

## Nursing diagnoses from ICNP® for people with metabolic syndrome

*Diagnósticos de enfermagem da CIPE® para pessoas com síndrome metabólica*

*Diagnósticos de enfermería de la CIPE® para personas con síndrome metabólica*

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### ABSTRACT

**Objective:** To construct nursing diagnosis statements based on the International Classification for Nursing Practice (ICNP®) for people with metabolic syndrome, settled on the theoretical framework of Basic Human Needs. **Method:** Descriptive study developed in four stages: 1) Identification and validation of terms relevant to care with health priority; 2) Cross-mapping of the terms identified with ICNP® terms; 3) Construction of the nursing diagnosis statements; and 4) Cross-mapping of constructed statements with the ones in ICNP®. **Results:** Regarding terms extracted, 370 were validated based on the consensus (100%) among specialists, subsidizing the elaboration of 52 nursing diagnosis statements from ICNP® version 2015, distributed among the Basic Human Needs proposed by theoretical framework. **Conclusion:** It was possible to construct nursing diagnoses for people with metabolic syndrome based on the terms extracted from the literature, with a predominance of the need for "Health education and learning".

**Descriptors:** Nursing; Nursing Diagnosis; Metabolic Syndrome X; Risk Factors; Cardiovascular Nursing.

### RESUMO

**Objetivo:** Construir enunciados de diagnósticos de enfermagem a partir da Classificação Internacional para a Prática de Enfermagem (CIPE®) para pessoas com síndrome metabólica, com base no modelo teórico das Necessidades Humanas Básicas. **Método:** Estudo descritivo desenvolvido em quatro etapas: 1) Identificação e validação de termos relevantes para o cuidado com a prioridade de saúde; 2) Mapeamento cruzado dos termos identificados com os termos da CIPE®; 3) Construção dos enunciados de diagnósticos de enfermagem; e 4) Mapeamento cruzado dos enunciados construídos com os constantes da CIPE®. **Resultados:** Dos termos extraídos, 370 foram validados a partir do consenso (100%) entre especialistas, subsidiando a elaboração de 52 enunciados de diagnósticos de enfermagem a partir da CIPE® versão 2015, distribuídos entre as Necessidades Humanas Básicas propostas pelo modelo teórico. **Conclusão:** Foi possível construir diagnósticos de enfermagem para pessoas com a síndrome metabólica a partir dos termos extraídos da literatura, com predomínio da necessidade de "Educação para a saúde e aprendizagem".

**Descritores:** Enfermagem; Diagnóstico de Enfermagem; Síndrome X Metabólica; Fatores de Risco; Enfermagem Cardiovascular.

### RESUMEN

**Objetivo:** Elaborar enunciados de diagnósticos de enfermería a partir de la Clasificación Internacional para la Práctica de Enfermería (CIPE®) para personas con síndrome metabólica, con base en el modelo teórico de las Necesidades Humanas Básicas. **Método:** Estudio descriptivo desarrollado en cuatro etapas: 1) Identificación y validación de términos relevantes para el cuidado con la prioridad de salud; 2) Mapeo cruzado de los términos identificados con los términos de la CIPE®; 3) Elaboración de los enunciados de diagnósticos de enfermería; e 4) Mapeo cruzado de los enunciados construidos con los enunciados constantes en la CIPE®. **Resultados:** De los términos extraídos, 370 fueron validados a partir del consenso (100 %) entre especialistas, subsidiando la elaboración de 52 enunciados de diagnósticos de enfermería a partir de la CIPE®, versión 2015, distribuidos entre las Necesidades Humanas Básicas propuestas por el

modelo teórico. **Conclusión:** Fue posible elaborar diagnósticos de enfermería para personas con la síndrome metabólica a partir de los términos extraídos de la literatura, con predominio de la necesidad de «Educación para la salud y aprendizaje».

**Descriptores:** Enfermería; Diagnóstico de Enfermería; Síndrome X Metabólica; Factores de Riesgo; Enfermería Cardiovascular.

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## INTRODUCTION

The use of a standard language in Nursing has been pointed as one of the means by which the profession seeks to achieve the conformation of science, outlining its systematized care, based on evidences and directed to health priorities inserted in its action spectrum. Nursing science already exists and continues to grow and strengthen, since it solves its problems and develops a body of knowledge through reflection. However, it is only based on a characteristic and standardized language that nurses will be able to prove that they play a scientific role in the health care area<sup>(1)</sup>, such language being used in the steps of the nursing process.

Nursing diagnosis is the second step of the process and consists of the identification of the basic needs of human beings that need to be seen by nurses and their teams, in order to achieve satisfactory results. The nursing diagnoses have been object of studies and debates, given their complexity and the evolution state of the discipline as a science<sup>(2)</sup>; this object must be based on a theoretical framework.

Hence, the International Classification for Nursing Practice (ICNP®) emerges as a complex and comprehensive instrument, which includes thousands of terms and definitions for the composition of nursing statements for diagnoses, results and interventions. The nursing care is documented through its usage, systematically enhancing its safety and quality<sup>(1)</sup>. Such classification follows the ISO 18,104:2003 rule, revised in 2014, and uses the 7-Axis Model (Focus, Judgment, Means, Action, Time, Location and Client), which facilitates the composition of the referred statements, organized to provide quick access to the predetermined components for a specific clientele<sup>(3)</sup>, the people with metabolic syndrome.

The syndrome consists of an aggregation of cardiometabolic problems, with a profile characterized by criteria such as elevation of arterial pressure, fasting venous blood glucose, plasma triglycerides and abdominal circumference; and reduction in levels of high-density lipoprotein cholesterol, in or out of treatment with anti-diabetic, antilipidemic and antihypertensive drugs, requiring the identification of at least three criteria. In Brazil, general epidemiological data about prevalence of the syndrome are still scarce. However, a recent systematic revision estimated the prevalence of metabolic syndrome in the country between 14.9% and 65.3%. It is worth highlighting that the global prevalence of the syndrome varies from <10% to 84%, depending on the region, composition of the population studied (sex, age, race and ethnicity), environment (urban or rural) and criteria adopted to syndrome definition<sup>(4,5)</sup>. Nurses deal daily with such patient profile, but they do not seem to recognize it as such, perhaps because of scarce dissemination about metabolic syndrome, besides absence of care protocols or specific instruments that may guide the systematized nursing care, justifying the need for investigation to expansion of care possibilities.

In our study, we emphasized the preparation of nursing diagnoses based on the ICNP® for the priority elected, considering that these diagnoses can subsidize the identification of the Basic Human Needs of people with the syndrome. We based our research on empirical data from the existing protocols and potential clinical evidence, besides assisting in the construction of instruments and/or new specific care protocols, impacting the nursing care in Primary Health Care. Thereafter, the following question emerged: Which nursing diagnosis statements relevant to the person with metabolic syndrome can be constructed, based on the ICNP® 2015, literature of the area and theoretical framework of Basic Human Needs?

In our study, we chose the theoretical framework of Basic Human Needs, since the syndrome is not a disease itself, but a set of risk factors that requires from Nursing a care that contemplates human needs in their varied dimensions, in the prospect of the health maintenance and prevention of diseases and complications, especially cardiovascular diseases. Likewise, our model may enable the identification of the real and potential needs of people with metabolic syndrome in an individual and specific manner, since the criteria may vary among individuals.

These nursing diagnosis statements were structured for use in Primary Health Care, favoring the applicability of the steps of the nursing process, which promote people's health based on the reduction of cardiometabolic risk factors, reducing, in mid- and/or long-term, the morbidity and mortality for chronic noncommunicable diseases and their complications through a nursing care of quality.

## OBJECTIVE

We aimed to construct nursing diagnoses statements based on the International Classification for Nursing Practice (ICNP®) for people with metabolic syndrome, settled on the theoretical framework of Basic Human Needs.

## METHOD

### Ethical aspects

This study was approved by the Research Ethics Committee of the Regional University of Cariri.

### Study design, location and period

Descriptive research developed in a Master's thesis of the Graduate Program in Nursing at the Regional University of Cariri from January to May 2016, following the stages according to the recommendations of renowned researchers who develop studies of this design in the country<sup>(3)</sup>: 1) Identification and validation of relevant terms to care with health priority; 2) Cross-mapping of the terms identified with terms of ICNP® 2015; 3) Construction of the nursing diagnosis statements, based on the theoretical framework of the Basic Human Needs; and 4) Cross-mapping of constructed statements with the ones registered in the classification.

### Inclusion criteria for selection of specialists

The following inclusion criteria were used: to be a nurse, author, co-author and/or tutor of studies in the theme directed to the metabolic syndrome and its components; to have had professional performance for at least four years, considered in this study, the minimum time period of clinical practice of specialists for inclusion. Specialists were required to obligatorily present all aforementioned inclusion criteria. Specialists were invited to participate in the research and signed the Informed Consent Form, besides having filled out a form for characterization with personal and professional data.

### Study protocol

In the first stage, the registered terms in Brazilian official publications on care and prevention strategies of chronic diseases<sup>(6-9)</sup> were identified. The terms were classified according to their clinical and cultural relevance to nursing practice directed to people with metabolic syndrome, substantiating the subsequent specific construction of the nursing termbase and statements. It is important to highlight that the use of the referred publications occurred due to the difficulty of the Primary Health Care to provide the care directed to people with the syndrome, evidenced by the absence of a program that specifically acts on these health services. Only indirect actions were carried out, in addition to the defective record of laboratory and anthropometrical parameters used as criteria and nursing notes in patient medical record.

Considering the large number of existing terms in selected publications and the existence of images and charts, the information were organized into individual files in the *Word for Windows*®, aiming to facilitate the extraction of terms. Subsequently, these files were converted to *Portable Document Format* (PDF), to be applied on the *PORONTO* tool<sup>(10)</sup>, which extracted the terms and provided the respective frequencies of appearance. Such tool has been used in studies of this same design and demonstrated efficiency in extraction of terms. The terms were extracted to a worksheet of the *Excel for Windows*®, in order to conduct the process of normalization and standardization, with analysis and exclusion of synonyms, adequacy of verb tenses, grammatical genders (male and female), numbers (singular and plural) and acronyms that identify certain terms.

Expressions/terms belonging to other areas were also excluded, such as diagnoses and medical procedures or other health professions. This exclusion of non-specific terms was necessary because the publications selected in this study are directed at health professionals from Brazil, among which stands the nurse. After normalization and standardization of the extracted terms, the operational definitions were built for these terms based on ICNP®, scientific articles, dictionaries of Portuguese language and technical health terms. These operational definitions facilitated the validation process by specialists.

Considering that the terms extracted in this study arise from care guidelines, it was necessary a validation by consensus among specialists regarding the relevance of the terms identified in relation to the syndrome. The technique of validation by consensus<sup>(11)</sup> was used, to which nurse specialists were selected based on the aforementioned inclusion criteria, recommending at least three and at most five criteria. Validation occurred through presence,

presenting the terms identified and their respective operational definitions for experts to analyze and discuss among themselves the relevance of the terms. The consensus was tested and verified when all the specialists (100%) considered the term expressly validated, with no interference by the researcher.

The second stage contemplated the cross-mapping of relevant terms identified and validated in the previous stage with the terms registered in the 7-Axis Model of ICNP® 2015. Two worksheets in *Excel for Windows*® were constructed: one with the identified terms and other with the ICNP® 2015 terms. They were crossed with each other with the use of the *Access for Windows*®, for identification of the registered and non-registered terms in the version of the classification under study. In the mapping process, the non-registered terms were analyzed regarding the similarity and scope in relation to the terms registered in ICNP®. By the end of the stage, the termbase of nursing language related to the person with metabolic syndrome was obtained, composed of all the registered terms of the classification under study and of all validated non-registered terms.

Regarding the third stage, the nursing diagnosis statements were constructed from the previously consolidated termbase, based on the model of the ICNP® 7-Axis Model, following the recommendations of the International Council of Nurses (ICN) and standard of ISO 18.104:2014, which cover the integration of a reference terminology model for Nursing with the termbase for people with metabolic syndrome constructed in this study.

Initially, according to the ICN recommendations, to construct nursing diagnostic statements, a term of the Focus axis and another of the Judgment axis were necessarily included, besides additional terms according to the needs of the Focus, Judgment, Client, Location and Time axes. The literature presents a Categorical Structure for Nursing Diagnoses<sup>(12)</sup> that brings changes in ISO 18.104, in which a nursing diagnosis can be expressed either by a term of the Judgment or Focus axis or by a clinical finding, in addition to the possibility of being associated with the potential expressed as risk or chance, reflecting the preventive function for nursing practice, essential to identify care needs of people with metabolic syndrome.

After the construction of statements, the cross-mapping technique was conducted between the nursing diagnostic statements constructed with the pre-combined concepts of ICNP® 2015, constituting the fourth step of the study. Two specific worksheets were created in *Excel for Windows*®: one for the constructed statements and other for statements registered in the ICNP® 2015, being subsequently subjected to the analysis process regarding the aforementioned similarity and scope.

### Analysis of results

Operational definitions were constructed for the nursing diagnosis statements, aiming at the best result analysis and at the classification within the theoretical framework, these tabulated in *Excel for Windows*®. The classification regarding the Basic Human Needs proposed in the theoretical framework selected<sup>(2)</sup> was due to the approximation of statements and their definitions with the definitions of the needs proposed by the literature<sup>(13)</sup>.

Results were discussed with relevant national and international publications in the Health and Nursing area, searching evidence

that presented the potentials related to nursing diagnoses constructed and contribution to reduce cardiometabolic risk factors.

**RESULTS**

In the first stage of the study, 49,867 terms were extracted from official publications selected for our study. Subsequently, repetitions among all extractions were excluded, leaving a total of 4,964 terms, subjected to the normalization and standardization process, with spell checking, analysis and exclusion of synonyms, adequacy of verbal tense, gender and number resulting in a total of 378 terms relevant to the nursing care with emphasis on the person with metabolic syndrome.

The terms identified went through a validation process by consensus with three specialist nurses aged between 35 and 52 years old: two masters and one doctor, with over 13 years of training and professional experience for more than four years. They have been working in undergraduate education for at least eight years and have developed or have been developing studies on the metabolic syndrome and nursing classification focused on CIPE®. Of the total, 370 terms were validated by the specialists, after subjected to the cross-mapping process, conducted twice, at different times.

After this process, in the second stage, the coverage and similarity analysis of the extracted terms regarding the terms registered in the ICNP® 2015 was carried out. A total of 207 terms were identified in the ICNP® 2015: 72 were arranged in the Focus axis; 14 in the Judgment axis; 7 in the Means axis; 91 in the Action axis; 8 in the Time axis; 10 in Location axis and 5 in the Client axis. Similarly, 163 terms were classified as non-registered terms, according to axes of the 2015 version of the classification. We considered the axis definition and its coherence with the meanings of the identified terms, of which only 140 were suitable regarding the ICNP® axes: 34 terms in the Focus axis; 18 in Judgment axis; 8 in Means axis; 70 in Action axis, 4 in Time axis, 5 in Location axis and 1 in Client axis. Considering the terms that did not show agreement during the analysis, 23 did not fit in any of the classification axes.

This termbase for nursing practice related to the person with metabolic syndrome has subsidized the third stage, which involved the construction of 52 nursing diagnosis statements based on the ICNP® 2015 and on the theoretical framework of Basic Human Needs<sup>(2,13)</sup>, which were mapped in the fourth stage with the statements registered in the ICNP® 2015, resulting in diagnoses exposed in Chart 1 below:

**Chart 1 –** Distribution of nursing diagnoses for people with metabolic syndrome according to the theoretical framework of Basic Human Needs

<b>Psychobiological needs</b>	
<b>Needs</b>	<b>Diagnoses</b>
Body and environmental care	Self-care deficit
Physical integrity	Risk of injury
Physical activity	Satisfactory weight loss; Active lifestyle; Sedentary lifestyle; Fatigue
Nutrition	Inadequate diet; Weight gain; Excessive eating; Obesity; Risk of overweight; Overweight
Physical and environmental security	Alcohol abuse (or Alcoholism); Abuse of tobacco (or Smoking)
Cardiovascular regulation	Altered arterial pressure; Tachycardia
Sexuality and reproduction	Damaged sexuality
Sleep and rest	Impaired rest
Hormone regulation	High body mass index; Hypercholesterolemia; Hyperglycemia; Hypertriglyceridemia; Metabolic syndrome
Therapeutics and prevention	Abandonment of therapeutic regimen; Adherence (specify); Non-adherence to exercise regimen; Non-adherence to dietary regimen; Non-adherence to drug regimen; Non-adherence to therapeutic regimen
<b>Psychosocial needs</b>	
<b>Needs</b>	<b>Diagnoses</b>
Love and acceptance	Acceptance of impaired health condition; Impaired adaptation
Self-image	Negative self-image
Self-esteem, self-confidence, self-respect	Low self-esteem; Risk of situational low self-esteem
Health education and learning	Impaired ability to manage (control) the exercise regimen; Impaired ability to manage (control) the dietary regimen; Impaired ability to manage (control) the drug regimen; Impaired ability to health monitoring; Impaired health seeking behavior; Impaired exercise behavior; Improved health condition; Lack of knowledge on physical exercise; Lack of knowledge on dietary regimen; Lack of knowledge on drug regimen; Lack of knowledge on therapeutic regimen
Self-actualization	Unfavorable socioeconomic condition; Inadequate income
Recreation and leisure	Risk of solitude; Impaired bond
Emotional security	Anxiety; Lack of family support
Communication	Impaired communication

The results demonstrated that the needs of “Health education and learning” hold the largest number of nursing diagnoses constructed in our study. However, some statements constructed can be classified in more than one need, depending on the context in which they are involved. We emphasize that none of the nursing diagnoses built was classified as a member of the psychospiritual needs.

## DISCUSSION

Nursing has increasingly sought to develop a scientifically-based care compatible with the real needs of the patient, family and community. Such needs must be expressed based on terms that conceptualize them and need to be registered and standardized to the conformation of a unified language in the global nursing field. Considering that a unified language for nursing care must cover the Basic Human Needs of people, especially the metabolic syndrome in our study, the nursing diagnoses must be classified within the demands of the target audience.

Regarding the statements constructed, it is important to consider that they can be organized in more than one need of the theoretical framework selected for our study, such as the *Satisfactory weight loss* statement, which was allocated on the “Physical Activity” need. However, the same statement fits in the “Nutrition” need. Therefore, the metabolic syndrome phenomenon refers to a need for “Physical activity”, “Nutrition”, “Therapeutics and prevention”, “Love and acceptance.”

A multicenter research<sup>(14)</sup> pointed out that 691 people with metabolic syndrome showed reduction of arterial pressure, abdominal circumference and blood glucose after a year of regular and controlled practice of progressive and aerobic physical activity and strength training, twice a week with high intensity. We noticed that the needs regarding the physical activity are related to other needs and, in this perspective, there is the nurse, who has been involved since the need detection up to the continuity of the patient with the syndrome, to promote health education directed to changes in the lifestyle of such patients.

Considering the diagnoses classified in “Nutrition” need, it is important to consider that the metabolic syndrome marks the current nutritional transition. High blood glucose and triglycerides levels, accumulation of abdominal fat and high arterial pressure of this population are directly related with the diets in which high-fat goods, excess of sugar and soft drinks prevail<sup>(15)</sup>, decreasing the quality and expectancy of life<sup>(16)</sup>.

The aforementioned requirement is related to the “Hormonal regulation” concerning the metabolic syndrome because, for its early identification, patients seeking the health service should be approached, and the measurement of indexes and request of laboratory tests should be carried out. Benchmarks of body mass index and waist circumference are useful tools for health professionals to use as an instrument for preventing or reducing cardiovascular risk<sup>(17)</sup>. When executing such measurement and verification of previously requested laboratory tests, the nurse investigates cardiometabolic changes by identifying the need to solve the nursing problems and promoting the health of the patient.

Regarding the metabolic syndrome, it is set as a phenomenon of increasing concern throughout the world, since people with this set of risk factors for cardiovascular diseases bring clinical and laboratory findings that are strong predictors of injuries to health<sup>(17)</sup>. Thus, the syndrome has been increasingly receiving attention, not only by the impact of each of its components, but mainly because the aggregation of risk factors have been increasingly prevalent<sup>(7)</sup>. These factors correspond to the nurse’s field of work, such as the measurement of abdominal circumference, arterial pressure and laboratory parameters; the syndrome may be a nursing phenomenon, to which studies such as ours are developed.

The theoretical framework used in our study<sup>(2)</sup> complements that nursing syndromes are a controversial matter and subject to criticism, in which health institutions that apply the nursing process will be able to develop studies on the definition of the common syndromes to certain groups of patients, as may be the case of the metabolic syndrome, requiring specific studies on such theme.

In a study on the prevalence of the syndrome<sup>(18)</sup>, the majority of individuals are in the overweight range, however, the highest percentage occurs among the obese. The hypercholesterolaemia in 32.9%, hypertriglyceridemia in 37.1%, fasting blood pressure at or above 110 mg/dL in 3.4% and high arterial pressure in 23.5% of people were evidenced. We correlated the evidence as with the “Nutrition” and “Hormonal Regulation” as with the “Cardiovascular regulation” need, which is an extension of “Vascular regulation”, since the model presents no broader category that covers the inotropic and chronotropic cardiac function.

Regarding the “Body and environmental care” need, the *Self-care deficit* diagnosis was classified. Dorothea Orem, in 1970, developed the Self-care Deficit Nursing Theory, which emphasizes nursing actions to the individuals associated with the intention of making the patients partially or completely able to regulate the care for themselves or for their dependents and to commit to the continuation of the performance of such control<sup>(19)</sup>, corroborating with the finding of our study.

Considering the “Therapeutics and prevention” need, the high frequency of chronic disease, especially in older people, is at some degree related with non-adherence to treatment. It suggests that the therapeutic difficulties, especially regarding changes in the lifestyle of these people, such as the control of salt, weight and stress, are negative factors for adherence, constituting in the most difficult variables to follow<sup>(20)</sup>. Such variables are potential points for the performance of nurses, when identifying problems on treatment adherence to treatment and intervening in the (re)establishment of patient cooperation, thus, these risk factors do not compromise the health of these people, such as the emergence of cardiovascular diseases and/or its complications.

Concerning the need for “Physical and the environmental security”, we found that around 50% of preventable deaths among smokers could be avoided if the addiction was abolished, being the majority of these deaths from cardiovascular diseases. Alcohol intake, acutely and depending on the dose, lowers arterial pressure, but the elevation occurs a few hours

after its consumption. In view of the controversy regarding the security and cardiovascular benefit of low doses, as well as the negative action of alcohol in society, the nurse should guide those who have the habit of drinking alcoholic beverages to not exceed 30 g of ethanol per day, for men, preferably not usually, and half that amount indicated for women<sup>(7)</sup>.

With regard to the statements of the “Love and acceptance” psychosocial need, chronic conditions constitute big current issues and because they have long-term characteristics, they require therapeutic regimens to keep them under control, which makes the treatment difficult, making the acceptance of chronic condition even more complicated. Also, it is required the acquisition of strategies to deal with the condition, either by the family or those who live with the patient<sup>(21)</sup>.

Considering the “Sexuality and reproduction”, among distinguished diseases that can interfere with sexuality there are obesity, diabetes mellitus, hypertension and some drugs used in the therapies<sup>(22)</sup>. In the “Sleep and rest” need, some employment activities offer risk for the development of the metabolic syndrome: health, shift (mostly at night) and industrial workers, drivers (freight transport/trucks), police officers and airline pilots. For the most part, these workers have sleep and rest deprivation, noting that the reduction of periods of sleep is associated with a reduction in glucose tolerance and an increase in the cortisol concentration in blood<sup>(23)</sup>.

We highlight the “Health education and learning” need, which grouped together the largest number of nursing diagnosis statements directed at people with metabolic syndrome, whom can present the statements jointly or separately. We must emphasize that Nursing increasingly requires deepening in its knowledge. It must be able to widely use the steps of the nursing process to serve the patients in their needs, implementing the interventions required in nursing care with quality. The preparation of strategies for educational approach of the patient, with clearing of doubts and lessening of anxiety, is also relevant, providing higher effectiveness in the application of therapeutic measures<sup>(20)</sup>. Therefore, the nurse must be able to recognize problems considering the understanding and management of therapy as a whole, focusing on improving the health condition of people with the syndrome.

To the need of “Self-actualization”, Brazilian data show that the obesity phenomenon tends towards higher growth in poor families than in wealthy families, therefore, this disease can no longer be considered as a problem of individuals of higher socioeconomic level<sup>(24)</sup>. The nurse needs to consider such need in the structuring of actions developed with this population, enabling the success of the therapeutic continuity and aftercare.

Regarding the “Self-esteem, self-confidence, self-respect”, the label imposition for those considered “different” is very common. However, it is important to highlight the importance of diversity among people and, therefore, emphasize boosting self-esteem messages, appreciating the idea of respect for differences and recognition of the limits of each person. It is part of the nurses’ continuity to rescue the patients’ self-esteem, to promote the development of their autonomy as well as their active social participation in community actions of interest<sup>(25)</sup>.

The overweight, in some cases, is associated with low self-esteem, dissatisfaction with own body, depression and eating disorders. Often, the obese are discriminated within the social group – be their own family, school, neighbors and friends – which can lead to increasing isolation and the search for filling their sense of dissatisfaction by means of food. Thus, it is necessary to have a positive attitude to combat prejudices, because obesity is not a problem of lack of character or sloppiness. It is essential to foster an inclusive attitude<sup>(25)</sup>, stimulating positive self-esteem.

Regarding the “Self-image”, obese people often show disturbances of body image and strong impact on the psychological aspect, favoring the development of anxiety, depression and low self-esteem, which negatively contributes to the view of the body. When the overweight people experience feelings of frustration, sadness, guilt, failure, depression and isolation, they can search for the most varied types of treatment for weight loss, being susceptible to many adverse effects<sup>(26)</sup>.

The “Communication” is one of the fundamental needs of the human being, such ability to exchange and discuss ideas is inherent to family caregivers, who feel responsible for the care and require that each action performed be in their knowledge. In some cases, it is even evidenced the existence of communication between nursing and family, however, the lack of clarity in dialogue, care in actions and respect for the family’s opinion makes this dialogue fragile<sup>(27)</sup>.

With regard to the “Recreation and leisure” and “Emotional security”, we highlight that the bond mobilizes the team to seek for a family-centered care, promotes ties of trust, mutuality, complicity and co-responsibility among professionals and families, which is consumed as the element that puts individuals in authentic interaction<sup>(28)</sup>. The nurses need to recognize these problems, including them in their own care and promoting an improvement in the quality of life of this population.

### Study limitations

Among the limitations of our research, we have the need for content analysis of the nursing diagnoses and the fact that no diagnosis was classified as a psychospiritual need, due to the possibility that the publications selected for conduction of study are still centered basically in the biomedical model, despite having character of national importance. From this context, it is clearly stated the importance of nurses attending to their patients in a holistic way, covering psychosocial and psychospiritual needs in the same proportion in which they assist their own psychobiological needs<sup>(29)</sup>.

### Contributions to the nursing field

In the Nursing context, our study contributes to the advancement in knowledge and debate about the nursing care needs of the population with the syndrome. It also raises a discussion on the use and applicability of ICNP® in Brazil, collaborating with the progress of the classification and standardization system of the language used in the nurse’s clinical practice, based on the construction of the diagnostic statements that will contribute to the continuity of care to the person with metabolic syndrome in Primary Health Care. The

study proposes it to other studies involving nursing phenomena presented and contemplated in the Basic Human Needs, aiming at the improvement of the quality of nursing care.

## CONCLUSION

Based on the study, we perceived the ICNP® potential as system that brings together relevant terms for the structuring of nursing diagnosis statements. With this classification, nurses can construct the diagnosis statements through clinical presentation of people that are under their care, since the terms occur in their

practice, while requiring clinical reasoning regarding the nursing problems. Such possibility is not so evident when other systems of classification and taxonomies are used.

The construction of the termbase enabled the development of 52 nursing diagnosis statements based on ICNP® 2015 and theoretical framework of Basic Human Needs, most classified in the "Health education and learning" need. Likewise, we highlight the *Metabolic syndrome* diagnosis. Studies should develop a conceptual analysis of this statement, identifying its essential, background and consequential attributes and applicability as proper phenomenon, consolidating it as nursing diagnosis, as this study points out.

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