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## THEORY OF HUMAN BECOMING FOR THE TERMINOLOGICAL CLASSIFICATION OF OCCUPATIONAL HEALTH NURSING<sup>1</sup>

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### ABSTRACT

**Objective:** to structure a terminological subgroup for occupational health nursing based on the identification of nursing-related terms in the environmental and occupational health protocols and in the International Classification for Nursing Practice.

**Method:** a methodological study was undertaken, involving the standardization of concepts and structuring of the terminological subgroup of the International Classification for Nursing Practice for Occupational Health Nursing, based on the Theory of Human Becoming.

**Results:** new diagnostic terms/outcomes were elaborated and all existing terms/outcomes in the International Classification for Nursing Practice 2015 were distributed. Although these research results emphasize individual care, the concepts presented proposed new ways of interacting, inserting the perspective of the occupational health nurse's assessment in the triad environment, individual and measures to promote health and healthy lifestyles.

**Conclusion:** the proposed subgroup uses the systemization of occupational health nursing care to permit the assessment of the workers' health situation, produce statistics and contribute to the development of health policies and care planning.

**DESCRIPTORS:** Nursing diagnosis. Occupational health nursing. Methodological research in nursing. Environmental health. Terminology.

## TEORIA DE TORNAR-SE HUMANO PARA A CLASSIFICAÇÃO TERMINOLÓGICA DA ENFERMAGEM DO TRABALHO

### RESUMO

**Objetivo:** estruturar um subconjunto terminológico para a enfermagem do trabalho com base teórica a partir da identificação de termos relacionados com a enfermagem nos protocolos de saúde ambiental e do trabalhador e na Classificação Internacional para a Prática de Enfermagem.

**Método:** estudo metodológico contendo as etapas de normalização de conceitos e estruturação do subconjunto terminológico da Classificação Internacional para a Prática de Enfermagem para Enfermagem do Trabalho, sustentado pela Teoria de Tornar-se Humano.

**Resultados:** foram elaborados termos diagnósticos/resultados novos e distribuídos todos aqueles existentes na Classificação Internacional para a Prática de Enfermagem 2015. Embora os resultados desta pesquisa remetam à ênfase nos cuidados assistenciais individuais, os conceitos apresentados propuseram novas maneiras de interagir, inserindo a perspectiva da avaliação do enfermeiro do trabalho na tríade ambiente, indivíduo e medidas de promoção da saúde e estilo de vida saudáveis.

**Conclusão:** o subconjunto proposto instrumentaliza a sistematização da assistência de enfermagem do trabalho, possibilita a avaliação da situação de saúde dos trabalhadores, gera estatísticas, bem como colabora com o desenvolvimento de políticas de saúde e com o planejamento do cuidado.

**DESCRIPTORIOS:** Diagnóstico de enfermagem. Enfermagem do trabalho. Pesquisa metodológica em enfermagem. Saúde ambiental. Terminologia

# TEORÍA DE TORNARSE HUMANO PARA LA CLASIFICACIÓN TERMINOLÓGICA DE LA ENFERMERÍA DEL TRABAJO

## RESUMEN

**Objetivo:** estructurar un subconjunto terminológico para la enfermería del trabajo con base teórica a partir de la identificación de términos relacionados con la enfermería en los protocolos de salud ambiental y del trabajador y en la Clasificación Internacional para la Práctica de Enfermería.

**Método:** se trata de un estudio metodológico que contiene las etapas de normalización de conceptos y estructuración del Subconjunto Terminológico de la Clasificación Internacional para la Práctica de Enfermería para Enfermería del Trabajo, sostenido por la Teoría de tornarse en Humano.

**Resultados:** se elaboraron términos diagnósticos/resultados nuevos y distribuidos todos aquellos existentes en la Clasificación Internacional para la Práctica de Enfermería 2015. Aunque los resultados de esta investigación remiten al énfasis en los cuidados asistenciales individuales, los conceptos presentados propusieron nuevas maneras de interactuar, insertando la perspectiva de la evaluación del enfermero en la tríade ambiente, individuo y las medidas de promoción de la salud y estilo de vida saludables.

**Conclusión:** el subconjunto propuesto instrumentaliza la sistematización de la asistencia de enfermería del trabajo, posibilita la evaluación de la situación de salud de los trabajadores, genera estadísticas, así como colabora con el desarrollo de políticas de salud y con la planificación del cuidado.

**DESCRIPTORES:** Diagnóstico de enfermería. Enfermería del trabajo. Investigación metodológica en enfermería. Salud ambiental. Terminología

## INTRODUCTION

The production of good practices in health converges to the prevention and promotion of quality of life based on a view of dynamic care that produces and protects the life of natural beings.<sup>1</sup> Every year, on average, 120 million occupational accidents are registered, 200 thousand work dysfunctions and about 113 million cases of professional illnesses around the world.<sup>2</sup>

The interdisciplinary approach of environmental and occupational health nursing encompasses the protection of workers' health and of populations exposed to environmental risks, the prevention of diseases and problems, the accomplishment of health surveillance actions and the emphasis on health promotion. Based on this approach, occupational health nurses gain prominence in organizations, acting in the workers' quality of life, in the protection against chemical, physical, biological and psychosocial agents, in the maintenance of health, occupational or non-occupational illnesses and in rehabilitation for work.<sup>2-4</sup>

Besides their administrative and health education tasks, their care activities are emphasized, which include nursing consultations through the occupational health nursing process, the diagnosis of workers' needs and the elaboration of a care plan, health promotion campaigns, implementation and assessment of multidisciplinary and interdisciplinary team projects, workplace inspections and proposal of environmental safety and occupational hygiene measures.<sup>5</sup>

Therefore, nursing knowledge has evolved in the scientific and theoretical spheres in terms of

new information and communication systems and new technologies. In that context, Rosemarie Rizzo Parse's Theory of Human Becoming represents a significant structure to understand the interrelation human-universe-health, as it accelerates the transformation process of the mechanistic approach of health care to a new model, in which individuals create and choose to live freely within paradoxical ways of being. It should be highlighted that, in the development of this theory, the four nursing knowledge patterns (empirical, esthetic, ethical and personal knowledge) are articulated, especially the esthetic pattern, which reveals the interaction that reflects the nature of care.<sup>6</sup>

Focused on human beings and their experiences, humanistic nursing seeks to act as a facilitator of the change process in individuals' unitary perception of health, influencing the care actions, teaching and demands in nursing research.<sup>7-9</sup> Hence, nursing has demonstrated its concern with its further consolidation as a science and with strengthening its clinical practice, especially through the establishment of a vocabulary that can classify and name its professional activities.<sup>10-11</sup>

This effort in favor of a specific language culminated in the development of terminologies that permit uniform meanings and the achievement of efficacy in scientific, technological and professional communication, besides strengthening autonomy and social practice.<sup>12</sup>

The International Classification for Nursing Practice (ICNP<sup>®</sup>) stands out, which uses the *Web Ontology Language* (OWL) and is updated and launched every two years, being organized by the International Council of Nurses (ICN) since 1989.

The ICNP<sup>®</sup> was conceived after the World Health Organization (WHO) appointed the need to describe nursing practice around the world.<sup>12-16</sup> Since 2008, it is considered as a classification listed in WHO's Family of International Classifications and translated in 15 languages.<sup>12</sup>

In 2003, the ICNP<sup>®</sup> Research and Development Centers were created, resulting in 11 centers accredited by ICN: United States, Canada, Chile, Brazil, Germany, Austria, Switzerland, Poland, Portugal, Iran, Korea and Australia.<sup>17</sup> Represented as from Version 1.0 by the Seven-Axis Model (Focus, Judgment, Means, Time, Location, Client, Action), the ICNP<sup>®</sup> permits the combination of terms to compose titles for nursing diagnoses (NDs), outcomes (NOs) and interventions (NIs), as its review process was influenced by the model proposed by the International Standards Organization (ISO) 18.104:2003, and later by ISO 18.104:2014, which refers to a Reference Terminology Model for Nursing.<sup>18-20</sup>

Since its conception, the ICNP<sup>®</sup> has gone through evaluations, review and publications of different versions: *alpha* (1996), *beta* (1999), *beta* 2 (2001), 1.0 (2005), 1.1 (2008), 2.0 (2009), 2011 release (2011), 2013 release (2013) and 2015 release (2015).<sup>16,19</sup> As from version 1.1 (2008), the ICNP<sup>®</sup> innovates through the inclusion of diagnoses and pre-combined interventions and, in 2009, version 2.0 was presented with the respective description of the nursing formulations in response to the adjustment needed to include this terminology in WHO's Family of International Classifications.<sup>10</sup>

Due to the extension and complex use of the ICNP<sup>®</sup>, subgroups have been developed based on evidence-based practice contents, organized per specialty, activity areas and clients, through preset formulations of nursing diagnoses, interventions and outcomes.<sup>21-22</sup> It is highlighted that these subgroups replace neither the nurses' clinical judgment nor their decision process, nor do they cover the entire nursing care domain.<sup>11,23</sup>

Hence, this study is linked to the ICNP<sup>®</sup>, aiming to contribute to the development of a special nursing language and to cooperate with ICN towards its transformation into a reference terminology for the strengthening and expansion of the profession's propositions in care, education and research.

In view of the above, this research was guided by the following questions: a) can diagnoses/outcomes and interventions be formulated for occupational health nursing care, departing from ICNP<sup>®</sup> terms and environmental and occupational

health protocols?; b) can the ICNP<sup>®</sup> terminological subgroup for occupational health nursing be structured based on the Theory of Human Becoming?

Departing from these questions, the objective in this study was to structure a terminological subgroup for occupational health nursing, theoretically based on the identification of nursing-related terms in the environmental and occupational health protocols and in the ICNP<sup>®</sup>.

## METHOD

Considering the ICNP<sup>®</sup> terminology subgroup as a technological reference for practice, a methodological study design was chosen, covering the definition, items and instructions of what will be represented, as well as reliability and validity tests.<sup>9,13</sup> Therefore, the methodology for the construction of ICNP<sup>®</sup> terminology subgroups of the ICNP<sup>®</sup> Center / Graduate Nursing Program at *Universidade Federal da Paraíba* (PPGENF / UFPB) was adopted: standardization of concepts and structuring of the ICNP<sup>®</sup> terminology subgroup for environmental and occupational health nursing, based on the Theory of Human Becoming.<sup>24</sup>

Initially, based on the correlation of the literature in the area (environmental [three] and occupational health [13] protocols, models adopted by the Brazilian Ministry of Health) with the terms of ICNP<sup>®</sup> 2011, we obtained 806 mapped terms as a result, which supported the elaboration of 41 new diagnostic concepts / outcomes and 227 new nursing interventions, based on ISO 18.104: 2003; and the new concepts of nursing formulations, later constructed according to ISO 18.104: 2014. The theoretical application to ecological and occupational health care was also considered based on the Theory of Human Becoming, considering the environment, the interaction process nurse-individual and the promotion of health and quality of life.<sup>6,25</sup>

Regarding the diagnostic stage, this permits the analysis of clinical information for decision making on the nursing problems identified and amenable to intervention, while the interventions serve to put the diagnoses in practice and produce outcomes.<sup>26</sup> To formulate the nursing diagnoses / outcomes, a term was included from the Focus axis and a pertinent term from the Judgment axis; to formulate the nursing interventions, a term from the Action axis and a term from the Target axis were included.<sup>27</sup>

Therefore, departing from the construction of new concepts, the terms existing in ICNP<sup>®</sup> 2013 and terms of the language pertaining to occupa-

tional health nursing practice, an ICNP® subgroup proposal was constructed for occupational health nursing from May to August 2014 and, from July to August 2016, its review was concluded, considering the concepts in ICNP® 2015, adding 62 new diagnostic / outcome terms related to environmental and occupational health.

Regarding ethical aspects, this research received approval from the Ethics Committee on Research involving Human Beings of the Faculty of Health at *Universidade de Brasília*, on June 21<sup>st</sup> 2016, under Opinion 1.601.159, considering Resolution N. 446/2012 and Federal Nursing Council (Cofen) Resolution N. 311/2007.

## RESULTS

As an essential phase in the structuring process, the theoretical validation applied to specific fields of care not only guides the understanding of the concepts, but also contributes to the organization of subgroups for use in practice.

Therefore, initially, according to the multidimensional approach of ecological and occupational health care, the set of NDs/NOs was distributed. Due to limited space, however, in table 1, only the new concepts were displayed, considering the respective theoretical dimensions adapted from Parse<sup>6</sup>.

**Table 1 - Formulations of nursing diagnoses/outcomes constructed for occupational health nursing. Brasília, DF, Brazil, 2017**

<b>Nursing diagnoses/outcomes per theoretical dimensions</b>
<b>Focusing the environment on care (about the environmental factors that can be mediated by nursing). (n=71)</b>
Contaminated water; Typical accident; Road accident; Accident involving sharps; Work accident; Chemical accident; Accident with venomous animals; Venomous animals; Inappropriate storage; Improper physical arrangement; Contaminated biota; Rigid productivity control; Damage to the environment and health; Environmental spill; Disaster (natural or anthropogenic); Electricity, Ergonomics, effective; Ergonomics, impaired; Intense physical effort; Requirement of inadequate posture; Exposure to agrochemicals; Heat; Cold; Smoke exposure; Exposure to gases; Exposure to solvents; Exposure to biological material; Exposure to fog; Exposure to mist; Exposure to dust; Exposure to abnormal pressures; Exposure to ionizing radiation; Exposure to non-ionizing radiation; Exposure to chemical substances; Extreme temperatures; Humidity; Vibrations; Inadequate or defective tools; Occupational hygiene, effective; Occupational hygiene, impaired; Inadequate lighting; Imposition of excessive rhythms; Prolonged work hours; Manual lifting and transport of weight; Unprotected machinery and equipment; Monotony and repetitiveness; Atmospheric pollution; Risk of fire or explosion; Biological risk; Risk of exposure; Ergonomic risk; Physical risk; Chemical risk; Irrelevant noise (below A.L.); Attention noise (above A.L. and below T.T.); Critical noise (equal to or above T.T.); Contaminated soil; Shift work; Night work.
<b>Human exposure to environmental and occupational health risks (about the biopsychosocial effects on the individual). (n=620)</b>
Moral harassment in the workplace; Sexual harassment in the workplace; Hereditary characteristic, impaired; Complication; Fetal development, impaired; Diabetes; Dyslipidemia; Burnout; Fertility, impaired; Fracture (specify location and grade); Bleeding (specify degree); Hypertension (specify degree); Exogenous intoxication; Body movement, effective; Body movement, impaired; Body mutilation; Obesity (specify degree); Professional rehabilitation, effective; Professional rehabilitation, impaired; Job retraining, effective; Job retraining, impaired; Risk of abortion; Auditory health, effective; Auditory health, impaired.

### Health promotion and quality of life (about the main determining and conditioning factors of health). (n=218)

Provision of community services, impaired; Absenteeism, high; Absenteeism, controlled; Accessibility, effective; Accessibility, impaired; Access to health service, impaired; Selective waste collection; Risk communication, effective; Risk communication, impaired; Sustainable development, impaired; Waste management of health services, effective; Waste management of health services, impaired; Community participation, impaired; Perceived risk, effective; Perceived risk, impaired; Occupational and environmental health policy, effective; Occupational and environmental health policy, impaired; Recycling; Health surveillance, effective; Health surveillance, impaired; Socio-environmental vulnerability.

A.L. = Acceptable level; T.T.= Tolerance threshold.

Regarding the theoretical axis, "Focusing on the environment in care", it focuses on the environmental factors described in the regulatory standards, as well as on labor legislation, in order to adapt the worker's health to the work environment through environmental safety measures and actions that involve occupational hygiene. The second theoretical dimension, "Human exposure to environmental and occupational hazards", deals with diseases and problems related to and conditioned by work and, finally, the theoretical dimension that refers to "Health promotion and quality of life", based on concepts, characteristics and reflexes that permeate health promotion actions in the work environment and reinforce healthy lifestyles.

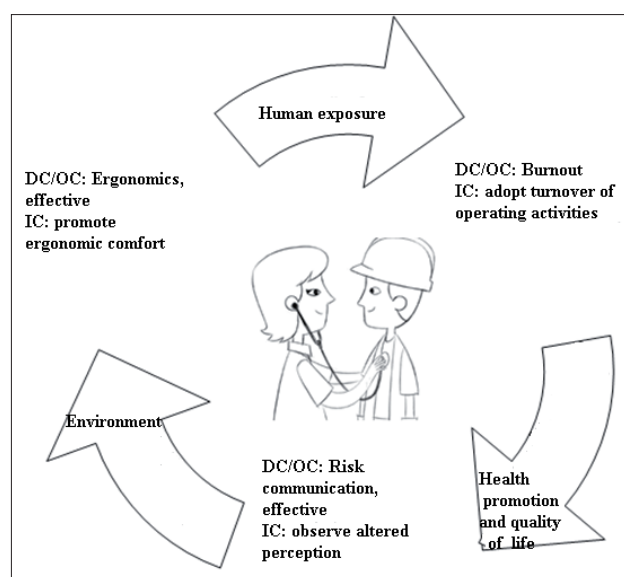
Thus, all NDs/NOs concepts gain a usage definition related to the three principles of Parse and its nine assumptions. This refers to the use of this ICNP® terminological subgroup on a contextual and priority basis to meet the workers' care needs.

Also according to table 1, a total of 104 new nursing diagnosis / outcome concepts were elaborated, 60% of which related to the environmental dimension, 20% related to human exposure to environmental and occupational risks and 20% inherent in the sphere of health promotion and quality of life. Considering the distribution of the pre-coordinated diagnoses existing in ICNP® 2015, together with the new terms, a total of 909 nursing diagnoses / results were obtained, with the following distribution by theoretical class: 10% in "Focusing on the environment in care"; 70% in "Human exposure to environmental and occupational hazards" and 20% in "Health promotion and quality of life".

A total of 227 new NIs were elaborated and, for each corresponding nursing diagnosis / outcome, in addition to those in ICNP® 2015, all of them were added compatible with the propositions of actions and phenomena contained in the environmental

and occupational health literature. Because of the scope of this article, however, we will exemplify a simplified case of occupational health care.

It should be noted that the non-coded interventions were newly elaborated. The average number of interventions per diagnosis / nursing outcome, taking into account the entire proposed subgroup, was ten formulations.



**Figure 1 - Example of occupational health care using the ICNP® subgroup for occupational health nursing. Brasília, DF, Brazil, 2017**

Therefore, according to the proposed theoretical model, the occupational health nurse should assess the three dimensions the worker is inserted in at the same time, that is, the work environment, the characteristics of the work and the aspects inherent in healthy and sustainable lifestyles. Hence, at least one nursing diagnosis/outcome needs to be listed per theoretical axis adapted from Parse, as described in figure 1.

In Table 2, the new terms were presented, distributed according to the ICNP® Seven-Axis Model, among which the definition of environmental nursing stood out as the activity area of nursing, which delivers care based on the understanding of the interaction between the environment and human

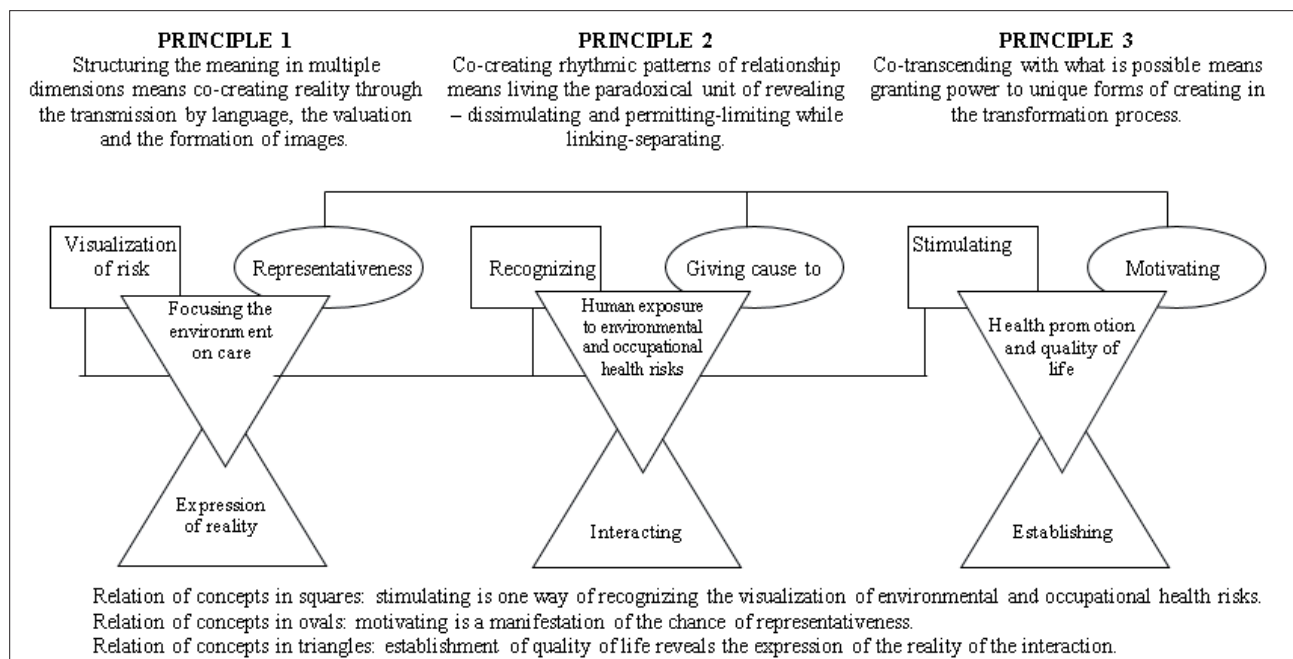
health, departing from the interaction environment and its natural components (air, water, soil and biota), besides its anthropic characteristics (physical structures people live, have contact and work in), as well as the use and reuse practices of natural resources.

**Table 2 - Distribution of new primitive concepts suggested for the ICNP® Seven-Axis Model. Brasília, DF, Brazil, 2017**

<b>Focus Axis. (n=62)</b>
Accident, accident involving sharps, work accident, chemical accident, venomous animal, storage, physical arrangement, biota, ergonomic condition, productivity control, damage to environment and health, environmental spill, dyslipidemia, electricity, ergonomics, physical effort, posture, exposure, ionizing radiation, non-ionizing radiation, extreme temperatures, chemical substance, humidity, vibration, tool, occupational hygiene, lighting, monotony, fire, explosion, pesticide, heat, cold, smoke, gases, biological material, fog, mist, environmental protection, environmental protection, health and safety, social rehabilitation, social rehabilitation, absenteeism, provision of community services, accessibility, selective collection, waste, risk communication, sustainable development, risk perception, environmental health, rehabilitation, professional rehabilitation, intoxication exogenous, bullying, environmental nursing, bio-monitoring, climate change, community therapy, healthy eating.
<b>Judgment Axis. (n=15)</b>
Contaminated, controlled, effective, high, diminished, inadequate, critical, apparent, intense, defective, prolonged, unprotected, rigid, extreme, excessive.
<b>Action Axis. (n=28)</b>
To limit, clarify, adapt, assure, allow, adopt, investigate, verify, refer, listen, analyze the health situation, search, gauge, gather, verify, create, search, allocate, manage, predict, offer, encourage, consult, use, perform, monitor, request, provide.
<b>Location Axis. (n=2)</b>
Home, environmental contamination exposure areas.
<b>Means Axis. (n=15)</b>
Human health risk assessment studies, environmental compartments, prophylactic measures, procedures, occupational exposure history, spirometer, auditory conservation plan, workout program, mental health program, trauma protocols, personal protective equipment (PPE), collective protective equipment (CPE), occupational health protocols, environmental health protocols, contingency plan.
<b>Time Axis. (n=6)</b>
Turnover, work journey, daytime, nighttime, scale, repetitiveness.
<b>Client Axis. (n=3)</b>
Worker, employer, susceptible groups.

It should be emphasized that, for the professional's understanding, an instruction manual should be prepared, containing all the operational definitions of the diagnoses / outcomes of that subgroup, as well as the correspondence with the pertinent NIs. In addition, its importance for occupational health nursing should be emphasized,

which refers to the need to approximate care, since occupational health nurses often deal with aspects related to the management and administration of occupational health services. Therefore, this subgroup permits the planning, implementation and evaluation of occupational health nursing care in the different spheres and types of work environments.



**Figure 2 - Relation among the principles, concepts and theoretical structures of the Theory of Human Becoming applied to environmental and occupational health Nursing<sup>25</sup>**

## DISCUSSION

The Theory of Human Becoming characterizes the nurse as agent of change for the improvement of the quality of life from the perspective of the person, seeking to understand the problems of nursing in the process of being with the person and not doing for the person, thus turning the professional into a facilitator in the implementation of the practical dimensions.<sup>9,26</sup>

Parse believes that the human being, the environment and health are strictly interconnected, making it difficult to characterize their individual assumptions.<sup>24</sup> Starting from the relationship among the principles, concepts and theoretical frameworks of the Theory of Human Becoming applied to occupational health nursing, it was possible to describe the practice and clinical evaluation forms of the occupational health nurse could be described in accordance with figure 2.<sup>9</sup>

Through the study of the work environment, the following aspects are understood: its different types (characteristics), the factors that condition it, the changes of these factors and their causes, the technique for the exploitation of these alterations and the measures that should be adopted to avoid environmental aggression against the individual.<sup>28</sup> Thus, the diagnoses / results were particularly based on the environmental, physical, chemical,

biological, ergonomic and accident risk factors - highlighted in Regulatory Standard 9, which refers to factors that can be controlled by the occupational health team through environmental safety measures and actions that involve occupational hygiene.<sup>29</sup>

In the individual dimension of the reflexes of the human relationship and the work environment, these derive from nosological and biopsychosocial factors, highlighted in the diseases related to and deriving from work.<sup>30</sup> Besides referring to the health and work conditions of occupational groups, the work processes can be characterized and the workers' illness profile can be described, evaluating possible associations between occupation and health.<sup>31-32</sup>

The occupational health nursing practice has as a convergent focus on the promotion of quality of life though, which encompasses the worldview of each human being. The influence of the National Health Promotion Policy (PNPS) is emphasized, which reaffirms the relevance of the health sector for the purpose of promoting quality of life and reducing vulnerabilities and health risks related to its determinants and conditioning factors - ways of living, working conditions, housing, environment, education, leisure, culture, access to essential goods and services.<sup>33-35</sup> With regard to the quality of life at work, according to the highlighted objectives of complementary therapies, adequate waste manage-

ment, access to health and community services and access to leisure, the diagnoses / outcomes belonging to this dimension were segregated, aiming at humanized care practices.<sup>36</sup>

Therefore, the interdisciplinary approach of environmental and occupational nursing encompasses integrated care through the health protection of workers and populations exposed to environmental risks, health surveillance and the emphasis on health promotion.<sup>3</sup> The impact of problems due to inadequate work conditions and / or inadequate occupational health is responsible for a high rate of absenteeism and low productivity, as well as for disorders in workers' quality of life.<sup>2</sup> Although the results of this research emphasize individual care, to the detriment of the focus on the environment and on health promotion and quality of life, the proposed concepts considered measures aimed at broadening the view of the nurse and proposed new ways of interacting, inserting the evaluation perspective of the occupational health nurse in the triad environment, individual and health promotion measures and healthy lifestyle.

Thus, the construction of ICNP<sup>®</sup> terminological subgroups, initiated in 2005, permits support to health information systems, promotion of manuals and electronic medical record systems, the integration of ICNP<sup>®</sup> into the different scenarios of practice and the development of a standardized language system by elaborating diagnoses, outcomes and specific NIs.<sup>22,35</sup> Considered a relevant technological strategy for the systematization of care, ICN encourages its development and testing for validation and dissemination worldwide.<sup>27</sup> After its standardization and content validation, the concepts will be transcribed and analyzed to prove their relevance in practice aimed at the priority of the terminological subgroup.<sup>37</sup> According to the ICNP<sup>®</sup> Research and Development Center of Paraíba, however, despite the number of terms contained in the banks of constructed terms, not all possible nursing declarations can be exhausted.<sup>38</sup>

Thus, in the most recent ICNP<sup>®</sup> versions, nursing diagnoses / outcomes and interventions were identified, using terms from the field of environmental and occupational health nursing, which demonstrates the breadth and feasibility of using ICNP<sup>®</sup> in the different care settings, linking the conduct of nursing practices to social responsibility, sustainability and ecology, although it was evidenced in this study that new terms need to be inserted, referring to the dynamics of the environmental and occupational health area.

The potentialities of the results of this study should be highlighted, since an ICNP<sup>®</sup> terminology subgroup was developed for occupational health care, based on a theoretical framework, departing from the re-reading of a great nursing theory and the transposition of its concepts and principles into practice; the method proposed by the ICNP<sup>®</sup> / PPGENF / UFPB Center was validated for the construction of subgroups; and the influence of environmental and occupational health policies was visualized in the ICNP<sup>®</sup> terms.

Regarding the limitations of this research, the operational definitions of the nursing diagnoses / outcomes were not verified, which, according to the stages listed by Waltz, include the literature review, the mapping of the meaning of the concept and the affirmation of the operational definition.<sup>39</sup> This study did not execute the consensus and / or clinical validation of the proposed ICNP<sup>®</sup> terminology subgroup either.

In this sense, it is worth emphasizing the relevance of ICNP<sup>®</sup>, which presents elements of nursing practice through a unified language, evidenced in the various correlations between nursing activities and health outcomes.<sup>40</sup> Thus, research with the purpose of interrelating concepts and comparing elements of practice promote the evolution of ICNP<sup>®</sup>, as they promote revisions, adaptations, structuring and inclusion of new terms applied to a certain clinical and geographic scenario, besides influencing health policies.

## CONCLUSION

The construction of the concepts ND/NO and NI was based on the guidelines recommended by ISO 18.104:2014 and their distribution in the paradigms resulting from human beings' interaction with the environment and in the ways of preserving and maintaining sustainable and healthy relations for the production of health actions, with emphasis on health promotion actions.

Therefore, the challenge in the elaboration of new statements and theoretical re-reading of the concepts existing in INCP<sup>®</sup> highlighted, as it was possible to critically reflect on the overlapping of the principles of the great Theory of Human Becoming and of environmental health and nursing care, human exposure to environmental and occupational hazards and to inherent and deriving from health promotion and quality of life concepts.

Regarding the type of study adopted, this permitted the visualization of the redundancies in this terminology, although resulting from the tree



structure of concepts, and served to highlight the need for continuous assessment of ICNP®, in order to propose the updating and applicability of terms in different areas of care. Thus, the contribution of this research refers to the organization of care services, in which the occupational health nurse works, as well as the innovation in covering new ways of taking care of the environment-work-human interaction and use of ICNP® as standardizing terminology.

Regarding future appointments, we suggest the expert validation of the concepts and in environmental and occupational health practice, since this ICNP® terminological subgroup can be used for occupational health work nursing in another theoretical model of nursing or another domain. In addition, the new concepts suggested in this study can be addressed in another subgroup and / or in another nursing theory or other domains of practice. These statements arouse reflections about the contextual characteristic of the usage definitions of the terms contained in the ICNP. Therefore, the structured subgroups gain meaning through a theoretical framework.

The proposed subgroup therefore equips the systematization of occupational health nursing care, makes it possible to evaluate the health situation of workers, generates statistics and collaborates with the development of health policies and with care planning. In addition, it enables the creation of electronic medical records for occupational health services, gives visibility to the profession and communication effectiveness, contributing to the refinement of terms, the adequacy of concepts, the emergence of new terms of practice, the organization of this subgroup with other theories in nursing and other domains and the application in several scenarios of ecological and occupational health care.

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