure; cry and think people do not like him anymore; thinks things can not improve; it is perceived as a hindrance in the lives of others; dissatisfied and bored with everything; feels guilty, disappointed with himself.^(32,33)

With regard to the attributes “lack of power and control” already contained in the current taxonomy

are indivisible. They affect the ability to make decisions regarding their state of health. They are antonyms to the word power, which means to have the faculty, to have possibility, to deliberate.⁽²¹⁾ In this way, power is the actual or potential ability or capacity to achieve goals through interpersonal processes. Previous studies on power evidence that it is the person's ability to influence what happens to them. Power can be structured into five categories: explorer, manipulator, competitor, nutritious and integrative. They interact with one another by giving and caring for oneself, directing others toward self-care and always giving the last word in decisions about self-care.⁽²²⁾ In the individual who survived stroke, functional, cognitive, affective and behavioral impairments, sometimes limits or impedes role performance.

It is verified that the causal factors can be categorized in: related to clinical condition, social bond, quality of care and emotional. In this sense, the type, severity, course and location of the lesion are decisive factors for the increase of hospitalization period, mortality rate in the first years, changes in mood control, physical immobility, expressive or receptive aphasia, facial paresis, hospital readmissions, and fatigue. Limitation in mobility triggers repeated episodes of melancholia.⁽³⁰⁾ It affects both body members with perceptible regions with spasticity and contractures making it difficult to reach and manage objects that causes an inoperable sense of less value.⁽³⁴⁾

The lack of social support and social participation are predictive factors for worse functional outcomes in the domains of cognition, mood and affectivity.^(11,28,30,32,34-39) With this, family and community reintegration favors the process of linking and communicating, returning to work and participating in community recreational activities.⁽³⁷⁾ The categorization of "quality of care" presented an antecedent: offering unsatisfactory care. This factor has repercussions on the confidence and contentment of the patients favoring adherence to the therapeutic regimen. This opinion is essential from the initial phase of treatment.⁽³⁹⁻⁴¹⁾

It was decided to restructure the disease-related regimen factor in low self-esteem, lack of

motivation and interest. These determinants have repercussions on functional recovery influencing the adaptation of the problem and the functional results on the motor and cognitive domains.^(29,35-36,42-44) Feelings of loss of confidence in oneself and physical control, threatening the self, starting to interfere with performance, social self-esteem and appearance are experienced because of low self-esteem.^(35,45,46) Low self-esteem has repercussions on dependence, depersonalization, functional difficulty and lack of control⁽³²⁾. The studies indicate that the occurrence of aphasia impairs verbal communication⁽³⁵⁾; low visual acuity, decreased cognitive function, and unilateral neglect directly affect moods by being angry, frustrated, sad, and apprehensive.⁽³⁶⁾ Another relevant fact is that lack of motivation is due to the low purpose of life. After illness, patients are considered obstacles to family and society. Factors such as lack of momentum or persistence are triggers for low life expectancy.^(29,42,44) Lack of interest is a decisive element in the participation of rehabilitation, leading to an increase in the time needed for recovery; besides causing stress overload in the caregiver.⁽⁴²⁾

As a result of the powerlessness, functional dependence has been found to cause innumerable damages, including: frequent hospitalizations,⁽⁴¹⁾ prolonged recovery, increased mortality,⁽⁴⁷⁾ and impairment of functional outcomes.⁽⁴⁸⁾ This indicator is related to the: advanced age, medical comorbidities, stroke severity, decreased cognition,⁽¹⁴⁾ and the presence of aphasia.⁽²¹⁾ Doubt regarding role performance is marked by negative attitudes and beliefs that compromise motivation and participation .

The frustration of the inability to perform basic, instrumental and advanced activities of daily living are signs of a feeling of worthlessness.^(30,46,48) It was decided to categorize the previous activities, since, the studies show the functional independence in these three levels. The report of fatigue is constant in the patients, showing themselves tired, unable to maintain habitual routines, necessitating a period of rest between one activity and another.⁽³⁵⁾ Another consequence of highlighting is cognitive impairment. It is the result of the effects of

cerebrovascular lesions that affect the domains of executive language, spatial and visual perception, learning and memory.^(37,38,43)

Studies point out that individuals with stroke are able to participate actively in an intense rehabilitation regimen of at least three hours a day, achieving better functional results over a short period of time.⁽⁴⁹⁾ Despite the implementation of intensive programs, many continue to experience post-discharge deficiency, presenting common feelings such as inferiority and fragility. The evidence suggests that rehabilitation during hospitalization improves short-term survival and functional capacity. However, long-term benefits are not perceived. Thus, it is urged that rehabilitative practices should not be discontinued at discharge before the completion of three months⁽⁵⁰⁾, and especially in the six weeks after the cerebrovascular event.⁽³⁴⁾ When the patient requires more than six months bigger are the rates of depression up to the third year associated with severe disability status.⁽⁴⁶⁾

The level of participation in rehabilitation worsens functional outcomes increasing the chance of developing depressive episodes.⁽⁵⁰⁾ This indicator is one of the ways to identify learning from activities performed, as well as progress in rehabilitation and overall functional prognosis.⁽²⁹⁾ It is noted that the consequent "Difficulty to express your thoughts verbally and to decide on their state of health" is related to lesion in the left hemisphere, triggering language disorders; being less cheerful and confident in following the prescribed therapeutic regimen.⁽³⁶⁾ Furthermore, concomitant aphasia is linked to a sense of worthlessness and less value.⁽³³⁾

Studies indicate suicide attempts as a consequence of this nursing diagnosis under study. It has high rates in the first six months post-event, with a mean suicide rate of 83 for every 10,000 affected patients.⁽⁵¹⁾ Undeniably, life purpose is an extremely important component in this diagnosis because it is demarcated by attitudes related to existentialism; to the senses that the individual gives his life, through the selection of value and objective. Still as the most stable and far-reaching

goal resulting from the experience of seeking personal satisfaction always directed towards an end opposite to existential frustration.⁽⁴⁴⁾ Studies point out that lack of enthusiasm, excitement in living; absence of clear life goals; have no meaning for life and no novelty each day. Then become constant the desire to die, do not work after retirement activities and start do wait death passively.⁽⁵²⁾

Shame is a psychological condition of negative control from ideas and emotional and psychological states that alter behavior. It is induced by knowledge or awareness of dishonor, disgrace, or condemnation.⁽⁴⁵⁾ It can manifest itself slightly or severely, affecting well-being and results against health control; in particular, in the performance (physical self-competence) of basic activities, in social self-esteem (family and community activities) and in the appearance of self-esteem (body image and attractiveness by other people).⁽⁴⁵⁾

After the end of the conceptual analysis of the nursing diagnosis powerlessness, it was submitted to the taxonomy of NANDA I for its appreciation and possible changes in the present diagnosis, as well as in the diagnosis of risk of feeling impotent. In view of the identification and analysis of the concept, it was verified as limitation of the present research, the large number of foreign publications evidenced in the integrative review, justified by the frequent involvement of the cerebrovascular accident in many countries, besides Brazil. It is observed that this profile of publications may have influenced the conclusion and limit the generalization of the data to the Brazilian population, thus, it is recommended to carry out new research in other databases.

Conclusion. This study is considered a pioneer in researching the concept of powerlessness experienced by individuals with stroke, since it presented the objective of identifying and analyzing the concept, related factors and defining characteristics of Impotence Feeling. In view of the results, it is pointed out as a limitation the need to follow the consequent steps to the diagnostic validation, among them the content by

specialists and the clinical validation in individuals with stroke who perform rehabilitation in the post-acute and chronic phase of the disease, in order to determine the predictive defining characteristics for diagnostic inference.

This study allowed the recognition of the best scientific evidence to be confirmed before the recognition and inference of this essential nursing diagnosis for the practice of clinical care in people with stroke.

Also, it is verified that the studied diagnosis is a phenomenon of nursing practice in rehabilitation, needing to recognize early signs and symptoms; as well as to establish and strengthen mechanisms of adaptation to the chronic condition. In this sense, it is observed that from this study the nursing diagnosis is more robust, passing from criterion 2.1 (accepted for publication and inclusion in the NANDA-I taxonomy) in the last version 2015-2017 to 3.1 (applied clinically through synthesis of literature to specific population) in the years to come. It should be emphasized that this study still allowed establishing causal relationships between the antecedents, consequent and the nursing diagnosis of interest.

With the analysis, a more complete and broad concept of the powerlessness was elaborated allowing to clarify the critical attributes that, in turn, will help the rehabilitating nurse to recognize the signs and symptoms and to strengthen mechanisms of tolerance and resistance to stress.

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Gender differences in the perception of quality of life of patients with colorectal cancer

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Gender differences in the perception of quality of life of patients with colorectal cancer

Objective. to identify the gender differences in assessing quality of life of patients undergoing chemotherapy treatment for colorectal cancer. **Methods.** this is a cross-sectional investigation conducted with 144 patients (72 men and 72 women) undergoing chemotherapy treatment in a southeastern Brazilian hospital. Data were gathered through a sociodemographic and clinical information form and the Health-related Quality of Life instrument from the European Organization for Research and Treatment of Cancer. **Results.** cognitive function leads to lower general quality of life, with higher effect in men when compared to women. Body image ($p=0.023$), abdominal pain ($p=0.020$) and dry mouth ($p=0.001$) produced lower quality of life in women. On other hand, men showed lower quality of life related to the following symptoms: fecal incontinency ($p<0.001$), sexual

impotency ($p=0.027$) and sexual arousal ($p<0.001$). **Conclusion.** the illness symptoms and chemotherapy treatment effects that negatively impact on quality of life differ between men and women. Thus, healthcare needs to be focused on these specific factors that affect the quality of life according to the patient's gender.

Descriptors: body image; quality of Life; cross-sectional studies; colorectal neoplasms.

Diferencias de género en la percepción de calidad de vida de pacientes con cáncer colorrectal

Objetivo. Identificar las diferencias de género en la percepción de la calidad de vida de pacientes con cáncer colorrectal. **Métodos.** Estudio transversal, realizado con 144 pacientes (72 hombres y 72 mujeres) en tratamiento quimioterapéutico en un hospital del

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sudeste brasileiro. Los datos se recogieron a partir de un cuestionario sociodemográfico y clínico y del instrumento de Calidad de Vida Relacionada a Salud del *European Organization for Research and Treatment of Cancer*. **Resultados.** La función cognitiva lleva a menor calidad de vida general, con mayor impacto en los hombres comparados con las mujeres. La imagen corporal ($p=0.023$), el dolor abdominal ($p=0.020$) y la boca seca ($p=0.001$) representan menor calidad de vida en las mujeres, mientras que en los hombres son los síntomas: incontinencia fecal ($p<0.001$), impotencia sexual ($p=0.027$) y el interés sexual ($p<0.001$). **Conclusión.** Los síntomas de la patología y los efectos del tratamiento quimioterapéutico reducen la calidad de vida en forma diferente en hombres y mujeres. Así, los cuidados en salud deben enfocarse en los factores específicos que impactan en la calidad de vida según el sexo.

Descriptor: imagen corporal; calidad de Vida; estudios transversales; neoplasias colorrectales.

Diferenças de gênero na percepção de qualidade de vida em pacientes com câncer colorretal

Introduction

Colorectal cancer has become a public health problem in Brazil and the world. In Brazil, 34,280 new cases are estimated for 2016, with an incidence of 7.8% in men and 8.6% in women (respectively third and second place in the Brazilian population without considering non-melanoma skin tumors).⁽¹⁾ The southeastern Brazilian region has the highest incidence of this type of tumor and ranks second among men and women with 19,950 new cases per year (20.6%).⁽¹⁾ The most common type of colorectal cancer is sporadic, characterized by affecting individuals over 50 years of age, with no family history or hereditary intestinal diseases. This type originates from normal cells of the body that, when exposed to a series of aggressions, accumulate mutations in some genes, resulting in clonal proliferation. However, there are other types such as Familial Adenomatous Polyposis Syndrome and Lynch Syndrome or Hereditary Non-Polyposis Colorectal Cancer Syndrome.⁽²⁾ Colorectal cancer can develop from exposure to a variety of factors, including: in-

Objetivo. Identificar as diferenças de gênero na avaliação de qualidade de vida dos pacientes em tratamento quimioterápico para câncer colorretal. **Metodologia.** Estudo transversal, realizado com 144 pacientes (72 homens e 72 mulheres) em tratamento quimioterápico. Para coletar os dados, aplicaram-se um questionário sócio-demográfico e clínico e o instrumento de Qualidade de Vida Relacionada à Saúde da *European Organization for Research and Treatment of Cancer*. **Resultados.** A função cognitiva leva a menor qualidade de vida geral, com maior impacto nos homens quando comparado às mulheres. A imagem corporal ($p=0.023$), a dor abdominal ($p=0.020$) e a boca seca ($p=0.001$) representam menor qualidade de vida às mulheres. Já os homens apresentam menor qualidade de vida devido aos sintomas: incontinência fecal ($p<0.001$), impotência sexual ($p=0.027$) e interesse sexual ($p<0.001$). **Conclusão.** Os sintomas da doença e os efeitos do tratamento quimioterápico que reduzem a qualidade de vida diferem entre homens e mulheres. Assim, os cuidados em saúde devem se voltar aos fatores específicos que impactam na qualidade de vida segundo o gênero.

Descritores: imagem corporal; qualidade de vida; estudos transversais; neoplasias colorretais.

adequate eating habits - excessive consumption of red meat, processed meat, alcohol, refined sugars, a high-fat and low-fiber diet - smoking, sedentary lifestyle, and daily stress.⁽³⁾ Treatment for colorectal cancer depends on the size, location, extent of tumor, and health conditions of the individual. The main types of treatment include surgery, chemotherapy and radiotherapy. The chemotherapeutic treatment may be neo-adjuvant, adjuvant or palliative for patients with stage II, III and IV colorectal cancer.⁽²⁾ Despite the benefits of this treatment, there are still some side effects due to the toxicity of chemotherapeutic drugs, a phenomenon that causes physical discomfort and limits daily activities. Added to this, the disease's own symptoms and the whirlwind of psychoemotional changes, which may include sadness, depression, anxiety, social isolation and existential and spiritual crisis,⁽⁴⁾ negatively impact the quality of life.

The World Health Organization defines quality of life as a multidimensional concept that includes individuals' perceptions of their position in life in the context of the cultural and value sys-

tems in which they live and in relation to their goals, standards, expectations and concerns.⁽⁵⁾ In turn, the European Organization for Research and Treatment of Cancer brings the term of quality of life by relating it to health in order to understand the general effect of cancer on the patient as a “whole human being.” Thus, quality of life is defined as a multidimensional concept encompassing key dimensions such as: symptoms related to disease and treatment, physical, psychological and social functioning.⁽⁶⁾ A longitudinal cohort study of 453 colon cancer patients at stage II identified lower levels of quality of life in those receiving chemotherapy compared to those who did not receive chemotherapy.⁽⁷⁾ In another study conducted with 16 patients aged between 43 and 75 years and with colorectal cancer and under chemotherapy, the patients assessed their quality of life as unsatisfactory and the meanings attributed to it were: loss of normal life, personal and social suffering and the need to react to the side effects of chemotherapy, which is a preliminary step to cure.⁽⁸⁾

Thus, since patients under chemotherapy treatment may have a greater negative impact on their quality of life, it becomes relevant to investigate gender differences, as men and women present individual, social, physical and psychological particularities, which reflects in the coping of the disease and impacts of treatment in various ways. Various authors^(9,10) have discussed gender differences and their individual cultural aspects; however, in the literature there are few studies evaluating gender differences in relation to quality of life in colorectal cancer. Studies analyzing colorectal neoplasia have shown a strong association between the psychoemotional manifestations of stress and the therapeutic actions of cancer. However, few of the gender-related peculiarities are considered a relevant factor in the evaluation of the quality of life of patients. Therefore, the purpose of this study is to identify gender differences in the quality of life of patients undergoing chemotherapy for colorectal cancer.

Methods

This is a cross-sectional and analytical study conducted in a hospital in the southeast of Brazil aimed

at the care of cancer patients. The study sample was non-probabilistic for convenience. It consisted of 144 patients on outpatient chemotherapy for colorectal cancer, aged 21 years or older, with preserved communication and comprehension ability, with or without previous surgical treatment, being in the third week of treatment with fluorouracil (5FU) + leucovorin or at least having received the first cycle of oxaliplatin + leucovorin + 5FU.

Data were collected from January to October 2012 through an interview conducted by the leading investigator at the time patients received the chemotherapy treatment. The instruments used in this phase were: the sociodemographic and clinical questionnaire, the European Organization for Research and Treatment of Cancer - (EORTC-QLQ-Q30), which evaluates the general quality of life, and the European Organization for Research and Treatment of Cancer - Colorectal Cancer (EORTC-QLQ-CR29), specifically targeted to patients with colorectal cancer. The clinical and sociodemographic form involved the variables age, gender, marital status, schooling, employment status, sick leave, social class (from A to E, being “A” the highest class and “E” the lowest), religious practice and monthly income.

The Health-Related Quality of Life instrument of the European Organization for Research and Treatment of Cancer (EORTC-QLQ-Q30) was built in 1993⁽¹¹⁾ and validated for the Brazilian reality in 2010.⁽¹²⁾ It is a general quality of life questionnaire (EORTC QLQ-C30) that includes 30 questions related to five functional scales (physical, functional, emotional, social and cognitive), a scale on the overall health status, three scales of symptoms (fatigue, pain and nausea/vomiting) and six items of additional symptoms (dyspnoea, insomnia, loss of appetite, constipation, diarrhea and financial distress).^(11,12) The answer options are four-point Likert type (1-no, 2-a little, 3-fair and 4-a lot), except for the measurement of general health status and quality of life that has a seven-point Likert scale (1- poor and 7- great). Higher scores for the items on the functional scales represent a better quality of life. On the items of the symptom scale, higher scores represent worsening of quality of life.⁽¹³⁾

The Health-related Quality of Life tool from the European Organization for Research and Treatment of Cancer (EORTC-QLQ-CR29) assesses quality of life in a specific way for patients with colon and rectal cancer. This instrument has 29 items divided into two functional scales (body image and sexual function) and seven items of signs/symptoms (urinary problem, chemotherapeutic drug effect, gastrointestinal tract alterations, sexual dysfunction, sphincter alteration, stoma-related problems, pain). Some items are answered by all patients and the others by subgroups (men, women and those with or without stoma). Values ranging from one to four (1 = nothing, 2 = a little, 3 = a lot, 4 = too much) are assigned to the items. All scales and items are transformed into scores ranging from 0 to 100⁽¹⁴⁾. High scores on the functional scale represent a better quality of life. On the symptom scale items, higher scores represent worsening of quality of life.⁽¹⁴⁾

The data were entered into a spreadsheet in the Microsoft Office Excel 2007 program. Data analysis was performed by the Statistical Package for Social Sciences (SPSS) software program, version 19.0. The qualitative variables were described in absolute (n) and relative frequency (%) and quantitative variables were described in measures of central tendency (mean and median) and dispersion (standard deviation, minimum and maximum). To evaluate the association between the nominal measures of sociodemographic and clinical variables of the disease and gender, Pearson's Chi-square test or Fisher's exact test was used. The association of quantitative sociodemographic variables and quality of life with the gender was performed using Student's t-test. The level of significance was set at 5%.

The informed consent form was given to the subjects who agreed to participate in the study after receiving explanation on the objectives of the study, and they signed it in two copies; one was given to the researcher and the other remained with the research subject. This study is part of a larger study that evaluated the perception of stress, social support, sense of coherence, resilience and the quality of life of patients with colorectal cancer under chemotherapy treatment and was

approved by the Research Ethics Committee of the Nursing School of the University of São Paulo (CEP - EEUSP - Protocol No. 1005/2011 and CAAE No. 0009.0.196.000-11).

Results

The analysis of the 144 patients is presented through gender comparison according to sociodemographic and clinical variables, followed by the comparative analysis of general quality of life and scales of symptoms and body image between men and woman with diagnosis of colorectal cancer and undergoing chemotherapy treatment. Table 1 shows the gender comparison according to the sociodemographic variables in this population. There was prevalence of married patients, with elementary education, social class C, and religious practice in both groups. However, it is observed that men remained active in the labor market, but with sick leave. On the other hand, women were mostly retired, which explains the predominance of absence of sick leave in this group.

In addition, the average monthly income of men (R\$ 2060.5, SD = 707.6, exchange rate in October 2012: 1.00 USD = R\$ 2.08) is higher than that of women (R\$ 1432.8, SD = 1266.7), but the average age is higher among women (58 years; SD = 10.3) when compared to men (56 years; SD = 12.4), with a general average age of 56.92 (SD = 11.4) years. Table 2 shows the gender comparison in relation to the clinical variables of the patients.

Table 2 shows there was no statistically significant difference between men and women for the analyzed variables, with predominance in both groups of patients with colon tumor, in stage III, undergoing adjuvant treatment and surgery, having a family history of cancer and absence of stomas.

Table 3 shows the comparison between men and women in relation to general quality of life (EORTC-QLQ-Q30). In this study, it is observed that cognitive function leads to lower general quality of life, with greater impact in men when compared to women. The other variables did not present a significant difference between males and females.

Table 1. Gender comparison according to sociodemographic variables of patients with colorectal cancer

Variable	Gender				p value
	Male (n=72)		Female (n=72)		
	n	%	n	%	
Marital status					
Single/Divorced/Widowed	1	1.4	11	15.3	0.004
Married/Living with family or partner	71	98.6	61	84.7	
Schooling					
Elementary school	47	65.3	51	70.8	0.729
High school	13	18.1	12	16.7	
Higher education	12	16.7	9	12.5	
Employment Situation					
Retired	18	25.0	28	39.4	0.008
Unemployed	8	11.1	18	22.5	
Active	46	63.9	27	38	
Sick Leave					
Yes	41	69.5	26	43.3	0.004
No	18	30.5	34	56.7	
Social class					
A	1	1.4	0	0	<0.001
B	29	40.3	10	13.9	
C	41	56.9	55	76.4	
D	1	1.4	6	8.3	
E	0	0	1	1.4	
Religious Practice					
Yes	51	72.9	62	87.3	0.031
No	19	27.1	9	12.7	

Table 2. Gender comparison in relation to the clinical variables of the disease

Variable	Gender				p value
	Male (n=72)		Female(n=72)		
	n	%	n	%	
Medical diagnostic					
Colon Neoplasia	60	83.3	60	83.3	1.00*
Junction Neoplasia Retosigmoid	1	1.4	2	2.8	
Rectal Neoplasia	11	15.3	10	13.9	
Tumor's Stage					
I	1	1.4	2	2.9	1.00*
II	13	18.1	14	20.3	
III	37	55.2	36	52.2	
IV	16	23.9	17	24.6	

Table 2. Gender comparison in relation to the clinical variables of the disease. (Cont.)

Type of Treatment					
Adjuvant	44	63.8	47	65.3	0.615*
Neo-adjuvant	3	4.3	1	1.4	
Palliative	21	30.4	24	33.3	
Induction	-	-	1	1.4	
Surgery					
Yes	68	95.8	69	95.8	1.000†
No	3	4.2	3	4.2	
Family History of Cancer					
Yes	43	59.7	44	61.1	0.865†
No	29	40.3	28	38.9	
Metastasis					
Yes	29	40.3	37	51.4	0.181†
No	43	59.7	35	48.6	
Stoma					
Yes	26	36.6	18	25	0.132†
No	45	63.4	54	75	

(*)Fisher's test; (†)Chi-Square Test

Table 3. Comparison of men and women in relation to general quality of life (EORTC-QLQ-Q30)

EORTC QLQ-C30	Male (n=72)		Female (n=72)		p value
	Mean	Standard deviation	Mean	Standard deviation	
Functional scale					
Physical Function	82.78	18.70	76.53	23.68	0.082
Role Performance	83.80	22.50	78.17	22.54	0.191
Cognitive Function	88.89	16.80	78.64	22.39	0.002
Emotional Function	78.01	21.95	70.19	26.78	0.058
Social Function	81.94	27.79	73.94	29.64	0.098
Scale of symptoms					
Fatigue	21.60	25.35	22.85	27.53	0.779
Pain	9.95	18.27	11.97	23.60	0.568
Nausea/Vomiting	12.04	18.60	17.37	25.57	0.156
Dyspnea	7.87	20.55	7.98	19.89	0.974
Insomnia	20.37	30.92	26.29	35.14	0.287
Lack of appetite/Anorexia	14.35	28.97	21.60	34.31	0.175
Constipation	7.41	22.53	12.21	26.57	0.246
Diarrhea	18.52	30.58	16.90	25.11	0.730
Financial problems	22.54	32.745	27.70	36.07	0.373
General health status	73.96	22.68	78.05	21.39	0.269

Table 4 presents the gender comparison in relation to EORTC-QLQ-CR29 scales of body image and symptoms in colorectal cancer patients. Body image, abdominal pain and dry mouth re-

present lower quality of life among women. Men have lower quality of life due to the symptoms: fecal incontinence, sexual impotence and sexual arousal.

Table 4. Gender comparison in relation to EORTC-QLQ-CR29 scales of body image and symptoms

EORTC-QLQ-CR29	Male		Female		p value
	Mean	Standard deviation	Mean	Standard deviation	
Body image	85.96	17.88	76.85	28.45	0.023
Scale of Symptoms					
Anxiety	59.26	35.91	61.50	35.47	0.708
Weight	75.00	32.50	70.42	32.14	0.399
Urinary Frequency	40.51	27.94	48.84	26.73	0.070
Blood and mucus in stool	3.47	10.44	2.08	6.21	0.334
Frequency of evacuation	18.29	23.76	18.52	25.41	0.955
Urinary incontinence	3.70	14.32	4.23	12.51	0.817
Dysuria	5.09	14.43	3.29	11.48	0.410
Abdominal pain	8.80	17.68	16.90	23.14	0.020
Pain in the gluteal region	3.70	13.18	4.23	14.83	0.824
Swelling	19.44	25.48	21.13	29.40	0.715
Dry mouth	20.83	29.83	38.50	33.16	0.001
Hair loss	3.24	14.97	7.51	16.13	0.103
Palate	27.78	36.25	34.27	39.02	0.304
Flatulence	13.43	23.51	19.25	30.16	0.201
Fecal incontinence	11.11	20.17	1.41	6.75	<0.001
Injured skin	9.26	21.09	11.27	24.52	0.600
Embarrassment	11.11	22.37	18.78	32.72	0.104
Problems with stoma	11.11	24.46	11.11	28.00	1.000
Sexual impotence	1.42	0.78	1.15	0.62	0.027
Sexual arousal	2.18	0.96	1.49	0.85	<0.001
Dyspareunia	11.11	19.24	6.47	20.3	0.699

Discussion

In both groups there was prevalence of married patients, with elementary education, social class C and with religious practice. However, men remained active in the labor market, but with sick leave. Women were mostly retired. Still, there was prevalence in both groups of patients with colon tumor, in stage III, undergoing adjuvant treatment

and surgery, having a family history of cancer and absence of stoma. A study conducted with 144 Brazilian patients (72 men and 72 women) with colorectal cancer also found a predominance of 66.7% of patients from social class C (66.7%), with complete elementary education (67.8%) and living with a partner (69.4%).⁽¹⁵⁾ In the analysis of clinical characteristics, there was prevalence of colon cancer (85%), in stages III and IV (47.3%),

being submitted to surgery (95.8%) and adjuvant chemotherapy (65%), with a family history of cancer in 60.4% of the sample.⁽¹⁵⁾ In this sense, the sociodemographic profile of patients with colorectal cancer is composed of patients with low educational and income level, who live with a partner or are married. The low level of education can contribute to delay in the recognition of symptoms and search for care in health services. In addition, financial limitations hamper access to private health services, thus requiring the search for public network services, in which a long time is generally observed between the consultation, the diagnosis and the actual treatment of tumors.⁽¹⁶⁻¹⁸⁾ This delay in access and care allows the disease to progress, leading to late diagnosis (stages III and IV), which will require surgery in addition to chemotherapy, with a higher risk of associated mortality.⁽¹⁶⁻¹⁸⁾

The results of this research reveal that, in both genders, cognitive function was the most affected by colorectal cancer, thus contributing to a decrease in general quality of life. However, the impact was greater among men when compared to women. In a study that analyzed 101 patients with colorectal cancer, cognitive function had a similar score (mean = 76.25),⁽¹⁹⁾ however, women had lower quality of life related to this factor. On the other hand, a study of 317 patients with gastrointestinal cancer, of whom 145 had colorectal cancer, showed that men with colorectal cancer presented lower quality of life in the domains of physical performance, emotional and cognitive function.⁽¹⁰⁾ Several studies have showed the impact of chemotherapy drugs on the cognitive function of patients. This impact varies according to the chemotherapeutic drugs that constitute the treatment protocol. Thus, a study of 30 patients with gastrointestinal, breast and prostate cancer observed greater side effects in the 5-Fluorouracil (5-FU) + Cyclophosphamide + Doxorubicin protocol. Among the effects mentioned, in addition to changes in the cognitive function, the most outstanding are pain, lack of appetite and constipation.⁽²⁰⁾ This fact was verified in a study conducted in 317 patients with gastrointestinal cancer - 145 with diagnosis of colorectal cancer - in which the women reported feeling more fatigue, nausea/vo-

miting, pain and lack of appetite.⁽¹⁰⁾

It was evidenced that body image, abdominal pain and dry mouth represent lower quality of life to women. Men have lower quality of life due to the symptoms: fecal incontinence, sexual impotence and sexual arousal. A longitudinal research with one year of follow-up after surgery conducted with 75 Japanese (42 male and 33 female) patients with rectal cancer found that women had their overall health and quality of life affected by fatigue, weight loss, problems with defecation and future prospects. On the other hand, among men, fatigue, weight loss, future prospects and role performance was affected by defecation problems and financial difficulties.⁽²¹⁾ It is observed that cancer and the effects produced by its treatment lead to important changes in the life of patients, including difficulties of defecation/incontinence and weight loss - which impacts on the perception of the body image - elements that are corroborated by other studies. In addition, pain and fatigue deriving from treatment may explain the poor quality of life presented by men in relation to sexual activity and arousal. In this sense, it is evident how colorectal cancer affects the social life of patients, which results not only from the direct effects of the treatment but also from the outcomes of the disease in the professional field, since there is often a decrease in productivity at work and retirement or sick leave, which leads to social isolation and depression. This is confirmed by research with 100 colon cancer patients in which men pointed out work activities and women social relationships as the elements that most negatively affected quality of life.⁽²²⁾ In addition, although cognitive function had had a greater impact on quality and life in this study, it is necessary to consider the psychological aspect and its effect on the quality of life of men and women. This was verified in a study of 114 patients with different types of tumor in which depression was the strongest predictor of decline in quality of life in both male and female patients.⁽²³⁾

It is concluded that cognitive function leads to lower general quality of life in men when compared to women. Body image, abdominal pain and dry mouth represent lower quality of life for

women. Men have lower quality of life due to the symptoms: fecal incontinence, sexual impotence and sexual arousal. Thus, it is confirmed that chemotherapy has a negative impact on men and women, but the symptoms of the disease and the treatment that reduce the quality of life differ between the genders. These results allow increasing knowledge about the quality of life from a gender perspective in a Brazilian population. In this sense, the nurse must be aware of the effects of chemotherapy on patients' quality of life, considering the gender differences in the perception of this phenomenon. Thus, in the care context, when evaluating the patient systematically and considering the gender differences in this process, nurses will be able to focus on the elements that contribute to lower quality of life in each group and, thus, to plan and implement individualized and humanized preventive measures and treatment for patients with colorectal cancer undergoing chemotherapy.

As a limitation of this study, we highlight the convenience sampling that does not allow the selection of subjects with a combination of sociodemographic and clinical characteristics in order to make the comparison of the quality of life even more reliable. In this sense, further studies with randomized and numerically larger samplings should be conducted so that the differences in the quality of life between men and women cannot be attributed to other characteristics than those present in the evaluation instrument.

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Development of coverage and its evaluation in the treatment of chronic wounds

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Development of coverage and its evaluation in the treatment of chronic wounds

Objective. To describe the development of the bacterial cellulose coating with anti-inflammatory Ibuprofen (BC/lbu) and to evaluate the cicatrization process with its use in patients with chronic wounds of venous and diabetic etiology. **Methods.** Longitudinal descriptive study. The cellulose membrane, cultivated with bacteria *Gluconacetobacter xylinus* and with incorporation of Ibuprofen, was used in the treatment of patients with chronic wounds in public health services in a Brazilian municipality. The ideal coverage characteristics were evaluated through physical, chemical and cell proliferation tests. **Results.** The sample consisted of 14 patients (10 women and 4 men), 8 with venous ulcer, 5 with diabetic foot and one with mixed wound. There was reduction of area and pain in 9 lesions; total healing of 3 wounds; and debridement of the devitalized tissue in 5 wounds with increased area. The use of the membrane was important in the reduction of pain, exudation and

ease in the accomplishment of the curative. **Conclusion.** BC/lbu favored the cicatrization process of patients with chronic vasculogenic wounds.

Descriptors: diabetic foot; varicose ulcer; cellulose; ibuprofen; wound healing; *Gluconacetobacter xylinus*.

Desarrollo de cobertura y su evaluación en el tratamiento de las heridas crónicas

Objetivo. Describir el desarrollo de la cobertura de celulosa bacteriana con antiinflamatorio Ibuprofeno (CB/lbu) y evaluar el proceso de cicatrización en la utilización en pacientes con heridas crónicas de etiología venosa y diabética. **Métodos.** Estudio descriptivo longitudinal. La membrana de celulosa, cultivada con bacterias *Gluconacetobacter xylinus* y con incorporación del Ibuprofeno se utilizó en el tratamiento de pacientes con heridas crónicas en servicios de atención pública de un municipio brasileño. Se evaluaron características de cobertura ideal mediante pruebas físicas, químicas

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y de proliferación celular. **Resultados.** La muestra fue constituida por 14 pacientes (10 mujeres y 4 hombres): 8 con úlcera venosa, 5 con pie diabético y uno con herida mixta. Se redujo el área y el dolor en 9 lesiones; la cicatrización total de 3 heridas; y el debridamiento del tejido desvitalizado en 5 heridas con aumento del área. El uso de la membrana de celulosa disminuyó el dolor de la exudación y facilitó la realización del vendaje. **Conclusión.** La CB/Ibu favoreció el proceso de cicatrización de los pacientes con heridas crónicas vasculogénicas.

Descriptor: pie diabético; úlcera varicosa; celulosa; Ibuprofeno; cicatrización de heridas; Gluconacetobacter xylinus.

Desenvolvimento de cobertura e sua avaliação no tratamento de feridas crônicas

Objetivo. Descrever o desenvolvimento da cobertura de celulose bacteriana com anti-inflamatório Ibuprofeno (CB/Ibu) e avaliar o processo de cicatrização com a

sua utilização em pacientes com feridas crônicas de etiologia venosa e diabética. **Métodos.** Estudo descritivo longitudinal. A membrana de celulose, cultivada com bactérias *Gluconacetobacter xylinus* e com incorporação do Ibuprofeno, foi utilizada no tratamento de pacientes com feridas crônicas em serviços de atendimento público de um município brasileiro. *Foram avaliadas as características de cobertura ideal mediante testes físicos, químicos e de proliferação celular.* **Resultados.** A amostra foi constituída por 14 pacientes (10 mulheres e 4 homens), sendo 8 com úlcera venosa, 5 com pé diabético e um com ferida mista. Houve redução da área e da dor em 9 lesões; cicatrização total de 3 feridas; e o debridamento do tecido desvitalizado em 5 feridas com aumento da área. O uso da membrana além da diminuição da dor, da exsudação e facilidade na realização do curativo. **Conclusão.** A CB/Ibu favoreceu o processo cicatrização dos pacientes com feridas crônicas vasculogénicas.

Descritores: pé diabético; úlcera varicosa; celulose; ibuprofeno; cicatrização; Gluconacetobacter xylinus.

Introduction

Assistance to the wounded person involves aspects such as types of injuries or traumas, with their respective specificities; however, it is necessary to evaluate the patient in the different sociocultural and health care contexts to which they are inserted, identifying the characteristics of each wound. Through integral analysis it is possible to plan the nursing care and the multi professional team to solve the demand of the patients.⁽¹⁾

Chronic wounds result from absences from the ordered and temporal tissue repair process or from anatomical and functional restoration.⁽²⁾ Among the chronic wounds we work with vascular wounds, venous ulcer (VU) and diabetic foot (DF) lesions, because they constitute a major public health problem, both in Brazil as in the world, with physiological, psychosocial and cultural repercussions.⁽²⁾

Treatment involves several factors and may be difficult, due to the disease's own changes, such as

associated comorbidities, advanced age, eczema and dermatosclerosis,⁽³⁾ and the therapy is related to correction of the preexisting condition and use of local measures to occur.⁽⁴⁾ Among the various coverage's used in the treatment are activated carbon, charcoal with silver salts for lesions with a large amount of exudate; hydrocolloids in small and medium lesions; antibiotics and collagenase.⁽⁵⁾

Topical administration drugs have been frequently indicated, because they exert an adjacent peripheral effect,⁽⁶⁾ and among nonsteroidal anti-inflammatory drug in clinical practice we have ibuprofen. Its mechanism of action is the inhibition of the cyclooxygenase type 1 and 2, reducing the synthesis of prostaglandins and the sensitization of peripheral nerve endings, common site of pain and inflammation. Its topical administration promotes therapeutic concentration in the target tissue, however the serum level does not generates adverse reaction.⁽⁶⁾ On the other hand, Ibuprofen is almost soluble in water and easily solubilized in alcohol, acetone, ether and methylene chloride.⁽⁷⁾

The objective of this research was to describe the development of bacterial cellulose coverage with anti-inflammatory Ibuprofen (BC/Ibu) and to evaluate the cicatrization process with its use in the treatment of chronic wounds, of venous and diabetic etiology of lower limbs, of patients in clinical follow-up in public assistance services in a Brazilian municipality.

Methods

This work was developed as a doctoral thesis of the Institute of Chemistry, Biotechnology Program of UNESP of Araraquara-SP, from March 2013 to February 2017, BC blankets were prepared in the Laboratory of Photonic Materials of the Institute of Chemistry of the UNESP, whose cultivation of the bacteria *Gluconacetobacter xylinus* occurred in 72 hours at 28°C, in static culture medium.

For the removal of the bacteria, the membrane was treated with a dilute solution of sodium hydroxide at 80°C for 20 minutes, followed by thorough washing with distilled water. After this preparation, the BC blankets were immersed in the anti-inflammatory Ibuprofen, which was diluted with 1 ml of distilled water at the concentration of 0.5mg/cm² and placed in an oven at 28°C for 24 hours. These membranes were also analyzed and characterized by means of different physical tests, such as Scanning Electron Microscopy (SEM), X-ray diffraction, Thermogravimetric Analysis (TGA), Differential Scanning Calorimetry (DSC), Infrared, UV-Visible Spectroscopy (UV-vis) and cell proliferation.

After drying, BC/Ibu membranes were packed in surgical grade paper and sterilized by gamma rays by Embrarad, Cotia (SP). The BC/Ibu coverage was applied in a non-probabilistic sample, for convenience, of patients in clinical follow-up in the public assistance services of a Brazilian municipality. The project was approved by the Research Ethics Committee through the CAAE registry: 36527414.7.0000.5512, and with report number: 911.647. Participants were requested to authorize the photographic registry of the evolution of the wound using the BC/Ibu

coverage. Ulcers evaluation was performed with the photographic images of a digital camera (Sony Cyber-shot 14.1 mega pixels), and the analysis of its total area was measured with ImageJ 1.46 software, in the public domain. Thus, the areas of each ulcer were calculated by ImageJ software, with the definition of ulcer healing index (UHI), where UHI-1, total re-epithelialization; UHI-0 without signs of re-epithelialization; 0<UHI<1-reduction of the ulcerated area; UHI<0-increase of ulcerated area, calculated by the formula: initial area minus the final area, divided by the initial area.

A quantitative, longitudinal descriptive study was carried out involving individuals of both sexes, over 18 years of age, who had chronic wounds of vasculogenic etiology, VU and/or DF, at any stage of cicatrization, in the chronic phase of the wound, attending the care services of a Brazilian municipality; were excluded from the study, patients who were not carriers of vasculogenic wounds or who were not in the chronic phase. Treatment was discontinued after full healing or at most 120 days or when the patient changed the conduct by medical request or by his or her will.

The dressings of the enlightened patients were performed by them and supervised by the researcher, after training and the others the researcher herself performed daily in the health units and/or in their homes. This wound was evaluated on the first day of treatment and weekly, by measuring the total area through photographic records, and the patient was the control. Pain was assessed weekly through the pain intensity scale.

After, the data were analyzed statistically (mean, median, percentage) and the areas of wounds with ImageJ software 1.46.

Results

The BC/Ibu membranes, using the physicochemical techniques of SEM, X-ray diffraction, TGA, DSC, Infrared, UV-vis, cell proliferation assays with cultured fibroblasts, as well as the release tests of Ibuprofen and tests of permeation and retention of

Ibuprofen, presented all the necessary properties and absence of adverse reactions, which are characteristics of an ideal coverage.

Among the 14 participants that constituted the sample of this study, 8 (57.10%) had VU, 5 (35.70%) DF and 1 (7.20%) mixed ulcer, 2,483 days is the average time of existence of the wound, representing 6.8 years; 47,30 days was the average of the treatment, from all 17 wounds, 9 (52.94%) had area reduction, 3 (17.65%) total healing and 5 (29.41%) debridement with increased area (Table 1).

The study sample consisted of 14 patients, of which 10 (71.50%) were female and 4 (28.50%) were male. The participants' ages ranged from

43 to 86 years, with a mean of 64.7 years and a median of 53 years. As for marital status 6 (43.0%) were married, 4 (28.60%) were widowed, 2 (14.20%) were single and 2 (14.20%) were divorced. In relation to schooling, 2 (14.30%) were illiterate; 7 (50.0%) studied a number of years that are currently classified as fundamental I; 1 (7.10%) fundamental II; and 4 (28.60%) high school. As for comorbidities, 10 (71.43%) patients were diabetic and hypertensive, 3 (21.43%) hypertensive and 1 (7.14%) were diabetic only. About the income of studied participants, 11 (78.57%) were excluded due to health problems or retirees with an average of one to two minimum wages, 2 (14.29%) had no income, depending on the family and 1 (7.14%) worked without a portfolio signed, receiving less than one minimum wage.

Table 1. Characterization of the wound, according to type, time of existence and treatment with BC/Ibu and dimensions of the initial and final areas, during the domiciliary follow-up of the sample studied

Patient	Wound type	Time of existence	Time of treatment (days)	Initial areal (cm ²)	Final area (cm ²)	*IUA	Reduction %
1	VU	10 years	120	4.93	2.07	0.57	57.90
2	VU	20 years	48	44.62	29.8	0.33	33.07
3	DF	2 years	20	7.29	6.16	0.15	15.47
4	VU	1 year	120	7.41	6.78	0.08	8.48
5	DF	21 days	28	0.79	0	1	100
6	DF	1 year	28	4.25	2.78	0.34	34.45
7	VU	1 year 9 months	38	18.44	14.51	0.29	29.31
8	VU	1 year 6 months	15	6.44	8.52	-0.32	32.25*
9	MU	7 years	36	33.49	30.86	0.07	7.86
10	VU	10 years	120	8.70	22.59	-1.60	159.50*
11a	VU	40 years	15	2.09	1.98	0.05	5.21
11b				0.86	1.29	-0.49	49.49*
11c				5.44	9.04	-0.66	66.09*
12	VU	5 months	35	2.94	4.52	-0.53	53.77*
13	DF	6 months	15	15.32	13.58	0.11	11.37
14a	DF	10 days	14	1.13	0	1	100
14b			10	1.82	0	1	100

(*) Increase of the ulcerated area

We present the descriptive evolution of the participants during the follow-up of this study.

Participant 1. Female, 59 years, medical diagnosis of Diabetes mellitus, (DM) systemic arterial hypertension, hypothyroidism and VU, wound with 10 years of existence, that at the beginning of the treatment, with the presence of a large amount of serous exudate, at the end of the 120-day treatment, there was a 57.90% decrease in the area, absence of exudate, odor and pain, ease of coverage applicability and dressing permanence.

Participant 2. Female, 57 years, medical diagnosis of DM, systemic arterial hypertension and VU. The wound's lifetime was 20 years. At the beginning of the treatment there was a large serous exudation, with a foul odor, presence of slough and intense pain. At the end of 50 days of treatment, there was worsening of the clinical picture, with hyperthermia, intense pain in the leg and the participant's request for interruption of BC/Ibu treatment, the area was reduced by 33.07%. When BC/Ibu treatment was discontinued, the patient reported ease of coverage, but complained of severe pain.

Participant 3. Man, 65 years, medical diagnosis of DM, systemic arterial hypertension and DF, with 2-year wound life after 2-finger amputation (due to diabetes complications). Initially at the treatment, the wound had a large amount of purulent exudation. After 20 days of BC/Ibu treatment, there was a 15.47% decrease in area and exudation, besides the debridement of slough at the peripheral border, with granulation tissue. However, the participant requested a discontinuation of treatment claiming that he was not noticing improvement.

Participant 4. Man, 65 years, medical diagnosis of DM, systemic arterial hypertension and VU, with time of existence of the wound, of about 1 year. At the beginning of the treatment there was a mean amount of serous exudation and mild pain. At the end of BC/Ibu treatment at 120 days, the area of the wound was 8.48% smaller, with no exudation, odor and satisfaction report due to

the absence of pain, ease of application of this cover and maintenance of the dressing without extravasation.

Participant 5. A 86-year-old woman, a medical diagnosis of DM, systemic arterial hypertension and DF, had been injured 20 days due to the use of a slipper whose rubber handle was replaced by a piece of wire. In the initial evaluation of the wound there was presence of small amount of exudation and pain, from moderate to intense. With 28 days of treatment, there was total re-epithelialization, and the same one reported absence of pain, ease in the application of the cover and happiness for healing of the wound in a short time.

Participant 6. Man, 57 years, medical diagnosis of DM, systemic arterial hypertension and DF, with wound of one (1) year. Initially at treatment, there was a large amount of serous exudate. After 28 days of treatment, when the area of the wound was reduced by 34.45%, there was no exudate; however, it started a hyperthermia and malaise, which resulted in hospitalization and surgical approach to the wound. When our follow-up was interrupted, the patient reported absence of pain, ease of coverage and dressing.

Participant 7. Female, 63 years, medical diagnosis of DM, systemic arterial hypertension and VU, the first wound occurred more than 30 years ago, with no apparent cause; the current wound was 1 year and 9 months. The wound had a mean amount of serous exudation, local hyperemia and edema, and a large amount of slough throughout the wound; reported a lot of local pain and in the lower left limb. The treatment was interrupted at 38 days, when a reduction of the wound area of 29.31%, granulation tissue growth throughout the wound was reported at the time of application of the cover, but improvement soon afterwards, absence of use of analgesic via oral, besides the ease in the application of the cover and dressing, without extravasation of exudate.

Participant 8. Female, 43 years, medical diagnosis of systemic arterial hypertension, hypothyroidism and VU, 1 and half years ago. At the beginning there was presence of a medium

amount of serosanguinolent exudation in the wound, odor, and presence of necrotic tissue in the crust (eschar). After 15 days of treatment, at the vascular return medical visit, there was an exposure of the entire wound bed, with a 32.25% increase, due to the total debridement of necrotic and devitalized tissue (eschar), with total exposition of the wound area, which corresponds to the important phase of the scarring process and not lack of improvement. When treatment was interrupted, was related pain relief, ease of coverage, dressing without exudate and odor extravasation, and improvement in wound appearance due to debridement of the necrotic area were reported (Figure 1).

Participant 9. Female, 63 years, medical diagnosis of DM, systemic arterial hypertension and mixed ulcer (MU) for 7 years, with presence of large amount of serosanguinolent exudation and slough over the entire border of the wound, absence of wound bed, in addition to reports of intense pain, took painkillers several times a day. After 37 days of treatment, it was observed a decrease of the wound area of 7.86% and absence of exudate. However, it was diagnosed that MU and not only venous and treatment was discontinued, but the same reported significant improvement of pain, ease in the application of the coverage.

Participant 10. Woman, 84 years, aphasic after stroke, medical diagnosis of systemic arterial hypertension and VU from 10 years ago, which arose after an angioplasty. Wound with medium amount of serosanguinolent exudation and intense pain report. After 120 days, the area increased by 159.50%, due to the debridement of slough over the entire border of the wound and the growth of granulation tissue throughout the wound bed with a decrease in depth. At the end of BC/Ibu treatment, the son reported significant pain improvement, since she took daily pain medication and reduced the frequency to one analgesic every 3 days, ease in the application of the cover and dressing, without extravasation of exudate in the curative.

Participant 11. Man, 66 years, medical diagnosis of DM, systemic arterial hypertension and VU from

40 years ago, after a car accident, with two fractures in his leg. At the beginning of the treatment, the patient had a large amount of serosanguinolent exudation, in addition to peripheral hyperemia throughout the extension of the median portion inferior to the right knee; lower limb edema and three (3) wounds, two in the right leg and one in the left leg. After 15 days of treatment, it was interrupted at the request of the patient. In relation to the wounds, there was a decrease in the area of the wound in the left leg of 5.21% and increase in the other two of the right leg, one in 49.49% and another in 66.09%, due to the debridement and absence of slough throughout edge and wound bed. Besides, there was total absence of edema in the lower limbs and pain. When the treatment was interrupted, the participant reported absence of pain, ease in the application of the cover, without extravasation of exudate.

Participant 12. Female, 62 years, medical diagnosis of systemic arterial hypertension, obesity and VU for 5 months, with presence of small amount of serous exudation, slough throughout the wound, edema (+ + / + + + +) and reports of much pain. After 35 days, the treatment was interrupted at the request of the participant; there was a 53.57% increase in area due to total debridement of the slough, besides the regression of the edema in the left lower limb. Despite the persistence of pain, it was identified ease in the application and handling of the cover and absence of extravasation of exudate in the dressing.

Participant 13. Female, 56 years old, housekeeping, medical diagnosis of DM and DF from 6 months, with a large amount of serous exudation, reports of constant pain and worsening during the dressing procedure. After 15 days of treatment there was a decrease in the area of the wound of 11.37%, of the serous exudation and improvement of pain after dressing. Despite these results, the nursing professional modified the coverage used in the dressing. Thus, when the treatment was interrupted, persistence of pain during dressing was reported, but it improved after the end, ease in the application of the cover and absence of extravasation of exudate in the dressing.

Participant 14. Woman, 80 years, medical diagnosis of DM, systemic arterial hypertension and DF from 10 days. At initial evaluation, there was little serous exudation, thin and fragile skin around. At the end of 14 days of treatment with BC/Ibu, in

the left foot there was a 100% decrease in area and in the right foot there was a decrease of 100% in 10 days. Absence of pain, ease of application and coverage management, and absence of exudate and odor extravasation have been reported (Figure 2).



Figure 1. Photo of the first and last day of the coverage application of BC/Ibu

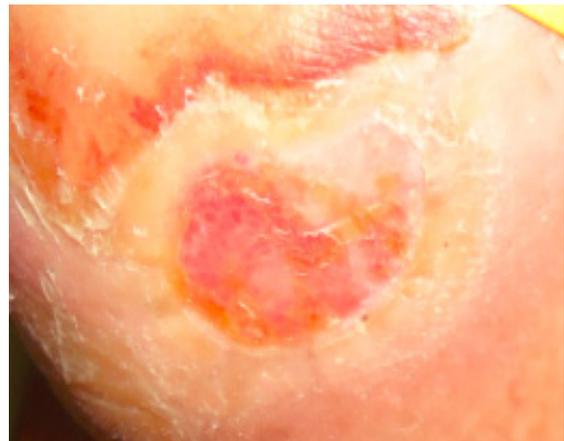


Figure 2. Photo of the first and last day of the coverage application of BC/Ibu

Discussion

The predominance of these wounds in females is usually related to female hormones and gestation, since hormonal changes predispose to chronic venous insufficiency and, consequently, to VU formation. Data reported in the literature indicate

a 2.3 fold higher proportion of vascular wounds in women than in men.⁽⁸⁻¹⁰⁾ Regarding age, data found in a study⁽¹¹⁾ in the city of Niterói, showed an average of 63.5 years, the same data found in this study. Schooling is a fundamental element so that people can access and seek information

in general, in addition to providing a better understanding of the guidelines given by the health professional. Similar data were found in another study, where low level of schooling limited access to information, making it difficult to understand the diet, physical activity, medication dosage, among other factors.⁽¹²⁾

The process of wound healing depends on a multiplicity of factors, related to the physiological, social aspects, accessibility of the health care and feeding system, among others. Therefore, for the analysis of the sample profile of this study, we used the concept of Social Determinants of Health (SDH), that the living and working conditions of individuals and population groups, related to their health situation.^(13,14) Thus, when analyzing sociodemographic and clinical data, considering SDH from the perspective of the National Commission on Social Determinants of Health, which expands the discussion in greater detail on social, economic, cultural, ethnic/racial, psychological and behavioral factors.^(13,14) In this study, the specificity refers to the indication of coverage and the performance of the curative intervention. It is important to note that the Human Development Index (HDI) measures the level of human development in the countries using as indicators of education (literacy and enrollment), longevity (life expectancy at birth) and income (GDP per capita). Countries with HDI of up to 0.499 have low human development; countries with indices between 0.500 and 0.799 are considered medium human development and countries with HDI higher than 0.800 have high human development.⁽¹⁵⁾

The research was carried out in the municipality of the interior of São Paulo, in Araraquara, whose HDI is 0.815, which indicates a high human development. However, the profile of our sample does not corroborate this HDI, since we have from illiterate patients, with a family income of a minimum wage and with hopeless life, for having health problems for years and with a wound that does not heal. These considerations may help to understand the difficulties to manage the factors in the sample of this study, which influenced the occurrence of health problems and

risks for possible complications in people with vasculogenic wounds, as well as in the evaluation of BC/lbu use. Among these, we identified the age, comorbidities, temporality of wound existence, use of oral medications with several active principles, as well as family income, access to formal study, employment relationship, which interfere in the onset or maintenance of an injury.

From the clinical point of view, the participants in this study had a predominance of DM and systemic arterial hypertension, and the vasculogenic wound, whether DF or VU, are the complications of these diagnoses, which further compromises the scarring process. We also point out that the temporality of the lesion varied between 10 days and 40 years, with a history of failures of other therapies, mainly the topical ones, with use with different medications. In addition, we observed that these individuals had no possibility of adequate maintenance of food, hygiene and effective daily dressing, as well as presenting difficulties for total adherence to treatment.

The nutritional condition is another decisive factor in the evolution of the scarring process due to the specificity of action as the proteins favor the inflammatory response and the synthesis of collagen with the remodeling of the ulcer; carbohydrates and fats by providing energy; vitamin K by acting in the coagulation process, B complex in collagen metabolism, zinc in cell proliferation and epithelization; and manganese, copper, magnesium and vitamins A and C as contributing to the synthesis of collagen.^(16,17) Thus, these nutritional factors could explain the fact that the participants present ulcers with greater difficulty in healing (P8, P10, P11 and P12), as they reported eat predominantly carbohydrate and frying, which is not adequate considering that almost all have other comorbidities such as DM or systemic arterial hypertension. On the other hand, the increased area of the wounds of these individuals may be related to the fact that BC/lbu presents the characteristics of an ideal cover, maintaining the moisture in the wound bed, which favors the occurrence of the healing process, process control inflammatory, as well as natural debridement, according to results of the analysis

of the chemical and biochemical characteristics of this study.

The appearance of chronic wounds, especially DF and VU, interferes in the quality of life of these individuals, and the socioeconomic impact of these patients is significant due to the expenses with the treatments, prolonged and recurrent hospitalizations, physical and social incapacities, with loss of employment and productivity. For the person, there is repercussion in his personal life, affecting his self-image, his self-esteem and his role in the family and in society, and if there is physical limitation, it can lead to social isolation and depression.^(18,19) Perception of the patient and his family, how to deal with self-care and with the disease.⁽²⁰⁾ Physical complications occur in the short and long term, with changes in lifestyle, polarization of daily time for treatments, and adverse drug events.⁽²¹⁾ Can be compromised as a result of frustration and hopelessness with the disease and its complications; fatigue or dismay with treatment management, as well as low self-esteem, inferiority and depression,⁽²²⁾ which constitute the major challenges for professionals in providing assistance to this clientele.

The limitations of this study were related to obtaining a larger sample due to the difficulty of longitudinal follow up by the clinical involvement of the participants and the maintenance of their adherence to the treatment.

Conclusion. Through the treatment with BC/Ibu coverage, we obtained promising results such as total healing of 3 wounds, reduction of the area of 9 wounds and debridement of the slough in 5 wounds; reports of absence and/or decreased pain and use of oral analgesics. With the permeation of Ibuprofen, which affects the blood circulation, decreasing or relieving pain, without causing gastrointestinal reactions, it has improved the social life of the patients, as well as the absence of extravasation of the exudate of the wounds, the maintenance of dry dressing and the ease of use of these patient coverage. The coverage of BC/Ibu for the vasculogenic wounds such as DF and VU remained intact in the wound bed of the patients; allowed gas exchange and ease of dressing.

For nursing and public health this study is an advance, since it contributes as an alternative in the treatment of chronic wounds, never reported in the literature, of the association between the cellulose membrane and Ibuprofen, since its production and the implementation of its use in users of the public health system with the achievement of promising results.

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Impact of Applying a Learning Strategy to Improve the Sample Quality in Cervical Screening in Nursing Staff in Social Service

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Impact of Applying a Learning Strategy to Improve the Sample Quality in Cervical Screening in Nursing Staff in Social Service

Objective. The study sought to assess the impact of applying a learning strategy to improve the quality of sample collection during cervical screening by students from the Nursing Degree Program doing social service.

Methods. This was a longitudinal, quasi-experimental study with the participation of 23 interns from the Nursing Degree Program at a public university from San Luis Potosí, Mexico. The work assessed knowledge of

practical skills in taking cervical cytology tests and the quality of samples before and after applying a learning strategy that included 10 h of theoretical training and 22 h of practices on themes related to sample collection in cervical screening. **Results.** A statistically significant difference was obtained in improved knowledge ($t = -12.8$ $p < 0.001$) and practical skills ($t = -8.86$ $p < 0.001$) after the intervention. The increased percentage of suitable samples from 30.43% to 82.60% was attributed to the application of the learning strategy in the pre- and post-intervention phases ($p < 0.001$). **Conclusion.** Training is effective

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to improve knowledge and practical skills to collect samples in cervical screening, as well as the quality of the samples for their interpretation.

Descriptors: uterine cervical neoplasms; Papanicolaou test; quality assurance; health care; inservice training; students, nursing.

Impacto de la aplicación de una estrategia de aprendizaje para mejorar la calidad de la muestra en el tamizaje cervical en personal de enfermería en servicio social

Objetivo. Evaluar el impacto de la aplicación de una estrategia de aprendizaje para mejorar la calidad de la toma de la muestra en el tamizaje cervical en estudiantes de Licenciatura de Enfermería en servicio social. **Métodos.** Estudio cuasi-experimental, longitudinal realizado en el que participaron 23 pasantes de la Licenciatura en Enfermería de una universidad pública de San Luis Potosí, México. Se evaluaron los conocimientos y las habilidades prácticas en la toma de las citologías cervicales y la calidad de las muestras antes y después de la aplicación de una estrategia de aprendizaje que incluía un entrenamiento de 10 horas teóricas y 22 horas prácticas con temas relacionados con la toma de muestra en el tamizaje cervical. **Resultados.** Se obtuvo una diferencia estadísticamente significativa en el mejoramiento de los conocimientos ($t=-12.8$ $p<0.001$) y de las habilidades prácticas ($t=-8.86$ $p<0.001$) después de la intervención. Se atribuyó a la aplicación de la estrategia de aprendizaje el aumento del porcentaje de muestras adecuadas de 30.43% a 82.60% en las fases de pre y post-intervención ($p<0.001$). **Conclusión.** El entrenamiento es eficaz para mejorar los conocimientos y las habilidades prácticas para la toma de la muestra en el tamizaje cervical, así como la calidad de las muestras para su interpretación.

Introduction

Globally, cervical uterine (CU) cancer constitutes a public health problem, given that it causes 528 000 new cases and 270,000 deaths per year, with 85% of these occurring in developing countries. ⁽¹⁾ In the last 30 years, incidence and mortality rates due to this type of cancer has diminished because social and economic indicators have

Descritores: neoplasias del cuello uterino; prueba de Papanicolaou; garantía de la calidad de atención de salud; capacitación en servicio; estudiantes de enfermería.

Impacto da aplicação de uma estratégia de aprendizagem para melhorar a qualidade da amostra na tamizagem cervical em pessoal de enfermagem no serviço social

Objetivo. Avaliar o impacto da aplicação de uma estratégia de aprendizagem para melhorar a qualidade da toma da amostra na tamizagem cervical em estudantes de Licenciatura de Enfermagem no serviço social. **Métodos.** Estudo quase-experimental, longitudinal realizado com a participação 23 passantes da Licenciatura em Enfermagem de uma universidade pública de San Luis Potosí, México. Se avaliaram os conhecimentos as habilidades práticas na toma das citologias cervicais e a qualidade das amostras antes e depois da aplicação de uma estratégia de aprendizagem que incluía um treinamento de 10 horas teóricas e 22 horas práticas com assuntos relacionados com a toma de amostra na tamizagem cervical. **Resultados.** Se obteve uma diferença estatisticamente significativa no melhoramento dos conhecimentos ($t=-12.8$ $p<0.001$) e das habilidades práticas ($t=-8.86$ $p<0.001$) depois a intervenção. Se atribuiu à aplicação da estratégia de aprendizagem o aumento da porcentagem de amostras adequadas de 30.43% a 82.60% nas fases de pré e pós-intervenção ($p<0.001$). **Conclusão.** O treinamento é eficaz para melhorar os conhecimentos e as habilidades práticas para a toma da amostra na tamizagem cervical, assim como a qualidade das amostras para sua interpretação.

Descritores: neoplasias do colo do útero; teste de Papanicolaou; garantia da qualidade dos cuidados de saúde; capacitação em serviço; estudantes de enfermagem.

improved. This change is due in great part to the implementation of secondary prevention efforts regarding early diagnosis and treatment of cancer precursor lesions during early stages.⁽²⁾ According to the Pan-American Health Organization in 2012, over 83 000 women were diagnosed with the disease and almost 36,000 died due to this cause in the Americas; adding that if current

trends are manifested, the number of deaths will increase by 45% by 2030. According to the same source, mortality rates are three times higher in Latin America and the Caribbean than in North America, revealing huge inequalities in health.⁽³⁾

In 2009, Mexico reported a mortality rate due to CU cancer of 9.1 cases per 100 000 women and the state of San Luis Potosí reported 10.1 cases per 100 000 women.⁽⁴⁾ In this country, although screening is generally done by using the Papanicolaou test (cervical cytology or PAP), it is recognized that the effectiveness of the program on Timely Detection of Cervical Uterine Cancer has been poor.⁽⁵⁾ A critical element that explains the low impact of the program on mortality due to CU cancer in most Latin American countries is the dissociation between the screening and treatment activities,⁽⁶⁾ with one of the critical factors being the quality of the samples for screening due, among others, to lack of compliance with the guidelines established in the cytology and pathology manual regarding the revision of the cyto-colpo-histopathological congruence, forms of training, and quality control, as well as personnel deficiencies in sample collection.⁽⁷⁾ A recent Mexican study⁽⁸⁾ showed that an important difficulty in the person collecting the sample is ignorance of the anatomy of the female lower genital tract, specifically the localization of the endocervix, the transformation zone, and lack of knowledge on which cells make up the transformation zone. Other faults were observed on the type of recommendations given to the user, the registry – particularly in identifying risk factors, and the gynecological evaluation before and during the test, as well as in applying the central technique (collecting the sample, spreading, and fixation).

The aforementioned justifies the need to conduct studies on educational interventions to improve the quality of sample collection from the cervical cytology. Students and interns (nursing staff engaged in social service) from the Nursing Degree Program in Mexico undertake their practices in public institutions. These practices include taking cervical cytology tests; hence, it is fundamental to improve capacities in this regard since their attendance to the university, which will increase their knowledge and skills as health

service providers. Thus, the aim of this study was to evaluate the impact of applying a learning strategy to improve sample quality in cervical screening by the nursing staff in social service.

Methods

The study design was quasi-experimental, longitudinal and prospective, conducted in a university health center at a public university from February to June 2015. Convenience sampling was carried out of the institution where the study took place, with participation from 23 individuals who were about to complete their social service and required training in taking cervical cytology tests prior to concluding that stage. An educational intervention was designed based on the Andromache model for teaching innovation in taking these cytology tests, registered in the National Copyright Institute, dependent on the Mexican Secretary of Public Education (INDAUTOR, registry number: 03-2014-020412513001-01), and which was designed by researchers in the Faculty of Nursing at Universidad Autónoma de San Luis Potosí, Mexico. The intervention lasted two weeks with a total of 48 h, 24 h per week and was divided into three phases: 1- basal measurement, 2- training, and 3 -final measurement.

The first phase that conducted the basal measurement lasted 8 h, considered for the study as the pre-intervention and it assessed knowledge on taking cervical cytology tests and the skill in its execution. To apply the intervention, personnel participated from Pathology, Nursing, Gynecology, specialists in public health and information technology, all trained and certified in their given area. Three instruments were used: a test to measure knowledge and two verification lists, one to evaluate skills in taking cytology tests and another to emit the report of the quality of the cervical cytology samples. Knowledge was measured by applying a structured survey with 57 items (scale from 0 - 57 points, starting from the Mexican official norm), which has four sections: personal data (6 items), Mexican Official Norm (NOM-014-SSA2-1994. Secretary of Health,

Mexico) (four items); anatomy of the female lower genital tract (six items); and steps of the procedure to take cervical cytology tests (47 items).

To obtain the score in practical skills, a verification list was designed with a measurement scale from 0 to 126 points, with three codes to evaluate in the procedure to take the cervical cytology tests: 0 (not taken), 1 (partially taken), and 2 (taken). It has five sections: reception of the user (3 items), registries (23 items), preparation of material (2 items),

preparation of the user (8 items), and screening technique (27 items). The highest score is 126 for the person who throughout the procedure obtained two points for each item. Quality of the cytology tests was obtained through the report from the pathologist who was considered the gold standard. This study catalogued as suitable those samples with endocervical cells. The results were reported in a verification list based on the Bethesda System 2001, which classifies the sample as suitable or unsuitable (Table 1).⁽⁹⁾

Table 1. Bethesda System 2001. Quality classification of cervical cytology tests

Suitable sample	Unsuitable sample
Presence of 10 squamous cells of metaplasia	Shows >75% necrosis
Presence of exocervix cells	Shows >75% bleeding
Presence of cells from the transformation zone	Shows >75% inflammation
Presence of 8,000 to 12,000 squamous epithelial cells	Shows >75% poor fixation

Instrument reliability was measured through Cronbach's alpha (0.74 for the survey and 0.80 for the verification lists); experts on the topic provided validity.

The second phase corresponds to the training carried out during 32 h, 8 h per day. In this phase, theoretical classes (10 h) were dictated along with the practices (22 h). The theory was taught by professors, physicians, and researchers who were experts on the topic, using reading material, videos on the correct taking of cervical cytology tests, systematization of experiences to obtain facilitators and hindrances from the opinions of the participants and based on their experience, didactic techniques, like plenary talks, expositions and demonstrations, such as the technique to carry out the staining train and the importance of correct sample taking. The core of this educational strategy is the practice phase, which applied innovative methodological strategies to propitiate a more significant learning environment. Among these is the *in vivo* reading of the cervical cytology samples, which means that once the participants collected the samples, the

staining was done in the place where the course was being offered. Thereafter, during a special session, by using a microscope, the pathologist reads and interprets the samples in front of the participants. The pathologist interprets each sample and communicates to individuals the quality with which it was collected, indicating if the sample contains endocervical cells and emitting the diagnosis. To perform said activity, four real-situation practices were carried out with patients. The first is cataloged as the basal measurement or pre-intervention and the last as post-intervention, which were taken to make the final comparisons of this study. Additionally, two other intermediate practices were conducted, denominated 360-degree practices and pre-final evaluation. The first makes a paired assessment (two participants, one conducts the technique and the other evaluates it), this is done to reinforce learning. In addition, an evaluator or certified monitor is present and is always in the consultation rooms to assess the procedure.

The pre-final evaluation practice is considered the last opportunity to carry out the technique of

taking the guided cervical cytology tests and with help from experts before the final evaluation. All the samples were collected with cyto-brush for endocervix and Ayre spatula for exocervix. The registry used a format denominated "Request and Results of Cervical Cytology" from the Secretary of Health in San Luis Potosí, Mexico. Other practices exist, like simulation and modelling. The first simulates taking cervical cytology tests by using lower mammal anatomical pieces (cow uterus) with simulator cytological models of flexible material with which students can improve their skills. Modelling is a workshop in which the participants use special soap to model their anatomical pieces (uterus and cervix) with which they perform the three central steps of this procedure: cell collection, spreading the cells on the sample holder, and fixation. Expert professors guide the practices at all times.

The final measurement (8 h) constitutes the last phase and, for this study, it is called post-intervention, which again and for the last time evaluated knowledge and practical skills. To analyze results related to knowledge and practical skills, Student's t and the analysis of variance with repeated measures were applied. Analysis of the results of sample quality was done by using the binomial test.

This study kept in mind the ethical principles contained in the Helsinki declaration. All the

participants and patients provided written informed consent. The Ethics Committee of the Faculty of Nursing and Nutrition at Universidad Autónoma de San Luis Potosí approved the project and assigned registry number CEIFE-2015-118. The diagnosis of the samples and their quality were validated through the Department of Pathology at Hospital Central Dr. Ignacio Morones Prieto located in the city of San Luis Potosí. All the results were delivered to the patients one month after performing the cytology study.

Results

This study showed in the participants a significant increase from the basal measurement to the final measurement in the average scores of theoretical knowledge (30.74 to 44.3 points) and in practical skills in taking cervical cytology tests (55.3 to 88.13 points) (Table 2).

A sustained increase was noted in the average score of practical skills measured during four sessions of the intervention (1st = 55.34, 2nd = 80.26, 3rd = 84.78, and 4th = 88.13), showing in the ANOVA that differences were statistically significant only between the first and the remaining three (Table 3).

The pre-intervention reported 30.43% suitable samples versus 82.6% in the post-intervention; this difference was statistically significant ($p = <0.001$) (Table 4).

Table 2. Scores of knowledge and practical skills for cervical screening (n = 23)

Variable	Statistics	Pre-intervention	Post-intervention	Difference	p
Knowledge	Median	30.74	44.39	- 13.65	<0.001
	SD*	5.387	3.026	5.11	
	Minimum	21	40	- 15	
	Maximum	39	50	- 11	
Skills	Median	55.35	88.13	- 32.78	<0.001
	SD	17.644	3.252	17.740	
	Minimum	21	79	- 40	
	Maximum	83	92	- 25	

(*) Standard deviation

Table 3. Results of the ANOVA of repeated measurements of the comparison of skills among practice sessions (n = 23)

Practice	Measurements	Difference of means	Lower limit	Upper limit	p
1	2	-24.91	-35.35	-14.46	<0.001
	3	-29.43	-40.52	-18.34	<0.001
	4	-32.78	-43.50	-22.06	<0.001
2	1	24.91	14.46	35.35	<0.001
	3	-4.52	-10.58	1.54	0.251
	4	-7.87	-13.61	-2.12	0.004
3	1	29.43	18.34	40.52	<0.001
	2	4.52	-1.54	10.58	0.251
	4	-3.34	-7.09	0.39	0.100
4	1	32.78	22.06	43.50	<0.001
	2	7.87	2.12	13.61	0.004
	3	3.34	-0.39	7.09	0.100

Table 4. Pre- and post-intervention report of sample quality (n = 23)

Practice	Suitable		Unsuitable	
	Number	%	Number	%
Pre-intervention	7	30.43	16	69.56
Post-intervention	19	82.60	4	17.39

Discussion

This study revealed that in the basal measurement participants obtained a low score with respect to the expected score. This result agrees with that reported by Songthap *et al.*,⁽¹⁰⁾ Arias *et al.*,⁽¹¹⁾ and Makwe *et al.*,⁽¹²⁾ who found that students demonstrated medium knowledge on CU cancer, given that they lacked sufficient clarity on the theme. Weaknesses found in this study regarding the low knowledge of the participants is related to the results of the samples in function of the quality reported through pathology because the first measurement only obtained 30.43% of samples with optimal quality and with the presence of endocervical cells. This result is similar to that reported by Yoshino *et al.*,⁽¹³⁾ whose work with nurses from a university in Japan indicates that only 4.7% knew that CU cancer is detected through tests, like the Papanicolaou test, and

concludes that deficient knowledge in this staff was associated with the failure to undergo cancer detection. Likewise, the study by Ali *et al.*,⁽¹⁴⁾ 2010, with interns in social service and nursing staff from a tier III hospital in Karachi, Pakistan, also indicates that only 23.3% were aware that CU cancer is the most common cause among gynecological cancers and 41% ignored the new detection methods; concluding that most service providers do not have sufficient knowledge on this ailment.

During post-intervention, the participants improved notably in knowledge acquisition and improved their practical skills, gained greater confidence, and the guidance provided to users was better. In this evaluation, the mean score in practical skills improved compared to the first measurement in the five sections assessed

(from 55.35 to 88.13 points). This result was reflected in the pathology report during the post-intervention, given that it reported 80% suitable samples, with useful material for its interpretation, which was the main objective in this study. This agrees with the results by Gómez *et al.*,⁽¹⁵⁾ where after an educational intervention to improve the taking of cervical cytology tests, it reported a greater amount of cervical material useful to emit results that are more accurate and diminish false negatives.

Training with this innovative methodology is effective to increase the capacities of participants, as well as to improve the quality of the samples from cervical cytology tests, given that this training has implemented strategies different from the habitual strategies. Nevertheless, it is fundamental to continue improving the teaching methodologies in students and health professionals. It is important to reinforce general learning in taking cervical cytology tests in the following aspects: awareness of the anatomical characteristics of a cervix, the way of conducting the gynecological assessment, different instruments used to collect samples, and the correct fixation technique.

One of the limitations in this study was the availability of educational and health institutions to allow their interns in social service to attend the training. We recommend increasing the number of participants in applying this methodology, as well as measuring the variables one or six months after the training concludes. We also recommend using this model in other intervention scenarios and testing new “be learning”-type tools to implement the advanced technology in health education.

In conclusion, interns in social service have among their functions that of providing care in public health services, and to a large extent, performing cervical screening, which is why it is fundamental for them to have solid theoretical and practical training that integrates the capacities and skills requested by the labor setting. Thus, upon increasing their technical skills and knowledge on cervical cancer, they will enhance their practice along with the quality of public services. This

study identified the importance of continuous training of the health staff in formation, given that during their attendance in the university, they acquire the necessary theoretical knowledge, but often practice is minimal in relation to the opportunities of direct care to patients. The results from this study evidence the need to implement continuous training and updating of the health staff, as indicated in the NOM-014-SSA2-1994 standard, for prevention, detection, diagnosis, treatment, control, and epidemiological surveillance of cervical-uterine cancer, as well as by the Action Program on Cervical Cancer in Mexico 2007-2012.

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Meaning of parenting as a teenager

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Meaning of parenting as a teenager

Objective. Describe the meaning of parenting as a teenager. **Methods.** Study of the qualitative approach with phenomenological approach in the fourth village of San Cristobal (Bogotá, Colombia). The information was obtained by means of semi-structured interviews, participant observation, photos, daily and focal groups field. The information analysis was performed using the phenomenological method of Amadeo Giorgi. **Results.** The meaning of their parenthood in the adolescents revealed five units of sense: emotional ambivalence, paternity as a process of learning, changes in lifestyle, making a life project and support networks. **Conclusion.** Teenage fatherhood was interpreted by the participants as a positive change and assumed a patriarchal perspective.

Descriptors: paternity; pregnancy in adolescence; community health nursing; qualitative research (source: MeSH-NCBI).

Significado de ser padre siendo adolescente

Objetivo. Describir los significados de ser padre desde la visión del adolescente mismo. **Métodos.** Estudio de enfoque cualitativo con abordaje fenomenológico realizado en la Localidad Cuarta de San Cristóbal (Bogotá, Colombia). La información se obtuvo mediante entrevistas semiestructuradas, observación participante, fotografías, grupos focales y diarios de campo. El análisis de la información se realizó mediante el método fenomenológico de Amadeo Giorgi. **Resultados.** Los significados de la paternidad en los adolescentes develaron cinco unidades de sentido: ambivalencia emocional, paternidad como proceso de aprendizaje, cambios en estilo de vida, formación de proyecto de vida, y redes de apoyo. **Conclusión.** La paternidad adolescente fue interpretada por los participantes como un cambio positivo y es asumida desde una visión patriarcal.

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Descritores: paternidad; embarazo en adolescencia; enfermería en salud comunitaria; investigación cualitativa.

Significado de ser pai sendo adolescente

Objetivo. Descrever os significados de ser padre sendo adolescente. **Métodos.** Estudo de enfoque qualitativo com abordagem fenomenológico realizado na Localidade Cuarta de San Cristóbal (Bogotá, Colômbia). A informação se obteve mediante entrevistas semiestruturadas, observação participante, fotografias, grupos focais e diários de campo. A análise da informação

se realizou mediante o método fenomenológico de Amadeo Giorgi. **Resultados.** Os significados da sua paternidade nos adolescentes revelaram cinco unidades de sentido: ambivalência emocional, paternidade como processo de aprendizagem, mudança no estilo de vida, formação de projeto de vida, e redes de apoio. **Conclusão.** A paternidade adolescente foi interpretada pelos participantes como uma mudança positiva e é assumida desde uma visão patriarcal.

Descritores: paternidade; gravidez na adolescência; enfermagem em saúde comunitária; pesquisa qualitativa.

Introduction

According to the World Health Organization, 16 million pregnancies in adolescents are reported each year, with complications during childbirth and pregnancy being the second leading cause of mortality in this age group⁽¹⁾ in Colombia, 17.4% of women between the ages of 15 and 19 have already been mothers or are waiting for their first child, and it is important to emphasize that these women predominate in rural areas, few years of schooling and low educational levels.⁽²⁾ in the City of Bogotá (Colombia) during 2014, 16 686 children of women aged 15 to 19 years were born,⁽³⁾ providing the locality of San Cristóbal almost one in ten of these children.⁽⁴⁾

Adolescent paternity brings with it the decrease of the social and economic capital of a country, whereas it provokes in the adolescent men situations like desertion student.⁽⁵⁾ Reproduction of the economic poverty, family and social rejection, loss of Employment and educational opportunities, among others.⁽⁶⁾ At the same time, paternity is associated with the process of building masculinity,⁽⁷⁾ accelerates the transition to adulthood and implies a process of adaptation and learning that generates challenges, aspirations, challenges and social and personal changes, to become Charge of a newborn and a family.⁽⁸⁾ In this context, the objectives of sustainable development, propose that for the year 2030, universal access to sexual and reproductive health services is required, including

family planning, information and education, as well as the need to strengthen Knowledge of sexual and reproductive health to combat adolescent pregnancy and sexually transmitted infections.⁽⁹⁾ for its part, during the year 2014 Colombia raised the national policy of sexuality, sexual rights and reproductive rights, in which it is pointed out that adolescent pregnancy perpetuates social inequities and therefore requires national actions and to lessen this phenomenon.⁽¹⁰⁾ In turn, the National Council for Economic and Social policy stresses that the approach of adolescent pregnancy should be carried out from an approach that includes the social determinants of health, to reduce the different social and economic gaps that They cause this phenomenon among teenagers.⁽¹¹⁾ In addition, in Colombia, studies and policies on the prevention of adolescent pregnancy have focused on women, minimizing the role and responsibility of men, so this research sought to describe the meanings of their paternity in adolescent parents attending the Secretary of Social integration, the Community Development Centre (CDC) La Victoria, of the fourth locality of San Cristóbal de Bogotá.

Methods

Qualitative type study, descriptive scope and phenomenological approach, in which seven adolescent parents participated between 15 and 19 years. The sampling of the participants was intentional, according to the fulfilment of the criteria of inclusion and to achieve the saturation

of data, so that a deep and detailed description of the meanings of the adolescent paternity was obtained. The inclusion criteria were: being an adolescent father between 15 and 19 years of age, assisting the CDC with victory and accepting participation in the investigation through informed consent or assent; At the same time. Those who were a teenage father were excluded for the second or more times and those with cognitive disabilities.

The investigative process was carried out between August 2013 and August 2014 at the CDC La Victoria, of the fourth locality of San Cristóbal (Bogotá, Colombia), located in an area of high social vulnerability, which converges different problems Social such as “Pandillismo”, the use of psychoactive substances, adolescent pregnancy, and domestic violence, among others.⁽¹²⁾ Likewise, the participating adolescent parents received support from the CDC of the Food Safety program for adolescent mothers, which consisted of the delivery of a \$40 food voucher, aid that was conditioned to the Assistance for parenting and maternity training for adolescent mothers and fathers. The gathering of the information was carried out through two interviews-first a semi-structured one and then a second one to deepen some essential topics-, participant observation, photographs, focal groups and field diaries. The approximate duration of the interviews was 30 minutes. The participant observation was carried out in other spaces different to the CDC of the victory as sports and cultural meetings organized by the researchers to generate a greater approach with the participants, among which the realization of A championship of Micro football, and attendance to museums by suggestion of the adolescent parents, to deepen in the description of the meanings of the adolescent paternity. The two focal groups involved the seven adolescent parents, helped with the saturation of data and with the understanding depth of the meanings of paternity for the teenager. The type of record was of narrative and audio-visual type, and the triangulation processes of the information obtained were developed, to increase the validity and quality of the research.

The information was codified in the Atlas software. TI 7 and the analysis was carried out through the

phenomenological method of Amadeo Giorgi, which led to a description of paternity through the categorization of all the findings in units of meaning, based on the Philosophy of Edmund Husserl and Merleau-Ponty.⁽¹³⁾ Otherwise, to maintain the purposes, objectives and requirements of the qualitative methodological approach, the criteria of auditability, credibility, transferability and dependence were considered. With regard to ethical considerations, the investigation complied fully with the provisions of resolution 8430 of the Ministry of Health and Social protection of Colombia, therefore the investigation was classified in the category without risk.⁽¹⁴⁾ (It is important to emphasize that the present study was financed by the Research and Extension Directorate of the National University of Colombia- Sede Bogotá, within the framework of the National Program of research, creation and innovation Seders of the Universidad Nacional de Colombia 2013-2015.

Results

It was found that, of the seven adolescent parents participating in the investigation, three were 17 years old; two, 18 years, and two, 19 years old. According to the educational level, five had incomplete baccalaureate; One, full baccalaureate, and one was a complete technician. As for who or who they lived with, three coexist with their families of origin, two live alone and two with their partners. The neighbourhoods inhabited by the seven adolescents belong to the socioeconomic stratum 2 (1 is the lowest and 6 is higher). The seven adolescent parents received financial aid from the state, which consisted of a food bond, provided they attended the maternity and paternity preparation courses offered by the CDC victory, and only four received help Economic of their families. The cross analysis of the diverse sources of data used in the study allowed to identify the following units of meaning of the meanings of their paternity for these adolescent parents: emotional ambivalence, paternity as a process of Learning, lifestyle changes, life project formation and support networks. We then describe the units of sense found, with their respective essential themes.

Emotional ambivalence: Between happiness and fear

Paternity generates in adolescent men ambivalent emotions, as happiness and fear at the same time; happiness, by the possibility of joining even more with their partners, and fear, so that their families would think.: *For at first, I gave as emotion of joy that I was going to be a father for the fruit of my love with her, but also gave me as fear of what I would say her mom and my parents (P3)*. Also, parenting in adolescents causes fear due to the acquisition of the economic, family and emotional responsibilities that this role carries, as well as conveying the news to the families: *that suddenly one day I will lose them, to separate me from them, not because I want, but because they make us separate, or lose them both already definitively because you may not have how to respond (P3)*. Likewise, happiness, fear, anxiety and anguish are shown: *for at the same time both joy and emptiness, because I did not know what to do, what I was going to say to my family before this, if you understand me, because I just heard I felt like tickle, as something I can't even explain, and as an anxiety to know you already, but then think of everything that's coming (P5)*.

Paternity as a learning process

In this sense unit, several essential topics were identified. The first important and characteristic topic of the learning process that involves fatherhood is learning to provide and feel love: *I have learned that the child moves with whom he feels most safe, with whom he better stimulates it, because until the sun today the child has moved CU Ando I touched his belly and I have learned to give affection that way to him (P4); That I could learn things that I did not know, that I can give affection to a person without seeing it; I have never been affectionate because my father raised me like this and I have always spent it alone since childhood, but now I have learned to love it, to give it affection, especially to pamper it, more than everything being in the belly (P6)*.

The second topic is the fear of repeating stories, for which the adolescent parents mentioned that

they have lived positive experiences and good examples of their parents or other people who took the role of parents for them, in order to be good examples for their Children: *From my dad I would not take any example, because he what he did was just to leave us thrown out for being in love with another woman, what I would do is the opposite and take good examples to be a good dad (P7); My dad has always fought, he has never starved to death or anything, and he has responded for us. That's why I think I do that, because he every Sunday he took us out and that was a good example of my dad (P5)*.

Paternity as a learning process also represents for adolescent parents a motive for struggle, which consists in the acquisition of responsibilities, summarized mainly in the economic responsibility to provide sustenance for their new Family; So, paternity is the main reason to include teen parents in the work world. Likewise, these responsibilities are acquired by the adolescent parents to show their families, their partners and their future children, the achievements that can achieve their dedication and motivation to bring forth their family: *Well now I must finish the most Soon to study, because one without a studio is no longer anyone, anywhere you go to ask for work, ask for a high school carton, whether to sweep the streets (P3); A child is not to tie it to one, but it always has one to take more responsibility than it has being lower (P4); It's just as cool to know that you have someone else to live for, and that's like having another happiness (P2)*. In addition, adolescents point out that a parent is the one who establishes the rules, the authority, and who cares and provides his family with what is necessary, as evidenced in the following phrases: *Being a parent is giving the permits, tidying the house, giving him what he needs, say, give him what he needs in the material, economically, that's what I've tried most, not much affectively (P2); On the one hand being a father is to give love to the children and the woman of one, but in my case as I am unaffectionate and generally one as a man as that does not flow to one like them, then my responsibility is in the financial support to my children and To my wife, who are missing nothing, and because now she has to stay looking after the baby (P3)*.

Changes in lifestyles

Identified changes in lifestyles, such as ending friendships that boost the use of psychoactive substances and abandoning tendencies to unprotected sexual intercourse and attending youth parties constantly. In the face of bad friendships, the participants referred that their children became a struggle to get ahead and be better people: *I was a barrista (a type of gang belonged to a football team), and if, say, if I had remained a "barrista", I could not offering my son nothing, I would only concentrate on wandering, drinking and being a drunkard, and in itself, the worst* (P1). The acquisition of responsibilities curtails the freedom of adolescents to have prior to their new role as parents, since freedom for them is summed to go out to juvenile parties with their peers, consume psychoactive substances and find couples to have sex; Although adolescents recognize as positive these changes that have generated paternity, at the same time they manifest miss those activities with their peers, as mentioned in the following excerpt: *It is no longer the same as before, you can no longer farrier (go to Parties) so much, neither smoke (to consume marijuana) so much* (P5).

Making of a life project

The fatherhood conducive that the adolescents project, formulate and, in the best option, carry out their life project, which is summarized in the shaping of a new family and in coexistence with their partner: *with the news that she gave to me, I immediately began to think about what would be our lives, and we set out to formulate the plan of life that always make us do, but for several reasons is not achieved. Now there is a motive of strength (the baby) that now forces us to do it to pull it forward* (P2).

In the same way, parents create the ideal of forming a family to provide stability for their children in the bosom of a home: *And now that I am a father I imagine myself in a home, in a house where my child can grow up, he can have his mom and dad together* (P1). However, and despite this ideal, there are obstacles imposed by

their in-laws, because the adolescent parents do not have an economic stability to meet the needs of their home, which is why many of them prefer to live with their families of origin and to visit his partner and son in the House of his in-laws: *with my mother-in-law very little we have taken and now that he learned that I was pregnant I caught more rage than I had; I have tried to talk to her, but as she does not get anything in her head, because she says no, no and no, she does not want to see me with the daughter, that I am a bad example for her and the baby* (P3).

On the other hand, other adolescent parents, despite not having economic stability, visualized from the beginning the coexistence as a couple, as evidenced in the following sentence: *As soon as I learned that she was pregnant I knew we should go to live both and I continue working as I was doing, because that will unite us as a new family we are* (P2).

Support Networks

Support networks, such as the family, especially the mothers of adolescent men, guided the care that they had to have with the babies, with their partner and the responsibility that brought with them paternity: *She says to me (my mom) how it is That one has to do things with the baby, how one has to treat the baby being in the belly, so one does not see it has to show the affection that feels for that person and so when the child is born, can be born well* (P1) , *my dad didn't like the news very much, he just scolded me and told me why he had gotten his paws so early; While my mom and sister are the ones who have been with me and have helped me with that learning and with the care* (P5).

Discussion

In this study it was identified that adolescent parents have difficulty expressing their feelings to their children and that they assume their role from a patriarchal vision, while being a parent denotes providing economic stability to their new Family and be the person who gives authority at

home, which is consistent with a study conducted in Uruguay, which shows that adolescent parents have conflicts to demonstrate their feelings by having strong patriarchal traits and assume their role from a Commercial vision for the pressure their families exert.⁽¹⁵⁾ Likewise, as opposed to the patriarchal figure, it is evident that the males appropriate the workforce and therefore of the economic responsibility, which allows them to have the authority on the family bosom, as well as of the dominion of their children and of “their woman” terms and socially they have been categorized as terms of dominance and inequality by several feminist authors.⁽¹⁶⁾

Likewise, it was observed that adolescent paternity fosters that adolescents develop a life project around parenthood, which is concretized in the shaping of a new family, coexistence with their partner and the acquisition of economic responsibilities; So, the adolescent paternity was assumed as a positive change, because they left aside risky behaviours like consuming psychoactive substances, going out with their friends to parties and having unprotected sex. This coincides with a study developed in Brazil that shows that paternity for adolescent men was assumed as a positive factor, because it generated a project of life and the interest to get a job and resume its studies;⁽¹⁷⁾ added to that It is essential for adolescent parents to provide financially for their families.⁽¹⁸⁾ Other studies show that adolescent paternity contributed to the consolidation of masculinity in adolescent men by assuming the role of guardian’s economic providers of the new family; Therefore, it was a positive experience that allowed them to stop being teenagers and become men;⁽¹⁹⁻²¹⁾ however, in another research, for some adolescent men the experience of adolescent paternity was negative, if That was associated with personal, economic and family problems.⁽²²⁾

The present research found that most of the adolescent parents had not completed their high school studies, were of low socioeconomic strata, received financial aid from the state and some had support from their families. About the foregoing, several investigations reiterate the importance of understanding the economic, political, social and

cultural context of adolescents, as the experience of adolescent fatherhood is directly influenced by their Context and the family support with which the adolescent men count.^(23,24) While it is true that the present study identified positive changes in the lifestyles of adolescent parents, paternity is more easily presented in spaces with lack of job and educational opportunities. In addition, the State and the society do not offer to the adolescent man conditions that favour the exercise of paternity, since in the formulation of the public policies of adolescent pregnancy do not include the expectations and educational needs of the Adolescents and it has been conceived that the problem of adolescent pregnancy is a matter only of women.^(25,26)

In this regard, it is necessary to build public policies capable of recognizing the adolescent man in the exercise of paternity, and formulating them based on the experiences and meanings of the adolescents themselves, considering that the Most teenage parents try to fulfil their responsibilities and few are prepared to raise their children.⁽²⁶⁾ Adolescent Parenthood is a subject of social, governmental and public health interest, due to its impact on the adolescent Life Project and its association with other problems, such as low levels of schooling and unemployment, which does not allow to close the social gaps and, on the contrary, perpetuates inequity.^(21,24) There is, however, a social potential in adolescent parents that must be evidenced through research, and the knowledge acquired in government decision-making should be harnessed, bringing young people closer to the spaces of Participation and social construction.

The conclusion of this study is that the adolescent parents conceived their paternity as a positive change, because they formulated a life project, they moved away from their peers and acquired economic and social responsibilities; Becoming a teenager was an exit to stop consuming psychoactive substances and to stop performing other types of juvenile risky behaviours. Concluding, as public policies for the prevention of adolescent pregnancy have traditionally focused

on women, it is essential that the needs and expectations of adolescent men be considered, developing programs Education that are in line with their sociocultural context. The limitations of this study mainly must do with the adolescent parents selected for this study attending the CDC the victory; However, its location and participation involved a process that overstep The Times initially planned, because the participants expected economic remuneration and some did not want to participate in the study, although they were socialized the importance of research and the confidentiality of information. The development of interviews and focal groups was a wasteful process, since the adolescent parents initially felt uncomfortable to be recorded, so it was necessary to develop interviews of deepening and to carry out activities of Sports and cultural awareness, to deepen the description of the meanings of adolescent paternity.

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In-depth Knowledge of the Role of the Clinical Mentor

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In-depth Knowledge of the Role of the Clinical Mentor

Objective. This work sought to unveil the meaning expressed by clinical nurses by being mentors for students from the nursing internship level. **Methods.** Phenomenological research. In-depth interviews were conducted with nine clinical nurses from a hospital in Santiago de Chile, who participate as mentors of nursing students in their last stage of university formation. **Results.** Four comprehensive categories were obtained with their respective units of meaning by nursing: 1) vocation and gratification, 2) personal and professional challenge, 3) big responsibility, and 4) transmission of experience. **Conclusion.** Clinical mentorship is a relevant experience in the professional lives of nurses, which implies overcoming challenges, self-training, and delivering the best of oneself, for the purpose of training future professionals prepared to practice nursing integrally.

Descriptors: preceptorship; students, nursing; qualitative research.

Conociendo el rol del tutor clínico en profundidad

Objetivo. Develar el significado para las enfermeras clínicas ser tutor de estudiantes del nivel de internado de enfermería. **Métodos.** Investigación fenomenológica. Se realizaron entrevistas en profundidad a nueve enfermeras clínicas, de un hospital de Santiago de Chile, quienes participan como tutoras de estudiantes de enfermería que se encuentran en su última etapa de formación universitaria. **Resultados.** Se obtuvieron cuatro categorías comprensivas con sus respectivas unidades de significado de enfermería: 1) vocación y gratificación, 2) desafío personal y profesional, 3) gran responsabilidad, y 4) transmisión de experiencia. **Conclusión.** La tutoría clínica es una experiencia relevante en la vida profesional de la enfermera, que implica vencer desafíos, autoformarse y entregar lo mejor de sí misma, con el propósito de formar un futuro profesional que esté preparado para ejercer la enfermería en forma integral.

Descriptores: preceptoría; estudiantes de enfermería; investigación cualitativa.

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Conhecendo o papel do tutor clínico em profundidade

Objetivo. Revelar o significado que tem para as enfermeiras clínicas ser tutor de estudantes do nível de internado de enfermagem. **Métodos.** Investigação fenomenológica. Se realizaram entrevistas em profundidade a nove enfermeiras clínicas, de um hospital de Santiago do Chile, quem participam como tutoras de estudantes de enfermagem, que se encontram em sua última etapa de formação universitária. **Resultados.** Se obtiveram quatro categorias compreensivas

com suas respectivas unidades de significado de enfermagem: 1) vocação e gratificação, 2) desafio pessoal e profissional, 3) grande responsabilidade, e 4) transmissão de experiência. **Conclusão.** A tutoria clínica é uma experiência relevante na vida profissional da enfermeira, que implica vencer desafios, autoformar-se e entregar o melhor de si mesma, com o propósito de formar um futuro profissional que esteja preparado para exercer a enfermagem em forma integral.

Descritores: preceptoria; estudantes de enfermagem; pesquisa qualitativa.

Introduction

An optimal clinical learning environment for the formation of future professionals needs integrated commitment and cooperation from all those involved in the process. These include higher education institutions providing the career formation; health institutions acting as clinical field; and health professionals who undertake the role of clinical mentors, who must make compatible care demands with the requirements of clinical teaching.⁽¹⁻³⁾ In relation to the concept of clinical tutor, also called preceptor, supervisor, or mentor, no consensus exists in literature on the specific functions associated to this term, which are even used as synonyms.^(4,5) Where agreement does exist is in the important contribution made by mentors to the formation of future professionals. In most cases, the mentor preceptor refers to the person in charge of socializing students in their professional role, facilitate the acquisition of technical skills in the clinical environment, and developing their critical thinking, that is, reaching the maximum effective learning in the clinic;^(2,5-7) in all, clinical mentors are models, teachers, advisors, facilitators, and evaluators.^(8,9)

In Chile, clinical mentors are especially important when nursing students are in the final semesters of their professional career, given that during that instance they must complete a 14-week clinical internship during which a clinical nurse who plays the role of mentor⁽¹⁰⁾ guides and evaluates them, in a one-to-one relationship. The

importance of clinical mentorship when training nursing students and in achieving an optimal study learning environment has been recognized over decades in many Anglo-Saxon countries, like Canada (Canadian Nurses Association), the United Kingdom (Nursing Midwifery Council), and Spain, among others, where the phenomenon has been studied and programs have been created for mentors and directives to facilitate and provide guidelines to undertake the role.^(6,11-13) In Latin America and Chile, the experience related to the role of the clinical nurse mentor is hardly studied and much less is its function defined. Estimates show that in Chile an increasing number of nursing professionals are engaged in this activity, considering that in recent decades there has been a considerable increase in Nursing Schools, which are in need of these professionals.⁽¹⁴⁾ The objective of this study was to reveal the meaning clinical nurses give to being mentors for students from the nursing internship level.

Methods

A phenomenological study was carried out based on the postulates by Heidegger,⁽¹⁵⁾ considering principally that the being under study is a *being there*, who is within a context and environment that determine the view or essence of what it means to be a mentor for nursing students. On the other hand, it provides researchers the possibility to state their own perceptions and opinions *a priori* on the phenomenon, establishing that these

should be recognized and evidenced to identify that which this being will effectively donate.⁽¹⁶⁾

Participant selection was intentioned. A letter of invitation to participate was delivered to all the clinical nurses who had gone through or were undergoing the experience of being mentors of students at nursing internship level, between September 2013 and July 2014, in hospitalized patient units from a health institution in Santiago de Chile, which acts as clinical field for diverse careers in this area. Everyone invited accepted to participate in the research.

The group size was established through the classical saturation criterion of emergent meanings according to Streubert,⁽¹⁷⁾ which was achieved on the sixth interview, with three more conducted to ensure the results revealed. The participants were nine women between 26 and 41 years of age, with a range between 1.5 and 18 years of work experience, and with an average of three mentorships carried out within the last two years. Information was gathered through in-depth interviews, with prior signing of the informed consent elaborated according to the precepts established in the Belmont report.⁽¹⁸⁾ Given that the principal investigator works in the hospital's education area, an external interviewer was hired, a teaching professional, experienced in qualitative research and with no relationship in the health area, to conduct the interviews in a place agreed upon by both and which permitted privacy and tranquility to respond; no one else was present. The interviews were audio recorded and lasted approximately 45 min, starting with the research question: What does it mean to you to be a mentor to nursing students? During the interview, notes were not taken. No pilot tests were run, nor was the interview repeated for the participants. The researchers carried out the complete textual transcription of each of the interviews, as well as the subsequent data analysis.

Information analysis used the classic method described by Streubert and Carpenter:⁽¹⁷⁾ bracketing prior to starting with the interviews, which continued during the analysis stage and

consisted in the personal recognition by the researchers of their biases, suppositions, and of their own experiences in relation to the theme. This was followed by careful reading and re-reading of each transcribed interview, to capture the general sense of the experience; to relate and group into units of meanings, which were accompanied with textual phrases by those interviewed to understand better the phenomenon. Thereafter, relationships were established among the essences, to group them into bigger units. Two co-researchers carried out the process independently to triangulate the information and grant reliability to the results.⁽¹⁷⁾ The study applied methodological rigor criteria established by Guba and Lincoln⁽¹⁷⁾ and the results obtained were returned to six participating nurses, to provide reliability to the interpretation of the experiences. The ethical aspects of the study were addressed according to the informed consent process⁽¹⁹⁾ and were approved by the ethics committee in the School of Nursing at Pontificia Universidad Católica de Chile.

Results

This study conducted and analyzed nine in-depth interviews in which each made up a body of analysis of around nine pages. The phenomenon showed four big comprehensive categories: *vocation and gratification*; *personal and professional challenge*; *big responsibility*; and *transmission of experience*. From these categories and their corresponding units of meanings, it was possible to unveil the experience the clinical nurses attribute to being mentors to students from the nursing internship, considered a *being there* with their environment.

The meaning of being a mentor to nursing students is unveiled as a beneficial experience perceived internally, given that on the one hand it emerges as a *vocation* that offers mentors the possibility of doing something they like or for which they have aptitudes, like teaching and preparing future nurses, a condition that would be perfected over time. This vocation is perceived as a gratifying experience that emerges when seeing students grow as individuals and as future professionals,

and how they feel they have contributed to this development. The mentor learns and keeps up to date with the intern, but she also transmits her knowledge to students validated in the task and the experience, which is why it is a process of mutual growth. Some testimonies related to the aforementioned: *it is because of the vocation I have, which is something quite big to prepare students, thus, for me it has a very important meaning (E6); the other thing that is quite enriching is to watch them, fulfilling their stage, fulfilling their goal, and their showing what they learnt and that they learned it well (E7); so, I started with that...base, that it was going to be like mutual growth, we would both go study together... in any case, the experience has been super enriching (E4).*

In addition, certain characteristics of the work environment to which the nurse mentor is exposed may determine that this function bears an important meaning as *professional and personal challenge*. Work overload and lack of time associated to the teaching practice; lack of tools to become mentors to students or the lack of recognition and incentives for the work they do, constitute the principal elements associated to this experience. For some of the mentors, individuals who fail to meet these challenges could lack teaching vocation, or if this role is imposed, the experience could be unsatisfactory for them and for their students: *I believe that a nurse mentoring a student intern has the same care responsibilities as the colleague who is not assigned to students and, likewise, I have to dedicate time to being as professional as this colleague, but I also have to dedicate time to this student; so, how do I make this compatible? (E5); nobody has taken classes to become a mentor, no one tells you which are the items to be a mentor..., I think nobody teaches you that, it is something you learn on your own, and if you like it you get more into it, but if you don't like it, you will be less interested! (E7).*

Another relevant meaning revealed from being a mentor to nursing students is the *big responsibility* nurses sense during the exercise of this role. They perceive that for student interns this phase prior

to practicing as professionals is a “landmark” experience, which is why they feel that a positive or negative experience influences considerably on how the students will later perceive the nursing practice. Responsibility with patients and the health staff is related to mentors feeling that they are responsible for the task, and often for the decisions made by the student interns regarding the patient. The responsibility for preparing future “good professionals” emerges as a big theme for the mentor nurses. This is revealed from two aspects they consider relevant. Firstly, the characteristics they wish to encourage in their students to turn them into “good professionals”. Secondly, the forms or teaching-learning techniques they use intuitively to achieve this purpose, where modelling fulfills a fundamental role to achieve their objectives as mentors: *the ultimate responsibility, for the student and the rest of the staff, is assumed by the nurse, and in that case, you are the nurse and the mentor, you have to face things, as we say, if there is any error, or any situation (E3). We want to prepare students who are secure, empowered with a professional attitude and not with a technical attitude. Professional attitude, that is, here, I am the professional, equal to any other professional in the area and whoever it may be. Therefore, I see it as a big responsibility, not as something left to just any person... (E2); I believe, then, that it is that, exploiting the strong areas (of the intern) and reinforcing the weaker areas, that is what I do at least with my interns and it has worked till now. That is the methodology I use (E4).*

The mentors feel that a fundamental part of being a mentor nurse consists in being able to *transmit* to the student their professional and personal experience, given that through it, students can acquire knowledge that goes beyond the classrooms. They can transmit the vocation they feel, a way of teaching, a professional posture, a way of practicing nursing, and even a way of seeing life: *it is super important to transmit the attitude, the person's attitude, and the experience. Now I am much more experienced than before, hence, my experience now is more enriching than when I started (E7). I tell them: you can sit and read books and books on nursing and techniques on nursing, but anyone can learn that; here, we go*

for something else, for the essence, to caring for another because I want to and because I like it (E8). This is why the mentor is so important; the students cannot be left alone, there must be clinical mentors who deliver their experience, who manage to know the students, and for students to gain trust, and for their relationship to be very close (E3).

Discussion

Mentorship is an important study topic, which is relevant in the formation of future nursing professionals^(8,9) and which has been addressed more from the point of view of the tasks these professionals must perform, than from what it means to be a mentor.⁽⁸⁾ This is why this study is important, given that the participants in this research share what is revealed, their environment, which – finally – will define the mentor being. The discussion described ahead is based on results from international research and on a Chilean study published in 2010, which was carried out with the same methodology in a state hospital.

Vocation and gratification

Regarding the benefits perceived by the mentors in their teaching role with students, as in this study, being mentors mainly means to them intrinsic rewards, more than extrinsic recognition.^(20,21) *Per se*, being mentors to students generates satisfaction, especially if they feel they are prepared as educators, and clarity with exercising the role.^(13,21,22) Vocation and gratification are the starting point to create respectful, amiable, and collaborative relationships with the students, conditions studied as preponderant when conducting successful mentorships.⁽²³⁾ In the Chilean study, the category “being there in the relationship with the students” is perceived as “a personal and professional commitment resulting in possibilities for both”. This is mainly manifested in “concern for the students’ wellbeing and in understanding them within their capabilities, demonstrating consideration and patience”.⁽²⁴⁾ In this close relationship, mentors learn and stay up to date with the intern, but also transmit their knowledge validated in the task

performed and the experience, which is why it is a process of mutual growth.^(3,25) Likewise, in this study, in the vocation and gratification category, all mentor nurses feel that the relationship established with students permits mutual growth, given that they are kept up to date and gratified upon seeing the students grow through what they are capable of transmitting.

Personal and professional challenge

Another big issue extensively addressed in foreign publications, and which coincides fully with this research, are the needs, obstacles, and challenges the mentors must confront every day to perform their role. International studies highlight, among the results obtained, three relevant aspects perceived by the mentors and which are also described in this study. These are ambiguity of the role, associated to the lack of a definition of functions related to the mentorship; lack of recognition for the extra work they carry out with students, both from their co-workers and from their bosses; and work overload that leads to lack of time to properly perform their teaching duties.^(7,8,12,20,26,27) Although this is not the case of the nurses in this study, studies describe that these obstacles begrudge the work of the clinical mentor, finding a correlation that implies a decrease in the commitment with the mentor role.^(20,27) For this reason, there is increasing emphasis in the literature on the need to have real supports for the mentors, like formation programs and a mentorship model that provides tools to exert this role.^(7,13)

In relation to recognition, as in this research, the following were considered as important incentives for the mentors: having credits for professional certification, information programs on the assignment, good relations with the Faculty, economic allocation, and access to clinical resources and available academic material.⁽²⁸⁾ Small presents or certificates of gratitude were not good incentives for this group.⁽²⁸⁾ Upon reviewing the literature, it is interesting to see that these same obstacles or needs of the mentors are repeated over decades, without achieving a substantial change in their opinion of their condition.

Big responsibility

It could be considered that the big roles associated to mentors are, according to Boyer, cited by Omer:⁽⁹⁾ role of protector, evaluator, educator, and facilitator. According to this, the responsibility for protection toward the patient is the most important activity and most demanding for the mentor⁽⁹⁾. This protection is mainly aimed at not incurring in errors that affect the patient's safety, which also results in protection toward the student. Due to this, many mentors consider the mentorship as stressful work, associated to multiple functions, which are not altogether clear.^(21,26) This was also described in this study, in the category of "responsibility in front of the patient and the health staff", where mentors need to be present, directly supervise the student assigned to them, given that a medication error can have serious consequences, which is why mentors need to know their intern well. They must create a relationship based on trust and honesty, given that only under those terms, can mentors advance and feel secure with student formation.

Another aspect that highlights this category is related to the responsibility assumed by mentor nurses for the proper teaching the students assigned to them. In the study by Wu,⁽²¹⁾ for the mentors, techniques, like reflexion and reasoning against clinical situations, as well as the feedback, fulfill an important role in teaching students, but they sense that a variety of evaluation methods exist that do not ensure its objectivity.⁽²¹⁾ As well as that found in this study, the mentors complain of the insufficient time they have to dedicate to education, and of the deficit in the formation of the mentors in pedagogical competencies.^(7,29,30) It was of interest to compare how the mentors in the present research also carried out each of these aspects (reflexion, analysis of situations, and accompaniment) in self-taught manner. They also felt that the degree of independence and learning achieved by students would not only depend on the mentor's skills and experience, but on the student's capacities and motivations. It is a two-way relationship, given that mentors will feel less satisfied in their role if the student is difficult or is unmotivated with the learning.^(22,31,32)

Other research describes similar situations that highlight the lack of specific pedagogic formation and training, especially in reference to assessing student learning; due to this standardized directives are needed for the functions and a support system that backs the functions and limits the duality of roles.^(7, 8, 22, 27, 33)

Transmission of experience

It is important to recognize that mentors not only feel they contribute at the technical-practical level, but also at the behavioral level, given that they also share their experiences, are models of actions to follow, and generate an ethical contribution that influences the students. This is a relevant aspect, but quite often poorly regarded.⁽³⁾ The second category in the study by Santos *et al.*,⁽²⁴⁾ agrees with the aforementioned, given that nurses feel they are models for the students. This is associated to a sense of responsibility for the formation because, from it, nurses transmit "knowledge, experiences, their way of being, and their own art of care giving" for students to be good professionals in the future. These results agree with this research in the category of "transmission of the experience" in which mentor nurses state that they always accompany the students, support them, supervise them, guide, and model, thus, transmitting their teaching vocation, professional posture, a way of practicing nursing, and even a way of seeing life.

To conclude this study, mentoring of nursing students in the clinical setting has shown benefits in preparing future professionals as a valid tool to bring these students "from theory to practice". Mentors can transmit their own professional experience, permitting students to socialize the role they will play within the multidisciplinary health staff, unadorned, but within a protected learning environment. Mentors, through this one-to-one encounter, based on trust and communication, will seek to strengthen the student's best skills and reinforce weaknesses to, finally, manage for this future professional to acquire the tools to provide integral and founded care. The vocation of being a mentor and the responsibility for preparing "good professionals"

will be the engine that drives nurses to carry out this work with dedication and professionalism and future personal and professional mutual growth will be their reward. However, there are different needs and challenges declared by mentors and analyzed in this study, which limit the adequate exercise of the teaching role. Through the phenomenological method, a vast richness of testimonies has been accomplished, permitting us to explore and delve into a phenomenon scarcely studied in Chile. Like every phenomenon, the perceptions mentors have include many appendages that have been revealed from this methodology, managing to discover a *being there*, defined by a setting that is not often facilitating, or propitious, but which could be overcome from the mentor's vocation, experience, and preparation.

Based on the aforementioned, inputs are available to elaborate an intervention proposal, together with all the players involved (Health Institution, Nursing School, and mentor) to create a formal program that supports the conditions to perform this role, based on the needs expressed by the mentors in this study, enhance its benefits, and – thus – encourage and relieve the noble role of being a mentor to nursing students. Through this research, questions emerge, such as what happens to those individuals who by being mentors do not achieve gratifying experiences with students. As well as inquiring on which are the experiences of mentors with little experience (advanced beginner) who must assume the role of mentoring nursing students. It would also be interesting to ask about the experiences of student interns, as well as the rest of the health staff, about teaching in the clinical setting. This evidences the projection of the theme to continue this line of research.

Limitations in this study consisted in that the experience unveiled corresponds to nurses practicing in a hospital from a private health care network and which, additionally, was created since its origin as university clinical field.

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Puerperae bonding with their children and labor experiences

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Puerperae bonding with their children and labor experiences

Objective. To analyze the degree of bonding of puerperae with their babies, both in isolation and associated with experiences during and after labor. **Methods.** A cross-sectional study carried out among 200 puerperae in São José do Rio Preto, Brazil. To evaluate the mother-child bond, we used the Mother-to-Infant Bonding Scale (MIBS). **Results.** The mean age of puerperae was 26.4 years; most women were white (60.0%), were married (87.5%), and had an elementary education (51.5%). Most deliveries were cesarean (80.0% of cases); 68.0% of women had no pain during labor, and only 54% had skin-to-skin contact immediately after delivery. Type of labor and pain did not significantly change the maternal bond, and the lack of skin-to-skin contact negatively influenced the bond. **Conclusion.** Puerperae participants had a high degree of bonding with their babies that is mainly related to history of skin-to-skin contact. Nurses must promote strategies that encourage skin-to-skin contact between mother and newborn in the delivery room.

Descriptors: mother-child relations; nursing care; postpartum period; infant, newborn.

Vínculo de las púerperas con sus hijos y experiencias del parto

Objetivo. Analizar el vínculo de las púerperas con sus hijos asociado a las experiencias durante y después del parto. **Métodos.** Estudio de corte transversal realizado con la participación de 200 púerperas de un Hospital Materno-Infantil de São José do Rio Preto-SP, Brasil. Para la evaluación del vínculo madre-hijo se utilizó la escala Mother-to-Infant Bonding Scale (MIBS). **Resultados.** Las púerperas tenían una media de edad de 26.4 años, predominó la raza blanca (60.0%), estado civil casada (87.5%) y enseñanza media (51.5%). El parto fue por cesárea en el 80.0% de los casos, hubo ausencia de dolor durante el trabajo de parto en 68.0% y solo el 54% efectuó contacto piel a piel inmediatamente después del parto. En cuanto a la MIBS, se encontraron puntajes elevados para el vínculo positivo y bajos puntajes para vínculo negativo

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y neutro. El tipo de parto y el dolor no se asoció al vínculo madre-hijo, pero la ausencia de contacto piel a piel influyó de forma negativa este vínculo. **Conclusión.** Las puérperas respondientes presentaron un elevado grado de vínculo con sus bebés el cual se relacionó principalmente con el antecedente de contacto piel a piel. Las enfermeras deben fomentar las estrategias que promuevan el contacto piel a piel de la madre con el recién nacido desde la sala de partos.

Descriptor: relaciones madre-hijo; atención de enfermería; periodo posparto; recién nacido

Vinculação das puérperas com seus filhos e experiências do parto

Objetivo. Analisar o grau de vinculação das puérperas com seus filhos, tanto isoladamente quanto associado às experiências durante e após o parto. **Métodos.** Estudo de corte transversal, realizado com a participação de 200 puérperas de uma maternidade

Introduction

The mother-child bond is of fundamental importance compared with other bonds that humans develop during life.⁽¹⁾ It is a single and long emotional relationship that begins early, during gestation, and is established slowly and gradually in a mutual adaptation process between mother and baby.^(2,3) The bond is understood as the ability of the mother to provide love, caring, and enough protection to fulfill the physical and emotional needs of the child. The formation of this bond is influenced not only by maternal behavior but also by the child's behavior.^(1,4) Human infants, unlike those from other species, cannot survive without the care from and bond with parents and caregivers; their interactions determine the quality of care that is offered after the delivery of the baby. Time immediately after delivery is considered critical for establishing the bond because the relationship is facilitated by adequate maternal hormonal system and is stimulated by presence of the baby.⁽¹⁾

First cares given to the baby, the manner in which the mother holds and handles the baby and the

de São José do Rio Preto, Brasil. Para a avaliação do vínculo mãe-filho utilizou-se a escala *Mother-to-Infant Bonding Scale* (MIBS). **Resultados.** A média de idade das puérperas foi de 26.4 anos, com predomínio da raça branca (60.0%), o estado civil casadas (87.5%) e ensino médio (51.5%). O parto foi por cesárea em 80.0% dos casos, houve ausência de dor durante o trabalho de parto em 68.0% e apenas 54% efetuaram contato pele a pele imediatamente após o parto. O tipo de parto e a dor não alteraram de forma significativa o vínculo materno, a ausência de contato pele a pele influenciou de forma negativa este vínculo. **Conclusão.** As puérperas participantes apresentaram um alto grau de vínculo com seus bebês que está relacionado principalmente a uma história de contato pele a pele. Enfermeiros devem promover estratégias que promovam o contato pele a pele entre mãe e recém-nascido na sala de parto.

Descriptor: relações mãe-filho; cuidados de enfermagem, vínculo, período pós-parto, recém-nascido.

way she establishes the routines, timing, and presentation of the world are characteristic factors of the first bonding relationship in humans, influence definitive psychic functioning, help form the basis of the baby's personality, and helps determine how future affective bonds will be established.⁽⁵⁾ Therefore, quality of the bond between mother and child will determine the child's future mental health conditions; that is, it is the basis for the creation of their first emotional bonds that would interfere in subsequent social relationships.^(6,7) Care delivery during gestation, labor and puerperium, mainly given by the nurse, must favor the creation of the mother-child bond by identification of factors that might interfere in this process. However, currently, there are several obstacles, mainly for centralized care in biomedical model, necessitating guidance for care practice that seeks life maintenance and quality of life; these depend on a significant and strong relationship with the family, both for the child and the mother.^(8,9)

This study aimed to characterize the demographic profile of puerperae and variables regarding delivery and to analyze the degree of the bond

between puerpera and child, both in isolation and associated with experiences during and after delivery. This study was based on the importance of recognizing that the quality of the maternal bond will determine the success of the mother-child relationship and constitutes the basis for the child's mental health.

Methods

This cross-sectional study was performed in a teaching hospital in the city of São José do Rio Preto – SP, Brazil, an institution that represents the main field of practical teaching of gynecology, obstetrics and pediatrics at Public State Faculty of Medicine and Nursing. The institution provides care for more than 2 million inhabitants from the 102 municipalities that are part of the 15 Regional Divisions of Health in the city of São José do Rio Preto. This large hospital in the São Paulo countryside currently has 180 beds; of these, 46 beds are designated for maternity. During the study, the hospital had 205 beds, 34 of which were maternity.

Data were collected in February 2014 among puerpera by using interviews with two instruments, one of which was structured, concerning the sociodemographic profile with some variables on delivery and significant experiences during and after delivery. We used the Mother-to-Infant Bonding Scale (MIBS), an instrument validated in 2005, which specifically evaluates the mental investment that the baby has in the parents' representative universe.⁽¹⁰⁾ This scale comprises 12 items of self-report, supported by three subscales: 1) positive bonding, evaluated by three items (affective, protective, and happy); negative bonding, evaluated by six items (angry, aggressive, sad, resentful, disappointed, uninterested); and unclear bonding, which highlights the presence of emotions not clearly related to bonding (afraid, possessive, neutral or without feeling). Each item has answer categories and one Likert-type scale ranging from 0 to 3: a score of 0 indicates the emotion is not present (elsewhere), and increasing scores indicate increasingly positive responses, up to its maximal level of 3 (very). The responses

reflect the feelings of parents in relation to child at the specific time in which the instrument is completed. The higher the score, the greater the degree of bonding seen.^(3,10) Initially, results of MIBS were analyzed in isolation, and posteriorly they were associated with some significant experiences that interfere in the development of the bond between mothers with their babies. We chose three significant experiences that have been extensively studied and that could interfere in the maternal bond: type of delivery, pain during delivery, and skin-to-skin contact.^(3,10)

To select the sample, we included puerpera who had delivered at Hospital da Criança and Maternidade de São José do Rio Preto – SP in February 2014 and who were at the first and tenth day after labor, were literate, did not have physical or cognitive limitations that would prevent them from completing the instrument, and agreed to participate in the study after signing the consent form. Therefore, sample calculation led to consideration of the mean number of monthly deliveries; the sample consisted of 200 puerperae. We excluded illiterate puerperae who had any medical reason that made it impossible for them to write, as well as those who did not agree to participate after they were adequately informed about the objective of the study.

For data analysis we used descriptive statistical techniques. For the association between significant experiences and items from MIBS, we used Mann-Whitney non-parametric tests to compare two sample groups, and Kruskal-Wallis to compare more than two sample groups; the significance level was 5%. The study followed guidelines of resolution 466/2 of the National Health Council. The study was approved by ethical and research committee with humans of the Faculdade de Medicina de São José do Rio Preto (n.168.636/2012).

Results

The mean age of puerpera included in the study was 26.4 years (standard deviation, 6.9 years;

median, 26 years). We observed the presence of a discrepant age value (outlier) — 46 years— that influenced the mean of the age distribution. The minimum age was 14 years, and the maximum age was 46 years. Data on patient age did not follow normal distribution. Most interviewed puerperae declared themselves as white (60.0%), as married (87.5%), and as having completed high school (51.5%). Most women had cesarean deliveries (80.0%), and 68.0% of women did not have pain during labor; only 54.0% had a chance for skin-to-skin contact with the baby immediately after delivery.

Table 2 shows the following scores on MIBS: total, type of delivery, occurrence of skin-to-skin contact just after delivery, and pain during labor. When evaluated in isolation, the MIBS score was elevated for positive bonding and low for negative bonding and neutral bonding, which shows that puerperal respondents are highly involved with their children. Responses to the MIBS component on current labor showed that the type of delivery did not affect the bonding degree. Pain during labor did not significantly influence domains on child and mother bonding. All p values were higher than the level of significant applied.

Table 1. Sociodemographic and cultural characteristics of 200 puerperae evaluated in the study

Characteristic	<i>n</i>	%
Race/ethnicity		
White	120	60.0
Parada	59	29.5
Black	21	10.5
Marital status		
Married	175	87.5
Single or separated	24	12.0
Education		
Primary	50	25.0
High school	103	51.5
High education	46	23.0
No data	1	0.5
Current delivery		
Cesarean delivery	160	80.0
Normal delivery	40	20.0
No data	1	0.5
Pain during delivery		
No	136	68.0
Yes	63	31.5
No data	1	0.5
Skin-to-skin contact		
No	108	54.0
Yes	90	45.0
No data	2	1.0

Table 2. Mean and standard deviation in Mother-to-Infant Bonding Scale according to total score, skin-to-skin contact, type of labor, and pain during labor, São José do Rio Preto de 2014

Domains	Total	Skin-to-skin contact			Type of labor			Pain during labor		
		No	Yes	<i>p</i>	Cesarean delivery	Normal	<i>p</i>	No	Yes	<i>p</i>
Affective	2.8±0.6	2.8±0.6	2.7±0.7	0.47	2.8±0.6	2.8±0.5	0.887	2.8±0.6	2.7±0.6	0.066
Protective	2.8±0.5	2.8±0.5	2.7±0.5	0.320	2.8±0.5	2.8±0.4	0.888	2.8±0.4	2.7±0.6	0.318
Happy	2.8±0.5	2.8±0.6	2.8±0.4	0.802	2.8±0.5	2.8±0.6	0.807	2.8±0.5	2.7±0.6	0.377
Angry	0.0±0.3	0.1±0.4	0.0±0.1	0.235	0.0±0.3	0.0±0.2	0.976	0.0±0.4	0.0±0.2	0.668
Aggressive	0.1±0.4	0.1±0.4	0.0±0.2	0.345	0.1±0.4	0.0±0.2	0.731	0.1±0.3	0.1±0.4	0.910
Sad	0.1±0.5	0.2±0.6	0.0±0.3	0.037	0.1±0.5	0.0±0.2	0.760	0.1±0.6	0.1±0.3	0.617
Resentful	0.0±0.1	0.0±0.1	0.0±0.0	0.192	0.0±0.1	0.0±0.0	0.488	0.0±0.1	0.0±0.1	0.559
Disappointed	0.0±0.3	0.1±0.4	0.0±0.1	0.141	0.0±0.2	0.1±0.5	0.875	0.0±0.2	0.0±0.4	0.466
Hopeless	0.0±0.1	0.0±0.2	0.0±0.1	0.396	0.0±0.1	0.0±0.2	0.126	0.0±0.1	0.0±0.2	0.402
Neutral	0.1±0.4	0.0±0.5	0.0±0.3	0.242	0.0±0.4	0.1±0.5	0.981	0.1±0.4	0.1±0.4	0.660
Possessive	0.0±0.1	0.0±0.1	0.0±0.0	0.192	0.0±0.1	0.0±0.0	0.488	0.0±0.1	0.0±0.1	0.559
Afraid	0.6±0.8	0.7±0.8	0.5±0.8	0.117	0.6±0.8	0.4±0.8	0.135	0.6±0.8	0.5±0.7	0.227

Results showed the influence of skin-to-skin contact (mother-baby) in the domain related to sadness ($p=0.037$): Puerperal who did not have contact with their newborns showed significantly more sadness than puerperae who had such contact with their child. Variables such as type of labor and pain during labor, when compared with results of the bonding subscale, were not statistically significant ($p>0.05$).

Discussion

In this study, the participants' mean age was 26.6 years, which is proportional to the reproductive age of Brazilian woman. This represents a young population because around 50% of them are younger than 30 years. In 2006, a national demographic study on the health of children and women was carried out; the following sociodemographic data were found in relation to race/ethnicity: 35.8% of Brazilian women living in the southeast region of Brazil declared themselves as white, while in other regions, especially the south region, there was a predominance of women who declared themselves to be black (65.7%). Therefore, these data show the divergence of findings in the study that showed a predominance of white women. When formal education level was evaluated, 50% of Brazilian women had

completed more than 8 years of education, indicating that they had complete elementary school.⁽¹¹⁾ In our study, 64.3% of women living in São José do Rio Preto concluded the second cycle of elementary education or more years of study. An adequate formal education level in a population is an essential requirement for development of a country to assure the exercise of citizenship and promote equality of social opportunities—among these opportunities, the right to healthcare.⁽¹²⁾

The marital status of participants in our study corroborate findings from a study in Portugal that also showed a higher percentage of married women (68.3% to 72.2%).^(10,13) The Winnicott study shows the importance of family support for puerperae who are vulnerable mainly within the first weeks after delivery.⁽⁵⁾ Of deliveries in Brazil, 48.3% were cesarean according to the census of 2006, and the southeast region had a higher number of cesarean deliveries (51.7%).⁽¹¹⁾ In the city of São José do Rio Preto, the number of cesarean deliveries is even greater (86.4%).⁽¹⁴⁾ In studies done in the city of São José do Rio Preto, we observed a high incidence of unnecessary cesarean deliveries and a number of women reported cesarean delivery as a commodity.⁽¹⁵⁾ In this study, unlike what the researchers expected, the type of current labor did not significantly influence any MIBS domain; however, these findings

corroborate other studies that showed no changes in emotional involvement of mothers with their newborns after different types of delivery.⁽¹⁶⁾ Studies show that pain in labor is considered a main builder of social representativeness of female attitudes about parturition, and it contributed to high index of cesarean deliveries in the country.⁽¹⁷⁾ In this study, pain during delivery did not significantly influence the mother-and-child bond; however, studies have shown that if labor is difficult and involves more pain, the mother-child relationship will change significantly.⁽¹⁸⁾ Promotion of skin-to-skin contact is an indicator of quality in humanized delivery care.⁽¹⁹⁾ According to ordinance no. 371 May 7, 2014, the Brazilian Ministry of Health instituted new guidelines for integral and humanized care to newborn, establishing that skin-to-skin contact must be assured immediately after labor in a continuous way; neonates are to be placed over the abdomen or thorax of the puerpera and are to be covered with a dry and warm cover in order to assure temperature maintenance.⁽²⁰⁾

A study in Paraná showed that only 5.3% of babies born from vaginal deliveries and 1.8% babies born from cesarean deliveries remained with the mother for at least 30 minutes; not allowing the mother and infant to have this sustained contact after delivery can harm both the maternal bond and the promotion of maternal breastfeeding.⁽²¹⁾ In Bahia, a study carried out in a public maternity unit showed that nursing professionals involved in promotion of skin-to-skin contact failed to encourage skin-to-skin contact between mothers and neonates. They did not worry about measures that could support mothers and would facilitate this first contact effectively; in addition, they did not inform women about the importance of this contact and not request consent for it. In general, the contact established is brief, and puerperae continue with doubts and anxieties because a short period does not enable adequate recognition between mother and child.⁽²⁰⁾ Another study done in Santa Catarina aimed to identify and analyze feelings expressed by mothers in the first contact with their child. It revealed that first moments after birth constitute a sensitive phase, and it constituted a precious opportunity for mothers to be touched by their babies.⁽²²⁾ In skin-to-skin contact there is huge change between mother and child, and it gives the

opportunity to begin bonding. Some puerperae are apprehensive about the characteristics of neonates soon after birth. However, having a team available to clarify any apprehension can transform the motivation factors of bonding.⁽²³⁾

In our study, we observed that lack of early skin-to-skin contact with the baby negatively influenced bonding: Puerperae who did not establish contact with the neonate were significantly sadder than puerperae who did have early skin-to-skin contact. Although the literature is clear regarding evidence on the importance of skin-to-skin contact, we observed that for more varied reasons the health team can still delay or limit this experience.^(22,24,25) Data obtained in this study, on a topic so little explored in our area, reveal the variability in the process by which puerperae bond to their babies.

Further studies are needed to clearly establish other significant experiences to before, during and after labor in order to improve the health team's understanding of how to act in this scenario. In addition, it is necessary to understand the need to respect pathways that lead a mother to establish a bond with her child. Some women might have difficulty establishing an emotional bond with newborn. The tasks for health professionals are to identify and act in such situations in order to offer help women establish a solid basis for interaction with and adequate care for their child, thereby facilitating interactions that strengthen the bond.

Limitations of this study include the extensive time needed to conduct the interview. In addition, some puerperae declined to answer the questions, which contributed to an oscillation in the number of responses. Moreover, some data were not evaluated because they were irrelevant; there was great turnover of puerperae because of the many deliveries done and small number of beds in the maternity; and it was difficult to interview puerperae who had health insurance.

Conclusion. Puerperae participants had a high degree of bonding with their babies that is mainly related to history of skin-to-skin contact. Nurses must promote strategies that encourage skin-to-skin contact between mother and newborn in the

delivery room. Administration of MIBS by nurses immediately after labor is essential to identify and prevent future fragility in the formation of bonding between mothers and babies and may enable the implementation of new strategies to strengthen this bonding. In addition, seeking direct and humanized care for puerperae will support them in providing adequate care to their child.

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