



Nursing diagnoses related to the nutrition of hospitalized older adults using the ICNP®: A cross-sectional study

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ABSTRACT

Objective: To identify Nursing diagnoses for hospitalized older adults about basic human nutrition needs, using the International Classification for Nursing Practice (ICNP®). **Method:** A cross-sectional survey with a sample of 100 older adults from a hospital. For data collection, a semi-structured instrument was used, containing sociodemographic data, anamnesis and physical examination. The diagnostic statements were built from the ICNP®. Data analysis was performed using descriptive statistics to obtain absolute and relative frequency. **Results:** The following diagnostic titles were constructed: Dentition, impaired; Nutritional condition, impaired; Nutritional condition, positive; Ability to eat, impaired; Emaciated (Thin); Obesity; Cachexia; Deglutition, impaired; and Taste, impaired. **Conclusion:** The importance of applying the stages of the Nursing Process is emphasized, providing systematic assistance to the older adult. Nursing diagnoses focused on nutrition for the older adult favor the formulation of interventions aimed at improving quality of life and functioning of the gastrointestinal system.

Descriptors: Nursing Theory; Aged; Standardized Nursing Terminology; Nursing Diagnosis; Elderly Nutrition.

INTRODUCTION

The longevity of the population and the projections for the growing increase in the number of older adults is a worldwide reality, due to the transformations in the age pyramid and to several factors, including the reduction in the number of births and deaths, which culminate in increase in life expectancy and, ultimately, intensify the population aging process⁽¹⁾.

Aging is characterized as a progressive process, in which several anatomofunctional changes occur, especially biological, which tend to promote the decline of several functions, such as those observed in the gastrointestinal system. In this context, structural changes, motility and secretory function of the digestive system occur, which vary in intensity and nature, allowing the excessive proliferation of bacteria that, associated with other aspects, increase the vulnerability for the development of diseases of the gastrointestinal tract. Thus, it is important to highlight the older adult's need for nutrition, together with nutritional assessment, especially in the hospital environment, in search of early tracking the accuracy of a dietary intervention, aiming at health promotion and better quality of life⁽²⁾.

With regard to Nursing Assistance in the face of such changes, it is essential that nurses provide

accurate and structured care to meet the basic human needs of the aged patient in a safe and effective manner, through strategies that identify the existence of nutritional problems, mainly characterized by the reduction of the muscular tissue and decrease of the lean mass, being potentiators for the increase in the number of complications in the clinical condition and of pre-existing diseases, comorbidities and mortality. Therefore, it is necessary to carry out the Systematization of Nursing Care (SNC), which is defined as a scientific instrument that directs care in a systematic and continuous way, because it provides professionals with technical, scientific and human resources, in addition to favoring the critical thinking and performance of nurses⁽³⁾.

Nurses also have several conceptual models to develop SNC based on scientific knowledge, among which the model proposed by Wanda de Aguiar Horta stands out, which classifies the basic human needs in three major perspectives: psychobiological, psychosocial and psychospiritual. The psychobiological dimension is seen as the first dimension of Nursing care and involves basic elements for maintaining life, such as nutrition⁽⁴⁾.

Corroborating this, as support for the operationalization of SNC, it is necessary to use the classification

systems, which foster the standardized communication process between the entire Nursing team and the other members involved in care. Among the various systems developed, the International Classification for Nursing Practice (ICNP®) stands out, which brings together terms and concepts of elements of the professional practice, enabling clinical reasoning and the documentation of Nursing actions. In addition, it allows for the development of terminological subsets, which are groupings of concepts of Nursing diagnoses, outcomes and interventions directed to specific areas of Nursing care⁽⁵⁾.

Thus, the Nursing professional becomes responsible for fully assisting the older adult according to the basic human needs, considering that nutrition and health are closely related and refer to the notion of a healthy lifestyle, considering older adults as active subjects in the control and treatment of their disease, in addition to remaining active and independent⁽⁵⁾.

Taking into account the considerations now exposed, it is understood that the construction of diagnostic statements for the hospitalized aged patient is a tool that supports improvements in the Nursing care provided, since such elaboration guides decision-making in the scope of care, making it clear to the professionals what their attributions in view of the aged patient's nutrition

needs. In addition, it favors the standardization of language in a universal manner, thus contributing to a better understanding between the Nursing team and other health professionals, enabling care registration and documentation and offering greater scientific evidence that strengthens professional recognition.

In this context, and considering the importance of implementing the Nursing Process, this study aims to identify Nursing diagnoses for hospitalized older adults about the basic human need for nutrition, using the ICNP®.

METHOD

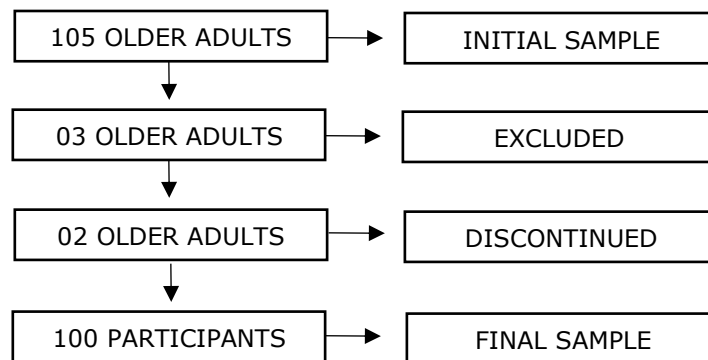
This is a descriptive and cross-sectional study, linked to a research project entitled "Software development for the identification of ICNP® Nursing diagnoses and interventions", developed in a Higher Education Institution (HEI) located in the city of João Pessoa, Paraíba, Brazil.

The study population included all the older adults admitted to general wards and palliative care units of a public hospital, located in the city of João Pessoa, Paraíba, Brazil. It is noteworthy that all patients who were admitted to the hospital during the collection period were approached. Individuals aged 60 years old or over were included. Those who did not have physical and/or psychological conditions to respond to the collection

instrument were excluded. Those who gave up participating in the research in any of its stages were discontinued. The sample was of the non-probabilistic

type, composed of 100 older adults, selected for convenience. Figure 1 shows the construction of the final sample.

Figure 1. Description of the final sample of research participants. João Pessoa, Paraíba, Brazil, 2019. (n=100)



Source: Research data, 2019.

Data collection was carried out between April and August 2019, through the application of a non-validated semi-structured instrument built by the researchers that included data about the sociodemographic profile (age, gender, schooling, marital status, income, family situation, profession and religion); detailed anamnesis (in order to understand the biopsychosocial health status and the complaints presented by the older adults) and physical examination (composed of the organic systems: integumentary, respiratory, cardiovascular, gastrointestinal, genitourinary and neurological, using the propedeutic indicated for each system). The interview lasted nearly 40 minutes and was conducted by a team

of researchers composed of four undergraduate students, previously trained by the main researchers. The companions were not present during collection, since such presence could influence the answer of the older adult. However, when there was any doubt in the information passed on, the companion was subsequently referred to for further clarification, which was observed mainly with regard to the use of medications.

To perform the analytical procedure, the instruments were listed according to the frequency in which data collection was performed and inserted in the *Statistical Package for the Social Sciences* 20.0 (SPSS) for Windows software. Data analysis was carried out using the quantitative

approach, by means of descriptive statistics to obtain absolute and relative frequency, location measures (mean, median, minimum, maximum) and scale (standard deviation).

To structure the diagnostic statements, ISO 18104: 2014 was used as the basis, which deals with the terminology model for Nursing care. The responsible researchers met and followed these stages: 1) analysis of the data collection instrument; 2) survey of the problems presented by each participant; 3) identification of the basic human needs affected in the health-disease process of each older adult; 4) search in the ICNP® for the necessary terms to elucidate the problems presented, according to the axes that compose it; 5) formulation of the diagnosis, composed of at least one term of the focus axis and one of the judgment axis, or complete diagnosis (called single descriptor); 6) review by two experts with a PhD in Nursing; 7) statistical analysis of the absolute and relative frequency of each diagnosis.

It should be noted that the ICNP® version 2019, 7-axis model was used, composed of Focus, Judgment, Means, Action, Time, Location and Client. According to the International Council of Nurses (ICN), for the construction of diagnoses through the aforementioned, it is mandatory to use

one term from the Focus axis and one from the Judgment axis, with the possibility of adding terms from other axes, according to the specific need to present the diagnosis structured according to the characteristics of each individual⁽⁶⁾.

This research observed the ethical guidelines for studies with human beings, set out in Resolution 466/2012 of the National Health Council (*Conselho Nacional de Saúde*, CNS), being approved by the Ethics and Research Committee (*Comitê de Ética e Pesquisa*, CEP) of the João Pessoa University Center, under protocol number: 3,181,956. In addition, a signature or fingerprint was obtained in two copies from the older adult and/or responsible caregiver through the Free and Informed Consent Form (FICF).

RESULTS

With regard to the sociodemographic characterization, the mean age of the older adults studied was 74.02 (± 9.03) years old, with 26% in the age group of 80 years old or more. There was prevalence of the female sex (63%); literate (60%); married/in a stable union (40%); living with a relative (67%); retired (76%) and Catholics (55%), as shown in Figure 2.

Figure 2. Sociodemographic characterization of hospitalized older adults. João Pessoa, Paraíba, Brazil, 2019. (n=100)

Variable	n	%
Age		
60-64 years old	16	16
65-69 years old	20	20
70-74 years old	21	21
75-79 years old	17	17
80 years old or more	26	26
Gender		
Female	63	63
Male	37	37
Schooling		
Literate	60	60
Illiterate	40	40
Marital Status		
Married/Stable union	40	40
Widow/Widower	28	28
Single	24	24
Divorced	8	8
Family Situation		
Lives with a relative	67	67
Not informed	24	24
Lives alone	9	9
Retired		
Yes	76	76
No	24	24
Religion		
Catholic	55	55
Evangelical	19	19

Atheist	6	6
Does not refer	20	20
Total	100	100

Source: Research data, 2019.

With regard to the preparation of the diagnostic statements, the psychobiological need for nutrition was considered in the Wanda Aguiar Horta's theory of basic human needs⁽⁴⁾, in addition to the diagnostic reasoning process and the ICNP® version 2019. According to the ICNP, the nursing diagnosis is "a title conferred to a finding, event, or health situation, identified by the Nurse through data collection and that the professional considers important"⁽⁶⁾.

Thus, 10 diagnostic titles were built, among which the most prevalent

were: "Dentition, Impaired" (66%), "Nutritional Condition, Impaired" (33%), Nutritional Condition, Positive (31%) and Ability to eat, Impaired (31%). Of the terms used to construct the diagnoses based on the ICNP®, six were part of the focus axis (54.55%), three were complete diagnoses (CDs) (27.27%) and two were part of the judgment axis (18.18%). The most used term of the focus axis was "nutritional condition" (33.33%) and, of the judgment axis, "impaired" (83.33%) (Figure 3).

Figure 3. ICNP® Nursing diagnoses related to the nutrition of hospitalized older adults, according to the Horta's Theory of Basic Human Needs. João Pessoa, Paraíba, Brazil. (n=100)

Nursing Diagnosis*	n	%
Dentition, Impaired	66	66
Nutritional Condition, Impaired	33	33
Nutritional Condition, Positive	31	31
Ability to eat, Impaired	31	31
Emaciated (Thin)	13	13
Obesity	13	13
Cachexia	8	8
Deglutition, Impaired	7	7
Taste, Impaired	7	7

Source: Research data, 2019. *There is the possibility of more than one diagnosis per older adult.

DISCUSSION

Among the Nursing diagnoses presented, "Dentition, Impaired" was the most prevalent in the older adults. In a cross-sectional survey conducted in Brazil, with 3,917 older adults, the prevalence of participants with impaired dentition was 73.3%. Furthermore, the same study noted that there was greater criticality in the female population in the North of the country⁽⁷⁾. Corroborating this, another cross-sectional survey carried out in the Brazilian Northeast region, found that more than half of those surveyed (50.8%) presented tooth loss; while nearly 28.1% had root caries⁽⁸⁾.

Dentition inefficiency as well as "Ability to eat, Impaired", also listed in this study, can interfere with the physical well-being and social life of the older adult, in addition to being related to the difficulty in performing Basic Activities of Daily Living (BADLs). Such conditions are related to the atrophy of the muscles involved in the mastication process; that, concomitant to other changes typical of aging such as the reduction in taste and muscle strength, which directly interfere in the occurrence of Chronic Non-Communicable Diseases (CNCDs) such as Diabetes Mellitus and Hypertension. In this context, the physical and

functional limitations observed in these older adults directly influence their nutritional condition⁽⁹⁾.

Associated with this factor, there is also the "Taste, Impaired" diagnosis prevalent in this research and in common with the results of a study that evaluated the taste sensitivity of the older adults, obtaining as a result the presence of altered taste function due to use of medications, chronic diseases and the aging process itself⁽¹⁰⁾. In addition, a number of studies show that hypogeusia can culminate in the increased use of salts and sugars for flavor recognition, strongly contributing to the increase in CNCDs. Considering this situation, it is necessary for the older adult to obtain multi-professional follow-up, aiming at the administration of adequate diets, as well as providing guidance on the varied preparation of foods, making them attractive⁽¹¹⁾.

Regarding the "Nutritional Condition, Impaired" diagnosis, a population-based study verified that low weight is directly related to increasing age, that is, the greater the longevity, the greater the nutritional risks⁽¹²⁾. Another cross-sectional survey with hospitalized patients identified that long hospital stays are associated with weight loss regardless of factors such

as disease severity, comorbidities, age and gender⁽¹³⁾.

In this context, the relationship between the physiological factors of aging and pathological factors commonly acquired in senescence is also emphasized⁽⁵⁾. Thus, reduced vision, smell and taste, associated with reduced appetite and difficulty in masticating/digesting food, are predictive factors for triggering an inadequate nutritional status, which culminates in weight loss and, consequently, propitiates a negative energy balance, resulting in increased fragility in this population and, therefore, in an increase in the number of hospitalizations⁽¹⁵⁾. In addition, non-adherence to hospital diets also contributes to poor nutritional conditions, being responsible for the increase in hospital stay, making the older adult susceptible to new pathological conditions⁽⁵⁾.

It is also noteworthy that the reduction in body weight has been identified in the gerontological literature as a relevant risk factor for negative outcomes in the health of the older adult. Such condition can be evidenced by the design of the "Emaciated (Thin)" and "Cachexia" diagnoses. While weight loss is associated with reduced body weight as a whole, cachexia is defined as loss of lean mass (muscle and bone), becoming, in isolation, an important predictor of death in older adults. A

multicentric study carried out with 900 hospitalized older adults verified that 35% of the sample had the diagnosis "emaciated", which corroborates with the one identified in this research⁽¹⁴⁾. Another survey, with an observational approach, investigated the causes of death, identifying cachexia in the older adults as one of the registered causes⁽¹⁵⁾.

In addition to the aspects previously mentioned as contributing to weight reduction in the older adult, this condition is strongly related to social issues, such as scarcity of financial resources, to maintain an adequate diet; abandonment, widowhood and isolation that favor the manifestation of depressive symptoms⁽¹⁶⁾.

In contrast, the "Nutritional Condition, Positive" Nursing diagnosis was also observed in the sample investigated, which can be related to the maintenance of ideal dietary conditions and/or shorter hospital stay. Strengthening these data, a prospective study found that 44% of the older adults interviewed were classified as eutrophic, according to an assessment of the Body Mass Index (BMI)⁽¹⁷⁾. Such conditions can be justified, in the scope of this study, by the considerable number of young older adults present in the sample (36% aged 60-69 years old). Age is considered a non-modifiable risk factor, being described, in a population-based study, with a direct relationship to the

nutritional conditions of the older adults⁽¹⁴⁾.

Furthermore, it was possible to identify the "Deglutition, Impaired" diagnosis in the older adults interviewed. The deglutition mechanism, performed voluntarily, is highly complex and involves the muscular and nervous systems associated with various structures. Thus, for the conduction of the bolus produced in the mouth to the pharynx, several processes are activated in the cortex, brain stem, muscle and neuronal groups through six cranial nerves⁽¹⁰⁾. In this context, among the abnormalities during the aging process that significantly hinder deglutition, hyposalivation is observed, essential during the process of masticating food, capable of predisposing the older adults to chewing with repetitive movements, coughing and frequent gagging that culminate in the increase in the number of pneumonia cases caused by bronchoaspiration⁽¹⁸⁾.

Regarding the "Obesity" diagnosis, a study carried out in Goiana with 418 older adults identified that 49% had obesity⁽¹⁹⁾. Obesity is considered an important health problem in the older adult and is linked to physical inactivity; bad eating habits, adopted throughout life; and hormonal changes, which reduce body metabolic activity. This condition is related to the increase in abdominal visceral fat, which predisposes the individual to the

development of CNCs, especially DM and SAH, which are mainly responsible for the occurrence of cardiovascular events, such as acute myocardial infarction and stroke, which are the main causes of death in that population⁽²⁰⁾.

In view of the findings obtained in this study, the importance of the diagnostic judgment made by the Nursing professional stands out, aiming at the implementation of interventions that guarantee continuity of care not only during hospitalization but also in post-discharge recovery, including patients, caregivers and their living environment. Furthermore, the need for Nursing assistance in monitoring the nutritional status of the older adult is understood, as well as in strategies that minimize nutritional changes, considering that, as discussed throughout the study, such aspects directly influence other anatomofunctional systems, the inadequate nutritional condition being an important marker of unfavorable outcomes for the health of the older adult.

This study has limitations because it addresses only one hospital reality, in view of being cross-sectional, making it impossible to establish a cause and effect relationship. In addition, the sample selected for convenience can generate selection bias.

CONCLUSION

Given the above, it is possible to conclude that the study achieved the proposed objective, since it was possible to identify ICNP® Nursing diagnoses related to the nutrition of hospitalized older adults, such as: Dentition, impaired; Nutritional condition, impaired; Nutritional condition, positive; Ability to eat, impaired; Emaciated (Thin); Obesity; Cachexia; Deglutition, impaired; and Taste, impaired.

Despite the limitations, it is worth mentioning that the identification of Nursing diagnoses is essential for the realization of comprehensive care. If elaborated in a way that encompasses the needs presented individually by the older adults, it allows for the application of a more effective therapy, promoting the reduction of the hospitalization time, in addition to a better prognosis.

Therefore, the importance of the data herein presented is emphasized; above all, because they are based on theoretical assumptions to aid decision-

making by nurses who deal with hospitalized older adults. Thus, it is suggested to carry out new research studies that address other care contexts, that seek the validation of the Nursing diagnoses herein outlined and/or the formulation of Nursing interventions.

In this context, it is emphasized that constant assessment of the older adult's nutritional status by the nurse and the multidisciplinary team is essential. This fact is justified due to the physiological changes inherent to aging and their impacts on the gastrointestinal tract, facilitating the development of pathologies and body changes. In addition, it is highlighted that hospitalization is a factor that enhances functional changes, justifying the need for active performance by the team. Thus, it is believed that the implementation of the stages of the Nursing Process presented contribute to comprehensive and resolute Nursing care for the older adults.

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