ICNP® nursing diagnoses for people with acquired immunodeficiency syndrome

Diagnósticos de enfermagem da CIPE® para pessoas com Síndrome da Imunodeficiência Adquirida

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Abstract

Objective: To identify ICNP® nursing diagnoses from nursing practice phenomena evidenced in health evaluation of people living with the acquired immunodeficiency syndrome (AIDS).

Methods: Cross-sectional study with 120 people living with AIDS at a hospital for the treatment of infectious and contagious diseases. Data collection was carried out using an interview script and a physical exam. Diagnoses were formulated using the ICNP® guidelines. Data were analyzed through descriptive and inferential statistics.

Results: Seventy-two nursing practice phenomena were identified, and 37 diagnoses were given. Among them, 11 reached agreement and content validity indexes > 0.80 and were considered validated. Within this set of diagnoses, seven were categorized in the group of psychobiological needs and four were included in the group of psychosocial demands.

Conclusion: The identification of nursing practice phenomena helps to formulate diagnoses, results, and interventions oriented to the essential needs of people living with AIDS.

Resumo

Objetivo: Identificar diagnósticos de enfermagem da CIPE®, a partir dos fenômenos da prática de enfermagem evidenciados na avaliação da saúde de pessoas vivendo com a Síndrome da Imunodeficiência adquirida.

Métodos: Estudo transversal com 120 pessoas vivendo com Aids em um hospital de doenças infectocontagiosas. Para a coleta de dados empregaram-se um roteiro de entrevista e exame físico. A elaboração dos diagnósticos foi realizada utilizando-se a CIPE®. Os dados foram analisados por meio da estatística descritiva e inferencial.

Resultados: Identificaram-se 72 fenômenos da prática de enfermagem, sendo possível a elaboração de 37 diagnósticos. Destes, apenas 11 obtiveram o índice de Concordância e índice de validação de conteúdo > 0.80, sendo considerados validados; dos quais sete foram classificados dentro das necessidades psicobiologicas e quatro nas psicossociais.

Conclusão: A identificação dos fenômenos da prática de enfermagem corrobora na elaboração dos diagnósticos, resultados e intervenções direcionados às necessidades prioritárias de pessoas vivendo com Aids.

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Introduction

The acquired immunodeficiency syndrome (AIDS) mobilizes research efforts to develop treatments and clinical and social interventions. Although there has been significant progress in the control of the disease, it is still considered a public health issue worldwide. From 1980 to June 2016, 842,710 cases of the illness were reported in Brazil. In the past five years, an average of 41,100 cases were registered annually in the country.[1]

The disease demands attention from healthcare managers and professionals regarding prevention measures, treatment, and rehabilitation. Nurses are important healthcare facilitators to people living with AIDS, either for executing nursing procedures during hospital admissions, evaluating patients' health conditions or providing guidance on exams, medication, diet, and prevention of transmission of the human immunodeficiency virus (HIV).[1,2]

When caring for people with AIDS, nurses must implement health technologies fully and systematically, in order to reach better service quality and solvability to these clients.[2]

Among many nursing technologies, the Nursing Care Systematization allows to organize actions and interventions in health care and bears the insertion of several methods, such as the nursing process, a methodological instrument to identify, understand and describe the needs of patients, families, and society in general, in addition to document professional practice.[3]

Nursing diagnosis, one of the steps of the nursing process, is a vital phase, during which nurses analyze, register and infer the main needs of patients through diagnoses. It is a process that requires clinical reasoning about the clinical condition of patients, so that it is possible to link clinical, social and behavioral data described in their nursing history.[4,5]

Nursing diagnoses rely on standard codes, instruments that support the clinical reasoning practice and organize the conditions necessary to nursing care.[5] Among them, the International Classification for Nursing Practice (ICNP®) stands out. It is a database for nursing terms and expressions designed to be comprehensive and sensitive to cultural diversity to meet multiple purposes in different countries.[6]

Taking into consideration this scenario, studies about diagnosis formulation through clinical reasoning using the ICNP® guidelines are fundamental to the nursing clinical practice. An integrative literature review with publications about nursing care through the use of ICNP® to people living with AIDS was carried out to support and justify the development of the present study. The consulted papers revealed that there are gaps regarding research about ICNP® with this population.

Consequently, the focus of the present study was to know the main needs of people living with AIDS and expand the systematic care practices to this population through the use of nursing classification systems, like ICNP®. Improvements can be expected as a result of the implementation of this system, such as better care to this specific public, better nursing information and better service organization.

The current context poses the question: What ICNP® nursing diagnoses can be identified from nursing practice phenomena evidenced in the health evaluation of people living with AIDS? Hence, the objective of the present study was to identify ICNP® nursing diagnoses based on nursing practice phenomena evidenced in the health evaluation of people living with the acquired immunodeficiency syndrome.

Methods

The present investigation was cross-sectional and quantitative and had a sample of 120 people living with AIDS admitted to a hospital specialized in infectious diseases in the Northeast region of Brazil. Sample size was based on the arithmetic mean of the number of people diagnosed with AIDS who were assisted in the institution from 2010 to 2014, corresponding to 300.2 patients.

Sample size calculation was based on the expression applied to finite populations, taking into account a confidence level of 95% (Z_{∞}=1.96),

a sampling error of 5% and the population of 300.2 patients.[7-10] As a result, the sample had 120 people, who were selected by convenience, consecutively.

Inclusion criteria for the sample selection were having had a clinical diagnosis of AIDS, being older than 18 years old and being admitted to the hospital during data collection. Exclusion criteria were being pregnant or a prison inmate or presenting a mental disorder evaluated through the application of the Mini-mental State Examination.[11]

After the application of these criteria and the definition of the sample, data collection was performed through an instrument that encompassed sociodemographic and clinical data (transmission routes, diagnosis time, presence of opportunistic conditions and adhesion to antiretroviral medication) and indicators of human basic psychobiological, psychosocial and psychospiritual needs, in accordance with Horta's theory.[12]

The referred items of the instruments were validated by 41 nurses regarding the following criteria: content, appearance, utility/pertinence, consistency, clarity, objectivity, simplicity, feasibility/applicability, updating, accuracy, sequence of the topics and general evaluation. The examiners were specialized nurses whose professional information was found at the Lattes Platform of the National Council for Scientific and Technological Development (CNPq). They developed studies about nursing diagnoses using ICNP®, with a focus on infectious diseases. Most experts were 40 years old (60%), female (90%), lived in the Southeast region of Brazil (40%), worked in teaching institutions (70%) and had a Ph.D. degree (50%).

The time established for the participants to send their answers was 30 days and their suggestions were considered in July 2015. After adjustments in the instrument, a pretest was applied with 10% of the selected sample, and the results were evaluated after data collection. As no changes were introduced to the instrument, these data were included in the final set of outcomes of the present study. Validation of the instrument occurred in a posterior phase of the research.

The identification of nursing diagnoses was concurrent to data collection. Two authors, one with a master's and one with a Ph.D. degree, compiled the nursing phenomena of each person living with AIDS and formulated the possible nursing diagnoses based on the ICNP® 2015 release. At this stage, the Gordon diagnostic system was adopted, which refers to the hypothetic-deductive model and considers the predictive testing of the hypothesis as a key to the diagnosis process.[13]

It is noteworthy that, in the diagnostic inference process, the clinical histories were evaluated individually. Diagnoses that presented concordance among evaluators were accepted. Those that were disparate had the correspondent clinical histories reevaluated until a consensus was obtained.

Subsequently, a datasheet was designed with the software Microsoft Excel, 2009 version, to gather the descriptive clinical history, nursing practice phenomena and the respective nursing diagnoses. This document was sent to researchers from the ICNP® center so they could evaluate whether the statements were pertinent to the reality of people living with AIDS. The criteria adopted to select experts from the ICNP® center were: working at the center for at least one year and developing research in the field of nursing diagnosis formulation in the infectology area. The only exclusion criterion was not having published a scientific paper on the studied subject.

Data were processed using the Statistical Package for the Social Sciences (SPSS), version 20.0, for Windows. For the content analysis of nursing diagnoses by ICNP® experts, the kappa coefficient and the content validity index were obtained and the binomial test was run, considering the last step of the research. Weighted indexes were calculated for the scores given by the experts to each nursing diagnosis. Based on a five-point Likert scale (1 = not pertinent; 2 = little pertinent; 3 = very pertinent; 4 = pertinent; 5 = extremely pertinent) to assess the importance of each diagnosis, a weighted arithmetic mean was calculated with the grades provided by each expert for each diagnosis to originate the validity content index. The scores are presented in chart 1.

Chart 1. Scores given to the indicators of nursing diagnoses

SCORE	BRUNT	SCORE	BRUNT	SCORE	BRUNT	SCORE	BRUNT	SCORE	BRUNT
1	0	2	0.25	3	0.5	4	0.75	5	1

Nursing diagnoses with weighted coefficients ≥ 0.80 were considered pertinent, but the binomial test was also used, because the weighted average tends to overestimate values, making some elements present high content validity indexes.

To apply the binomial test, the Likert scale was turned into a dichotomous system, in which items that received the scores 1, 2 and 3 were classified as inadequate and items that got the grades 4 and 5 were categorized as adequate. Based on the frequency corresponding to the number of experts that classified each nursing diagnosis as adequate, the binomial test was run to verify whether the ratio of experts was higher than or equal to a predefined value of 80%. Thus, results with $p > 0.05$ indicated that the proportion of experts who classified the nursing diagnoses as adequate can be equal to or higher than 80%, a criterion that was applied to every validated nursing diagnosis.

The study met ethical requirements regarding human research and obtained the Certificate of Submission for Ethical Appreciation number 47380915.2.0000.5537.

Results

Most people in the sample were men (57.78%), with a mean age of 39 ± 9.81 years old, married (63.85%), self-employed (41.33%), white (54.21%) and Catholic (85.74%). The most common transmission route was sexual (82.45%) and time of diagnosis was five years. The main hospital admission causes were pneumonia (44.51%), chronic diarrhea (35.28%) and neurotoxoplasmosis (20.21%). More than half of the patients (51%) had quit treatment.

During the health evaluation process, 72 nursing practice phenomena were identified and classified according to basic human needs, as shown in chart 2.

From the 72 nursing practice phenomena, 37 nursing diagnoses were formulated and sent for content validation by the ICNP® experts. The outcome of content validity took into account the predefined cutoffs (0.80 for agreement and content validity indexes) for each nursing diagnosis. Only seven diagnoses classified in the group of psychobiological needs and four included in the group of psychosocial needs reached the minimum score. These diagnoses are listed in table 1.

It is important to point that the need for neurological regulation was reallocated in the group that encompasses locomotion, body mechanics and mobility, given that an advanced HIV infection can set off a neuropathic process that persists even after treatment and restoration of CD4 cell population, regardless of the viral load. In the present study, during the clinical evalua-

Chart 2. Distribution of the nursing practice phenomena in people living with AIDS according to basic human needs

Practice phenomena	Basic human needs
Noisy, fast and abdominal breathing; use of accessory musculature; anteroposterior diameter; peripheral and central cyanosis; thready pulse; bloody sputum; vascular perfusion; altered heart rate; bloody nasopharynx secretion; anemia.	Oxygenation and vascular regulation.
Dehydration; peripheral and central edema; dry mucosa; anasarca; body fat index; peritonitis; positive fluid balance; altered turgor.	Hydration and electrolyte balance.
Weight loss; malnutrition; tube feeding; lesion in the naso and oropharynx; dysphagia; dyspepsia; nausea; vomit; diarrhea; flat abdomen, with hydro-aereal noise; long-term bladder catheters and dysuria; constipation.	Nutrition and elimination.
Use of medication to sleep; fatigue; adynamia; stress.	Sleep and rest.
Average temperature of 39.5ºC; oral cavity; dental flaws; dry skin; seborrhea; pediculosis; ecchymosis and papules; hyperaemia in the sacrum.	Thermoregulation, body care and skin and mucosa integrity.
Changes in gait; decreased muscular strength; decreased peripheral sensitivity; consumption of alcohol, drugs, and tobacco; recurrent infections; leukocytosis/leukopenia (CD4/CD8); interruption of treatment with antiretroviral drugs; sexual practices; viral load.	Locomotion, body mechanics and mobility, physical safety of the environment, immunological regulation, therapeutics.
Dysarthria; becoming sad easily; aphasia; family support; living alone; irritability; fear to expose ideas; stigma; expression and comprehension aphasia; health education.	Communication/learning (health education), sociability, leisure activities, neurological regulation.
Crying easily; sadness; lack of self-confidence; fear of death; body changes; lack of perspectives; desire for achievement and victory; positive attributes.	Self-fulfillment, self-esteem and self-image.
Anguish; lack of a spiritual belief.	Religiosity, spirituality.

Table 1. Distribution of nursing diagnoses for people living with AIDS, according to basic human psychobiological needs (n = 120)

Basic human psychobiological needs	Nursing diagnoses	*AI > 0.80	†CVI > 0.80 (Score)	‡p-value
Oxygenation and vascular regulation	Marked dyspnea	1.0	0.898	0.004
	Bleeding	0.70	0.735	0.248
	Impaired vascular perfusion	0.80	0.921	0.000
	Bloody sputum	0.80	0.987	0.04
Nutrition and nutritional regulation	Cachexia	0.62	0.627	0.128
	Impaired swallowing	0.90	0.935	0.003
Hydration and electrolyte balance	Dehydration	1.0	0.824	0.001
Elimination	Impaired spontaneous vesicle release	0.70	0.325	0.245
	High bowel movement frequency	0.62	0.456	1.25
	Vomit	0.74	0.489	0.589
	Constipation	0.50	0.676	0.269
Locomotion, body mechanics and mobility/neurological regulation	Impaired physical mobility	0.70	0.354	1.29
	Tremor	0.60	0.489	0.450
Sleep and rest	Impaired sleep	0.70	0.754	0.680
Skin and mucosa integrity	Impaired skin integrity	0.70	0.358	0.247
Body care	Impaired hygiene of the oral cavity	0.74	0.479	1.28
	Impaired hygiene of the scalp	0.65	0.612	0.398
Thermoregulation	Hyperthermia	1.0	0.980	0.001
Physical safety and environment	Exposure to contamination	0.64	0.169	0.741
	Tobacco abuse	0.52	0.458	0.125
	Drug abuse	0.51	0.698	0.322
	Alcohol and tobacco abuse	0.51	0.547	0.489
Therapeutics	Impaired adherence to the treatment	1.0	0.897	0.028

*AI - Agreement index; †CVI - Content validity index; ‡Binomial test - $p < 0.05$

Table 2. Distribution of nursing diagnoses for people living with AIDS, according to basic human psychosocial and spiritual needs (n = 120)

Basic human needs	Nursing diagnoses	*AI > 0.80	†CVI > 0.80 (Score)	‡p-value
Psychosocial				
Communication	Impaired communication	0.60	0.259	0.369
	Altered state of consciousness	0.58	0.489	0.578
Learning, sociability, recreation and leisure	Social isolation	0.70	0.783	0.784
	Knowledge of deficient health	0.80	0.854	0.001
	Low family support	1.0	0.951	0.034
	Low acceptance of the current health condition	0.70	0.412	0.174
	Marked body changes	0.60	0.587	0.246
Self-fulfillment, self-esteem and self-image	Loneliness	0.71	0.349	0.357
	Fear to die	0.80	0.871	0.00
	Impaired socialization	0.90	0.975	0.02
	Pertinent will to live	0.60	0.548	0.181
Psychospiritual	Spiritual anguish	0.70	0.459	0.342
Religiosity, spirituality	Impaired religious belief	0.60	0.378	0.234
	Need of a religious leader	0.74	0.594	0.253

*AI - Agreement index; †CVI - Content validity index; ‡Binomial test - $p < 0.05$

tion of people living with AIDS, gait alterations, decreased muscular strength and decreased peripheral sensitivity resulting from opportunistic infections that affected the peripheral nervous system were observed.

Table 2 shows the nursing diagnoses found in the present study that refer to psychosocial and spiritual needs.

Discussion

One of the limitations of the present study is the subjectivity of clinical evaluation and the uncertainties it contains, which has implications for nursing actions. The strong point of the study is the formulation of nursing diagnoses through practice phenomena using ICNP®, a fact that rein-

forces the standardization of a scientific language in nursing and increases the applicability of the nursing process.

Identification of nursing diagnoses is fundamental to list nursing specific interventions and orient them to the real needs of hospitalized patients that live with AIDS.[2] The validated diagnoses in the field of psychobiological needs were: marked dyspnea, impaired vascular perfusion, bloody sputum, impaired swallowing, dehydration, hyperthermia and impaired adherence to treatment.

Dyspnea is defined as a difficulty in the physiological process of inhalation and exhalation caused by a hindered ventilation-perfusion relationship.[8] For instance, a person with AIDS presenting pulmonary tuberculosis has trouble keeping this relationship in the normal level because of the damage in the alveoli provoked by the infection. The consequence is an impaired environmental ventilation.[14]

Another important point is that the disease makes lung cells produce a mucous substance that hinders the normal ventilation process.[15] Given this condition, it is necessary that the nursing team acts by performing interventions, such as decubitus change, postural drainage and cough stimulation to promote respiratory rehabilitation, so that patients reach the physiological parameters of 12-20 respiratory incursions per minute.[14,15]

In the field of vascular regulation need, the diagnosis was impaired vascular perfusion. The causes can be multifactorial, but the most common are anemia, resulting from the use of antiretroviral drugs, or nutritional deficiency, which leads to capillary fragility and changes the whole reticulo-endothelial system. The consequence is heart work overload and a higher heart rate. In addition, the issue can cause episodes of pulmonary hemorrhage, which can be detected through bloody sputum.[15]

The diagnosis of dehydration, characterized by a deficit of intra or extracellular volume, was made in the study sample. This condition results from the progression of the disease and affects blood osmolarity, with consequences for the kidney and heart. Nurses should implement interventions that keep a satisfactory plasma volume, without exceeding the physiological one, to avoid the development of local or generalized edema.[16]

Hyperthermia is defined as decreased or affected capacity to regulate the internal thermostat. In people living with AIDS, this property is influenced by the deficient immunocompetence, which makes them vulnerable to infection and submit them to the risks inherent to a hospital stay, such as the inadequate use of antibiotic therapy and the execution of invasive procedures (for instance, non-observation of the aseptic technique and unnecessary interventions) that can threaten patients' lives and boost new infections.[8-15]

In people living with AIDS, impaired swallowing is most commonly caused by candidiasis, a fungal infection provoked by yeast from the *Candida* genus. It affects the oropharynx cavity and the esophagus. Most people in the sample presented lesions in the oral and nasal mucosa, dysphagia and dyspepsia, and many reported odynophagia (painful swallowing).[16] Once this problem is detected, one of the necessary interventions is a change from oral to nasogastric tube feeding, limiting the ingestion of food rich in minerals, aminoacids, vitamins and proteins.[16]

A diversified diet, rich in proteins, vitamins, minerals and carbohydrates, provides a better nutritional input to fix the deficiencies in people living with AIDS. However, the absence of a proper oral hygiene procedure can enhance an imbalance in the oral mucosa, leading to food abstention and increasing the chances to develop cachexia.[15-17]

In the field of psychosocial needs, the diagnoses regarding knowledge of deficient health, low family support, fear to die and impaired socialization stood out in people living with AIDS in the present study. In the 2015 version of the ICNP®, the concept of knowledge is characterized by being a specific content of thought based on acquired wisdom, information or learned skills. Nevertheless, some researchers state that knowledge originates from the practice to know or have an idea or notion about a specific subject.[18]

Taking this concept into account, knowledge about a deficient health condition when faced with an event brings about vulnerability to every kind of situation, such as for people living with AIDS. Awareness of care practices, such as the daily use of

medication and changes in the routine, is fundamental to improve quality of life.

The practice of health education is a tool that helps prevent diseases and promote health, with a focus on solving problems, and sizes the knowledge of the disease of patients and relatives. It also contributes to adherence to treatment with antiretroviral drugs, given that the absence of adherence to and/or acceptance of the therapy can be related to personal, social or healthcare service-related issues.[19] Therefore, healthcare professionals, coordinated in multidisciplinary teams, should keep in mind that it is important to establish a trust relationship with patients to reach an effective result, through conversations about the physiopathology and treatment. Family, spouse and other people can participate in the discussion.[19,20]

Faced with the impaired adherence to treatment, nurses can implement the following interventions: guide on habits that improve quality of life and encourage people living with AIDS to reveal doubts, anguishes and difficulties related to the treatment, especially immediately after the diagnosis is made, given that patients tend to present irritability, guilt, apathy, among other negative feelings. These reactions can interfere with the commitment to the treatment plan.

Family support is an important tool for the adaptation, acceptance and coping of the new reality, as well as to reduce the fear of death. Such feeling originates from an uncertain future and has a defensive function, because it makes the body react to the imminent risk of death. Low family support was found in most people in the sample, and it makes patients more prone to suicide.[20,21]

The diagnosis fear to die was present in people living with AIDS and is an escape reaction from a negative event that is dreaded. This aspect interferes with the acceptance of the new health condition and can lead to mental health issues, such as anxiety, depression, suicidal ideation and social isolation.[21]

When such scenario is settled, nurses should implement interventions that promote psychological health. A few examples are organizing chat groups and therapeutic listening meetings with other professionals and people living with AIDS, offering a qualified listening to point out fears and anguishes resulting from the changes caused by the disease and encouraging the family to participate in the care to these users.[19] A study demonstrated that support from family and friends to people living with AIDS helped patients to keep their optimism and confidence about the treatment and reduced anxiety and depression.[20]

The diagnosis impaired socialization, identified from the need for sociability and evidenced in the practice phenomena becoming sad easily, living alone, fear to expose their ideas and stigma, corroborates the importance of participating in individual and group activities to have an opportunity to enjoy socialization experiences with family and other people with the same disease.[21]

Many people who live with AIDS tend to avoid social life to protect themselves. Stigmatized people usually keep away from society and even themselves for discrediting a world that does not embrace them.[22] When they seek socialization, they look for groups of people that share the same stigmatized treatment to increase the chances of acceptance, and even in this situation they can oscillate between approach and withdrawing. Another common reaction is to try to prove healthy people that they can be equals, trying to overcome limits, participating in sports championships and activities that reveal their talents. Therefore, social relationships play a crucial role in the moral life of stigmatized people.[23]

It is worth stressing that diagnoses related to psychospiritual needs did not reach a satisfactory prevalence for validation. However, the practice during data collection showed that spirituality, faith and religious belief worked as a support to cope with the difficulties imposed by the illness. The importance to pay attention and identify psychospiritual needs must be emphasized to nurses, because these elements affect therapy aspects, such as adherence, social support, conflicts and individual specificities that can help cope with the disease.

Conclusion

From the identification of 72 nursing practice phenomena, 37 nursing diagnoses were formulated. Subsequently, 11 diagnoses were validated: seven in the psychobiological set of needs and four in the

psychosocial group. The most prevalent diagnoses in the category of basic human psychobiological needs were: marked dyspnea, impaired vascular perfusion, bloody sputum, impaired swallowing, dehydration, hyperthermia and impaired adherence to treatment. In the class of basic human psychosocial needs, the most common diagnoses were: knowledge about deficient health, low family support, fear to die and impaired socialization. The identification of ICNP® diagnoses from nursing practice phenomena evidenced during the health evaluation of people living with AIDS is presented as a contribution to more qualified care to these users, given that the diagnoses allowed the analysis of the human response of these patients and the orientation of the care to their real needs. Taking into consideration the outcomes of the present study, the authors recommend that nurses pay attention to the identification of basic human needs of people living with AIDS when planning their care actions, respect the individual aspects of each user and eliminate or reduce the human response in this population. Last, the outcomes of the present study will contribute to the incorporation of a universal language in the description of professional practice to improve the quality of nursing care in Brazilian institutions, respecting the integrity of human beings and strengthening the scientific nature of nursing.

Contributions

Rocha CCT, Silva RAR and Costa RTS contributed to the study conception, data analysis and interpretation, writing of the manuscript, critical review of its intellectual content and final approval of the version to be published. Nóbrega MML and Souza Neto VL contributed to data analysis and interpretation, writing of the manuscript, critical review of the intellectual content and final approval of the version to be published.

References

1. The Joint United Nations Programme on HIV/AIDS (UNAIDS). AIDS by the numbers; 2016 [Internet]. Geneva; 2016 [cited 2017 May 25]. Available from: http://www.unaids.org/en/resources/documents/2016/AIDS-by-the-numbers.
2. Santos WN. Sistematização da assistência de enfermagem: o contexto histórico, o processo e obstáculos da implantação. J Manag Prim Health Care. 2014; 5(2):153-8.
3. Garcia TR. Systematization of nursing care: substantive aspect of the professional practice. Esc Anna Nery. 2016; 20(1):5-10.
4. Tastan S, Linch GC, Keenan GM, Stifter J, McKinney D, Fahey L, et al. Evidence for the existing American Nursing Association - recognized standardized nursing terminologies: a systematic review. Int J Nurs Stud. 2014; 51(8):1160-70.
5. Costa RH, Nelson AR, Prado NC, Rodrigues EH, Silva RA. Nursing diagnoses and their components in acquired immune deficiency syndrome patients. Acta Paul Enferm. 2016; 29(2):146-53.
6. Garcia TR, Nóbrega MM. The ICNP® terminology and the Brazilian ICNP® Centre participation on its development and dissemination. Rev Bras Enferm. 2013; 6(esp):142-50.
7. Lemos LA, Fiuza ML, Reis RK, Ferrer AC, Gir E, Galvão MT. Adherence to antiretrovirals in people coinfected with the human immunodeficiency virus and tuberculosis. Rev Lat Am Enfermagem. 2016; 24:e2691.
8. Silva RA, Costa RH, Nelson AR, Duarte FH, Prado NC, Rodrigues EH. Predictive factors for the Nursing Diagnoses in people living with Acquired Immune Deficiency Syndrome. Rev Lat Am Enfermagem. 2016; 24:e2712.
9. Oliveira FB, Moura ME, Araújo TM, Andrade EM. Quality of life and associated factors in people living with HIV/AIDS. Acta Paul Enferm. 2015; 28(6):510-6.
10. Crozara LF, Sponton AC, Jarrete AP, Araujo HN, Huamaní OG, Fernandes RA. Use of sample size calculation in scientific research in Brazilian Physical Education journals. Rev Bras Cineantropom. Desempenho Hum. 2014; 16(5):514-21.
11. Melo DM, Barbosa AJ. O uso do Mini-Exame do Estado Mental em pesquisas com idosos no Brasil: uma revisão sistemática. Ciênc Saúde Coletiva. 2015; 20(12):3865-876.
12. Souza NV, Andrade LL, Agra G, Costa MM, Silva RA. Profile of nursing diagnoses of hospitalized patients in an infectious disease unit. Rev Gaúcha Enferm. 2015; 36(3):79-85.
13. Gordon M, Murphy CP, Candee D, Hiltunen E. Clinical judgment: an integrated model. ANS Adv Nurs Sci. 1994; 16(4):55-70.
14. Cui Z, Lin M, Nie S, Lan R. Risk factors associated with Tuberculosis (TB) among people living with HIV/AIDS: A pair-matched case-control study in Guangxi, China. PLoS One. 2017; 12(3):e0173976.
15. Faria JO, Silva GA. Nursing diagnoses in persons with HIV/Aids: an approach based on horta's conceptual model. Rev RENE. 2013; 4(2):290-300.
16. Faria JO, Silva GA. Nursing diagnoses in the safety and protection domain in people with HIV/Aids. Rev Eletr Enf. 2014; 16(1):93-9.
17. Santos AS, Silveira EA, Falco MO, Nery MW, Turchi MD. Effectiveness of nutritional treatment and synbiotic use on gastrointestinal symptoms reduction in HIV-infected patients: Randomized clinical trial. Clin Nutr. 2017; 36(3):680-5.
18. Newman CE, Persson A, Bains A, De Wit J. Whose voices inform online representations of HIV treatment as prevention? AIDS. 2016; 30(5):808-10.
19. Castrighini CC, Reis RK, Neves LA, Brunini S, Canini SR, Gir E. Evaluation of self-esteem in people living with HIV/AIDS in the city of Ribeirão Preto, state of São Paulo, Brazil. Texto Contexto Enferm. 2013; 22(4):1049-55.

20. Tufano CS, Amaral RA, Cardoso LR, Malbergier A. The influence of depressive symptoms and substance use on adherence to antiretroviral therapy. A cross-sectional prevalence study. Sao Paulo Med. J. 2015; 133(3):179-86.

21. Boushab MB, Fatim-Zahra MF, Limame OC, Kishi BL. Forms of Stigma and Discrimination in the Daily Lives of HIV-Positive Individuals in Mauritania. Open AIDS J. 2017; 11:12-7.

22. Sanabria GV. Science, stigmatisation and afro-pessimism in the South African debate on AIDS. Vibrant, Virtual Braz. Anthr. 2016; 13(1):22-51.

23. Villela WV, Monteiro S. Gênero, estigma e saúde: reflexões a partir da prostituição, do aborto e do HIV/aids entre mulheres. Epidemiol Serv Saúde. 2015; 24(3):531-40.