

# Ineffective health control in people living with AIDS: a content analysis

Controle ineficaz da saúde em pessoas vivendo com AIDS: análise de conteúdo  
Control ineficaz de la salud en personas que viven con SIDA: análisis de contenido

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## How to cite:

Silva RA, Santos WN, Souza FM, Santos RS, Oliveira IC, Silva HL, et al. Controle Ineficaz Ineffective health control in people living with AIDS: a content analysis. Acta Paul Enferm. 2020; eAPE20190129.

## DOI

<http://dx.doi.org/10.37689/acta-ape/2020A00129>



## Keywords

Acquired immunodeficiency syndrome; Nursing diagnosis; Validation studies; Nursing process

## Descritores

Síndrome de imunodeficiência adquirida; Diagnóstico de enfermagem; Estudos de validação; Processos de enfermagem

## Descriptores

Síndrome de inmunodeficiencia adquirida; Diagnóstico de enfermería; Estudios de validación; Proceso de enfermería

## Submitted

May 22, 2019

## Accepted

September 10, 2019

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## Abstract

**Objective:** To analyze the content of NANDA International Taxonomy II (NANDA-I) nursing diagnosis, Ineffective Health Control in People Living with AIDS.

**Methods:** Methodological study with a quantitative approach. Content validation was performed by 41 experts regarding the definition, location, defining characteristics and related factors of the diagnosis studied. The binomial test was used to determine the proportion of experts who indicated that each appropriate item did not fall below 85%. The significance level adopted was 5%, with  $p > 0.05$ , and the pertinent item was above 85%.

**Results:** Experts considered that the definition found in the concept analysis was more appropriate when compared to Taxonomy II of the NANDA-I version (2018-2020). The most prevalent defining characteristics were failure to incorporate treatment into daily life and tuberculosis and HIV co-infection. The most frequent related factors were denial of disease and lack of expectations for clinical improvement.

**Conclusion:** The final diagnostic sample consisted of 19 related factors and 8 defining characteristics. Adequacy has been suggested in the definition of the diagnosis ineffective health control in people living with AIDS and its components.

## Resumo

**Objetivo:** Analisar o conteúdo do diagnóstico de enfermagem da Taxonomia II da NANDA International, Inc (NANDA-I) Controle Ineficaz da Saúde em pessoas vivendo com Aids.

**Métodos:** Estudo do tipo metodológico, de abordagem quantitativa. A validação de conteúdo foi realizada por 41 especialistas quanto à definição, localização, características definidoras e fatores relacionados do diagnóstico estudado. Utilizou-se o teste binomial para determinar a proporção de especialistas que indicaram que cada item adequado não ficou abaixo de 85%. Para tanto, o nível de significância adotado foi de 5%, com  $p > 0,05$ , e o item pertinente foi acima de 85%.

**Resultados:** Os especialistas julgaram que a definição encontrada na análise de conceito foi mais adequada, quando comparada com a Taxonomia II da versão da NANDA-I (2018-2020). As características definidoras mais prevalentes foram: falha em incorporar o tratamento na vida diária e co-infecção Tuberculose/HIV. Já os Fatores relacionados mais frequentes foram: negação da doença e falta de expectativas na melhora clínica.

**Conclusão:** A amostra final do diagnóstico foi composta por 19 fatores relacionados e 8 características definidoras. Foi sugerida adequação na definição do diagnóstico controle ineficaz da saúde em pessoas vivendo com aids e de seus componentes.

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Conflicts of interest: nothing to declare.

## Resumen

**Objetivo:** Analizar el contenido del diagnóstico de enfermería de la Taxonomía II de NANDA International, Inc (NANDA-I) Control ineficaz de la salud en personas que viven con SIDA.

**Métodos:** Estudio metodológico, con enfoque cuantitativo. La validación del contenido fue realizada por 41 especialistas respecto a la definición, localización, características definitorias y factores relacionados con el diagnóstico estudiado. Se utilizó la prueba binominal para determinar la proporción de especialistas que indicaron que cada ítem adecuado no quedó debajo de 85%. Para eso, el nivel de significación adoptado fue de 5%, con  $p > 0,05$ , y el ítem pertinente fue por arriba de 85%.

**Resultados:** Los especialistas consideraron que la definición encontrada en el análisis de concepto fue más adecuada cuando se la compara con la Taxonomía II de la versión de NANDA-I (2018-2020). Las características definitorias más prevalentes fueron: falla al incorporar el tratamiento en la vida diaria y coinfección Tuberculosis/VIH. Por otro lado, los factores relacionados más frecuentes fueron: negación de la enfermedad y falta de expectativas de mejora clínica.

**Conclusión:** La muestra final del diagnóstico fue compuesta por 19 factores relacionados y 8 características definitorias. Se sugirió la adecuación de la definición del diagnóstico control ineficaz de la salud en personas que viven con SIDA y de sus componentes.

## Introduction

Acquired Immunodeficiency Syndrome (AIDS), in the worldwide epidemiological setting, has promoted significant changes in the health field. It promoted discussions about sexual behaviors, associated with health beliefs, values and myths, because it is a disease related to sexuality.<sup>(1)</sup>

Some theoretical models seek to understand and explain the relationship between behavior and individual beliefs for the adoption or not of preventive behaviors in face of this disease. Among the references, the Health Belief Model (HBM) stands out.<sup>(2)</sup>

According to HBM, the individual's adoption of preventive behaviors depends on four variables: perceived vulnerability, severity, benefits, and perceived barriers. Thus, the individual must feel and perceive themselves in a situation of vulnerability in relation to a particular offense. In addition to understanding that this condition can have serious consequences for his or her health, he or she needs to realize that to avoid it, he or she must adopt preventive behaviors.<sup>(3)</sup> It must be considered, however, that this new attitude may bring impediments or obstacles to the need for health control.

AIDS is known to impose lifestyle changes.<sup>(4)</sup> Changes are related to the beliefs and behaviors learned and incorporated by people in social life. Therefore, it is undeniable that the health control of people living with AIDS is not limited to the approach of the sick body. It is necessary to consider life experience and subjectivity as essential aspects in the process of becoming ill and taking care of oneself.<sup>(1)</sup>

Thus, professionals involved in treating people living with AIDS, especially nurses, must understand that interventions need to be complex in order to favor the patient's control over their health and how much they are responsible for the success of treatment. It is important for professionals to understand if the client has understood the information and how much it takes it into account. They should provoke reflection on the positive and negative consequences of treatment in the face of ineffective health control.

In this context, nurses should use cognitive ability, scientific knowledge, clinical reasoning and practical experience to assess the clinical manifestations presented by the individual. They should identify the Nursing Diagnoses (NDs), and subsequently the necessary conducts for proper care.<sup>(5)</sup>

Among NDs present in people living with AIDS is Ineffective Health Control,<sup>(4)</sup> which is based on HBM. This diagnosis is present in NANDA-I Taxonomy II, inserted in the Health Promotion domain and in Class 2: Health Control. It is defined as "Pattern of regulation and integration into daily life of a therapeutic regime for treatment of diseases and their sequelae that is unsatisfactory to achieve specific health goals".<sup>(6)</sup>

Although the diagnoses proposed by this taxonomy are well recognized and applied in many situations and settings, they are not definitive. Research in specific populations through validation studies contributes to diagnostic accuracy. They establish appropriate interventions, positive outcomes for the health of the individual and the community, and bringing visibility to nursing as a science.<sup>(7)</sup>

Thus, the identification of the studied ND components corroborates the diagnostic inference process. It amplifies nurses' ability, reduces clinical uncertainties, and enables the development of safe, scientifically supported nursing interventions.<sup>(8)</sup> In addition, identification contributes to the design of systematic practices in the field of infectology and the implementation of new technologies for care for people living with AIDS, which justifies this study.

Study on ND ineffective health control in patients undergoing hemodialysis has been identified in the literature. It identified the need to deepen the analysis of this ND in other specific patient groups, providing components that better characterize the studied ND.<sup>(9)</sup> Thus, there was a need to conduct a study on the content analysis of ND ineffective health control in people living with AIDS, being important for its understanding in the context in which they are inserted. In addition to contributing to its proper application, it contributes to the judgment of the nurse's diagnosis, in order to more clearly address patient care and support clinical validation studies. It also brings important subsidies for nursing as a science.

From this perspective, we sought to analyze the content, the ND Ineffective Control of Health in people living with AIDS. It will provide significant knowledge for nursing professionals, contribute to expand publications on the subject, planning care of these clients and collaborate in early actions and strategies in the face of comorbidities and/or complications. This makes it possible to identify indicators more accurately and clearly and facilitates decision-making and communication in the nursing team.

Given this problem, the question is: what are the components of the ND Ineffective Health Control identified in people living with AIDS?

Given the above, the objective of the study is to analyze the content of NANDA-I Ineffective Health Control in people living with AIDS.

## Methods

Methodological study with a quantitative approach. For this study, the first two steps of the

nursing diagnosis validation model proposed by Lopes, Silva and Araújo were performed.<sup>(10)</sup> The first stage, concept analysis, aimed to identify the attributes, antecedents and consequences of ND Ineffective Health Control with people living with AIDS, in addition to reviewing and applying the transposition to the negation of diagnostic components and the construction of operational definitions of clinical indicators. The second stage, expert content analysis, aimed at adapting the material prepared in the first stage by expert nurses.

To perform this first step, the concept analysis model described by Walker and Avant.<sup>(11)</sup> And for its development, the integrative review proposed by Whittemore and Knafl was used as a tool.<sup>(12)</sup>

In the integrative review, the search was performed from January to March 2018 by the researcher through access to the CAPES portal in Scopus, LILACS, CINAHL, PubMed, Web of Science, Science Direct and Cochrane databases. The keywords and descriptors used were: Patient cooperation; Treatment cooperation and compliance; Medication compliance and acquired immunodeficiency syndrome. The following research questions were elaborated for this stage of the review: What are the clinical indicators that characterize Ineffective Health Control in people living with AIDS? What are the antecedents (related factors) of Ineffective Health Control and their consequences (defining characteristics) in the population people living with AIDS?

The initial sample consisted of 7,693 articles. Then, the selection criteria to refine the search were applied: articles available in full, available in Portuguese, English or Spanish, studies that answer the guiding questions proposed. Exclusion criteria were: advance notes, protocols, ongoing research, reviews, editorials, and letters to the editor. As it is a concept analysis that seeks to apprehend definitions and concepts about the studied phenomenon, it was admitted the inclusion of secondary studies, such as systematic reviews, considering that the exclusion of this type of publication could cause a significant reduction of significant information.

After applying the established criteria, each article was subjected to a reading of the title and the abstract to confirm the presence of the elements that supported the concept analysis, so that a final sample of 46 articles was obtained.

To calculate the proportion of experts, we adopted the formula:  $n = Z_{\infty}^2 * P * (1 - P)/e^2$ . “ $Z_{\infty}$ ” refers to the confidence level adopted (95%) and the value adopted (1.96); “ $P$ ” represents the expected percentage of experts indicating the adequacy of each item (85%); “ $e$ ” represents the acceptable difference proportional to what one would expect (15%).<sup>(10)</sup> Thus, the sample consisted of 22 ND experts.

Experts were selected in June 2018 through the Lattes Curriculum Lattes Platform simple search feature on the portal of the Brazilian National Council for Scientific and Technological Development (CNPq - *Conselho Nacional de Desenvolvimento Científico e Tecnológico*). Therefore, the terms used in the search by subject were nursing diagnoses and AIDS. The fields filled in were: doctors and other researchers and Brazilian nationality. A total of 68 resumes were recruited.

Thus, the following criteria were adopted: to be a nurse with clinical experience in infectology and to have some scientific production on NANDA-I diagnoses. Experts who did not have the Lattes curriculum updated in the last 6 months were excluded from the study. Then, after expert selection, an invitation letter was sent by e-mail containing the researcher’s identification and clarifying the research objectives and the Informed Consent Form.

As the concept of “expert” is not very clear, it was considered for the present study as clinical experience to work for more than a year in infectology services. No distinct scores were used for a longer period of time. It was adopted as “some production”, full article in journal or abstract in Annals of Congress, fearing not to reach the minimum number of the sample.

Initially, the number of experts selected was above the sample size calculation due to the possibility of failure to make contact, refusal to participate and incomplete information. Of the 68 invita-

tions sent to participate in this survey, 41 responses were returned. Thus, to follow this step, the tool and the instructions for its completion via e-mail were sent to the experts.

Data collection took place between July and August 2018. The tool consisted of two parts, namely: characterization of the experts and items elaborated in the concept analysis: statement and definition of the diagnosis, domain of the diagnosis, conceptual definitions and of defining characteristics and related factors.

For each conceptual and empirical definition of defining characteristics and related factors, a five-level Likert scale was applied, ranging from completely inappropriate to completely appropriate. In order to refine the adequacy of each item, the scale was recoded dichotomously. Items rated 1, 2, or 3 were considered inappropriate, and items rated 4 or 5 were considered adequate.<sup>(10)</sup>

The analysis was performed using the Statistical Package for Social Sciences® (SPSS), version 19.0, using a binomial test. The significance level adopted was 5%, with  $p < 0.05$ , and the appropriate item was above 85%. Consequently, the components that did not present these proportions were excluded from the final ND proposal studied.<sup>(10)</sup>

The development of the study complied with the ethics standards in research involving human beings under Opinion No. 1,146,907.

## Results

It was found that in the 46 selected studies, the most prevalent field of action was medicine (52.2%), followed by nursing (17.4%), public health (15.2%), multidisciplinary (10.9%) and life sciences (4.3%). The research development continents were: Africa (50%), North America (21.8%), South America (10.9%), Asia (6.5%), Oceania (6.5%) and Europe (4.3%). Regarding the year of publication, 17 (36.9%) articles were published in 2017; 10 (21.8%) articles were indexed in 2016, nine (19.6%) articles were published in 2015. In

other years, there was a fall in publication, with five (10.9%) articles published in 2014, three (6.5%) in 2018 and two (4.3%) in 2013. Thus, Figure 1 below presents the representation of the concept studied, its definition, antecedents, consequences and attributes, in order to illustrate the information identified and constructed.

The experts were mostly female (58.5%), between 30 and 35 years old (34.1%), residents of the Northeast region of Brazil (58.5%) and with more than 10 years of training, professional (43.9%). Regarding occupation, the majority (80.5%) worked as a professor in educational institutions, had a doctorate (61%), taught ND (84.8%) and

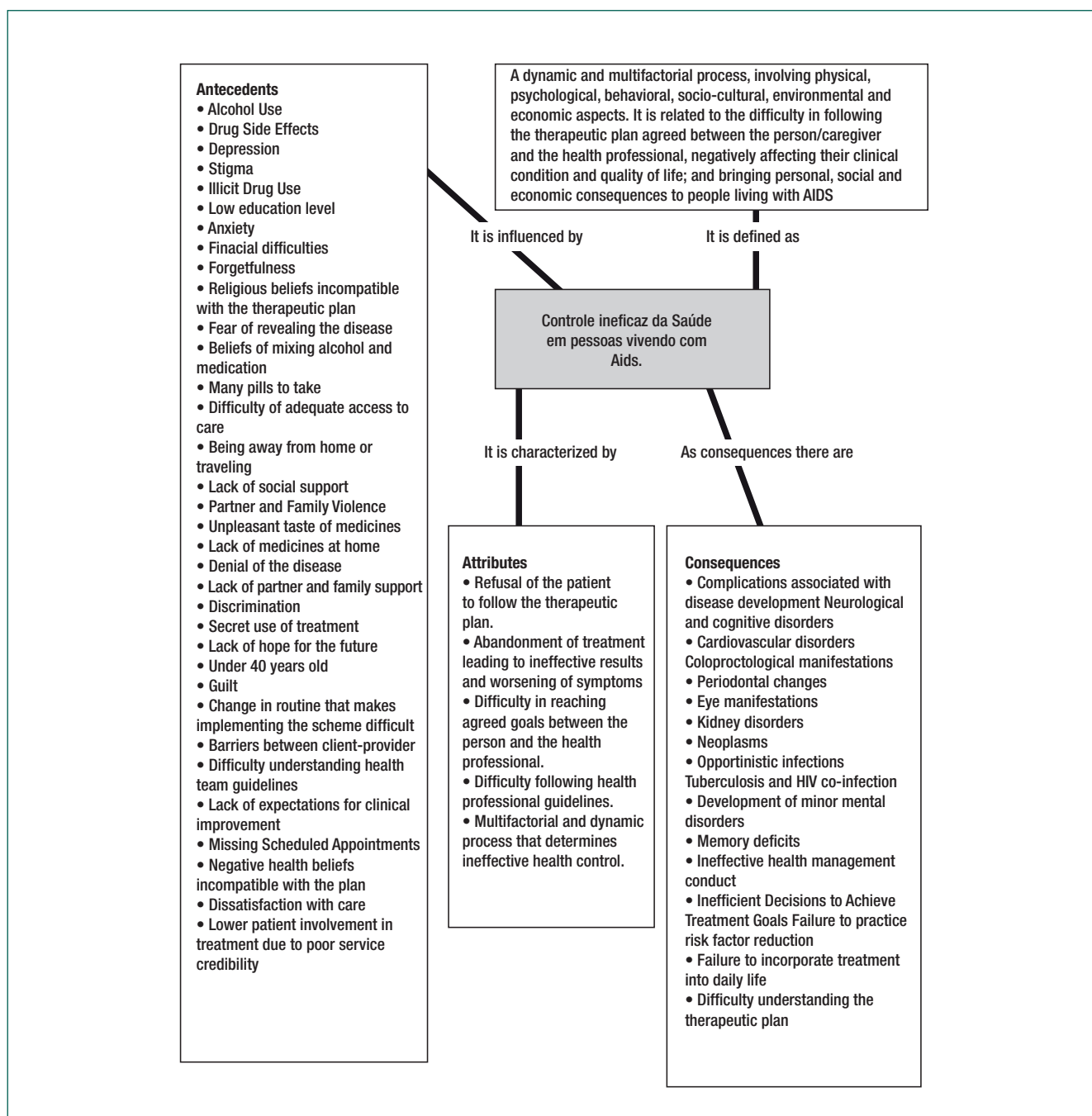


Figure 1. Representation of the studied concept

provided assistance to people living with AIDS (70.7%).

Two definitions were sent to the experts for ND Ineffective Health Control. The first definition was taken entirely from NANDA-I (2018-2020) and the second was built on the basis of the concept analysis. It was found that 92.7% of the experts considered that the most appropriate definition obtained in the concept analysis and provided by the author was: “Dynamic and multifactorial process, involving physical, psychological, behavioral, socio-cultural, environmental and economic aspects, related to the difficulty in following the therapeutic plan agreed between the person/caregiver and the health professional, negatively affecting their clinical condition and quality of life; and bringing personal, social and economic consequences”.

Regarding the location of ND Ineffective Health Control, three positions were pointed out: Domain 1: Health Promotion and Class 2: Health Control (78%), current location of ND in taxonomy II by NANDA-I; Domain 11: Security/Protection and Class 1: Infection (14.6%); Domain 11: Safety/Protection and Class 5: Environmental Risks (7.3%). In this case, most considered the current location of this ND.

The experts assessed the adequacy of the related factors and the defining characteristics of ND, as shown in Table 1.

From the list with 34 related factors, 15 presented a lower adequacy ratio than the adopted one (85%). Thus, these terms were removed from the final list for the adequacy of the related factors of the studied DE. The experts assessed the adequacy of the defining characteristics of ND, as shown in Table 1. From the list with 17 defining/consequent characteristics, 09 presented a lower adequacy ratio (85%), thus, these terms were removed from the final list of the defining characteristics of the studied ND. Chart 1 presents the final proposal for ND Ineffective Health Control, based on the findings of this study.

**Table 1.** Adequacy of related factors and defining characteristics of ND Ineffective Health

Antecedents/Related factors	n(%)	P value*
Denial of the disease	41(100)	0.072
Lack of expectations for clinical improvement	41(100)	0.072
Illicit drug use	40(97.6)	0.001
Difficulty understanding health team guidelines	40(97.6)	0.001
Drug Side Effects	39(95.1)	0.023
Depression	39(95.1)	0.023
Difficulty of adequate access to care	39(95.1)	0.023
Stigma	38(92.7)	0.153
Fear of releasing the disease	38(92.7)	0.153
Forgetfulness	37(90.3)	0.048
Lack of hope for the future	37(90.3)	0.048
Religious beliefs incompatible with the therapeutic plan	36(87.8)	0.001
Change in routine that makes implementing the scheme difficult	36(87.8)	0.001
Barriers between customer-taster	36(87.8)	0.001
Lack of partner and family support	36(87.8)	0.001
Alcohol abuse	35(85.4)	0.024
Lack of social support	35(85.4)	0.024
Negative health beliefs incompatible with the plan	35(85.4)	0.024
Dissatisfaction with care	35(85.4)	0.024
Many pills to take	34(82.9)	0.068
Lack of medicines at home	32(78.1)	0.071
Beliefs of mixing alcohol and medication	32(79.1)	0.071
Low education level	31(75.6)	0.094
Financial difficulties	30(73.2)	0.163
Secret use of treatment	30(73.2)	0.163
Discrimination	29(70.7)	0.093
Lower patient involvement in treatment due to poor service credibility	28(68.3)	0.641
Unpleasant taste of medicines	27(65.8)	0.062
Being away from home or traveling	27(65.8)	0.062
Missing scheduled appointments	25(60.9)	0.084
Partner and family violence	24(58.5)	0.082
Guilt	23(56.1)	0.183
Anxiety	23(56.1)	0.183
Under 40 years old	15(36.6)	0.816
Consequents/Defining characteristics	n(%)	P value*
Failure to incorporate treatment into daily life	41(100)	0.023
Tuberculosis and HIV co-infection	39(95.1)	0.001
Difficulty understanding the therapeutic plan	38(92.7)	0.003
Complications associated with disease development	38(92.7)	0.003
Opportunistic infections	37(90.2)	0.024
Inefficient Decisions to Achieve Treatment Goals	36(87.8)	0.035
Failure to practice risk factor reduction	36(87.8)	0.035
Ineffective Health Control Conduct	36(87.8)	0.035
Neurological and cognitive disorders	33(80.5)	0.621
Coloproctological manifestations	27(65.9)	0.741
Kidney Disorders	27(65.9)	0.741
Memory deficits	26(63.4)	0.603
Development of minor mental disorders	24(58.5)	0.984
Eye manifestations	23(56.1)	0.632
Periodontal changes	23(56.1)	0.632
Neoplasms	22(53.7)	0.769
Cardiovascular disorders	20(48.8)	0.834

\*Binomial test

**Chart 1.** Final Proposal for Nursing Diagnosis Ineffective Health Control

Defining Characteristics
Inefficient decisions to achieve treatment goals
Failure to practice risk factor reduction
Failure to incorporate treatment into daily life
Complications associated with disease development
Opportunistic infections
Tuberculosis and HIV co-infection
Ineffective health management conduct
Difficulty understanding the therapeutic plan
Related Factors
Alcohol abuse
Drug Side Effects
Depression
Stigma
Illicit drug use
Forgetfulness
Religious beliefs incompatible with the therapeutic plan
Fear of releasing the disease
Difficulty of adequate access to care
Lack of social support
Denial of the disease
Lack of partner and family support
Lack of hope for the future
Change in routine that makes implementing the scheme difficult
Barriers between customer-taster
Difficulty understanding health team guidelines
Lack of expectations for clinical improvement
Negative health beliefs incompatible with the plan
Dissatisfaction with care

## Discussion

Content analysis of ND Ineffective Health Control with regard to people living with AIDS can facilitate nurses' diagnostic reasoning, by providing evidence-based diagnostic elements presented by patients and identified from information about a health problem or vital process.

The definition of an ND should be clear and concise in order to facilitate decision making and communication in the nursing staff.<sup>(6)</sup> This could be seen in the choice of definition by the experts, where the proposed definition was based on concept analysis. In terms of location, experts chose Domain 1: Health Promotion and Class 2: Health Control. Health Promotion is defined as "perception of well-being or normal function and strategies used to maintain control of this good. and normal function as well as to improve them". The Health Control class consists of "identification, control, performance

and interconnection of activities to maintain health and wellbeing".<sup>(6)</sup>

Given the application of the validation studies on ND, it is of fundamental importance that during its execution there is a deepening in the identification and selection of experts in order to obtain legitimate results. Research with this methodological approach is based on the opinion of these professionals.

The characterization of the participants in the present study was similar to others performed to validate nursing diagnoses. There was a predominance of the age group between 30 and 35 years, the training time was over 10 years, doctoral degree and clinical experience.<sup>(13,14)</sup>

Although the rate of detection of AIDS has been falling in Brazil, as in the South and Southeast regions with fall of 22.2% and 26.7%, respectively, according to the latest Epidemiological Bulletin of the Ministry of Health, there was growth in the Northeast of 12.7 cases per 100 thousand inhabitants in 2007 to 15.7 in 2017, representing an increase of 24.1%. Although AIDS is a national problem, this increase in cases arouses the interest of researchers to develop new studies in the area, justifying the majority (58.5%) of the experts who composed the sample of this study come from the Northeast region.<sup>(15)</sup>

The results of the present study pointed out as Defining Characteristics for Ineffective Health Control: Inefficient decisions to achieve treatment goals; Failure to practice risk factor reduction; Failure to incorporate treatment into daily life; Complications associated with the development of disease; Opportunistic infections; Tuberculosis and HIV co-infection; Ineffective health management; Difficulty understanding treatment plan.

Inefficient decisions to achieve treatment goals are choices made by people living with AIDS that are ineffective in achieving health goals, such as: misuse or non-use of prescribed antiretroviral drugs; non-attendance at routine appointments; failure to perform regular exams (CD4 + and viral load). Its Operational Definition (OD) consists of questioning patients/family members/caregivers about the

patient's daily choices, if they are compatible with the health goals.<sup>(16)</sup>

For these people to remain healthy, and to prevent transmission, HIV is known to be suppressed to undetectable or very low levels through continuous antiretroviral treatment.<sup>(17)</sup> In addition, treating this disease is a unique tool in the response to AIDS, preventing its progression, complications and death, avoiding new infections and saving financial resources for the Brazilian Unified Health System (*Sistema Único de Saúde*). Expectations for the end of the disease epidemic depend to a large extent on the world's ability to provide treatment to all who need it, within a human rights-based approach, with universal access to treatment essential.

Failure to practice risk factor reduction can be conceptually defined (CD) as failure to act to reduce risk factors for the development of comorbidities or complications related to Acquired Immunodeficiency Virus (HIV).<sup>(18)</sup> OD consists of questioning patients/family members/caregivers about the difficulties in maintaining a practice to reduce disease-related risk factors.<sup>(19)</sup> If you do not take measures such as condom use, these people may become infected with another, more pathogenic or resistant strain of HIV, as well as acquire other Sexually Transmitted Infections (STIs) that may aggravate the course of the disease.<sup>(20)</sup>

Failure to incorporate treatment into daily life has as CD the difficulty expressed by the person living with AIDS in following the prescribed treatment regime due to its complexity and limitations. In this sense, OD consists in questioning patients/family members/caregivers about the presence of difficulties experienced to comply with the prescribed regimen. In the case of people living with AIDS, this failure is associated with low socioeconomic and educational levels, prescribing complex treatment regimens and dissatisfaction with the health service.<sup>(21)</sup>

Complications associated with the development of the disease present CD as a worsening of AIDS symptoms and the appearance of opportunistic infections, cardiovascular diseases, dyslipidemia, neoplasms and pneumonia.<sup>(22)</sup> Thus, OD consists of questioning patients/family members/caregivers

about the onset and intensification of symptoms.<sup>(23)</sup> HIV is known to affect defense cells and therefore causes immune compromise soon after infection is acquired. Early diagnosis followed by initiation of antiretroviral therapy early in infection promotes control of viral load and prevents the development of the disease and its complications, such as opportunistic infections leading to death.<sup>(20)</sup>

Opportunistic infections are conceptually defined as diseases that develop as a result of a host-induced immune change and are usually of infectious origin.<sup>(24)</sup> OD consists of questioning patients/family members/caregivers about the appearance of signs and symptoms of other diseases and monitoring laboratory test results (CD4 + cell count and viral load) according to normality standards. HIV causes immune cell depletion, especially in the subset of CD4 + cells, predisposing the individual to STI and opportunistic infections.<sup>(25)</sup>

In addition, as the disease progresses, the individual may have leukopenia, thrombocytopenia, and anemia related to immunity deficiency. Deficiency has its cause in HIV replication and the mechanism of action of HIV as it binds to the cell surface and destroys CD4 T lymphocytes, increasing susceptibility to opportunistic infections.<sup>(26)</sup>

CD Tuberculosis and HIV co-infection is defined as the presence of tuberculosis (TB) in people living with HIV (PLHIV).<sup>(27,28)</sup> OD consists of questioning the patient about one of four symptoms: fever, cough, night sweats, and weight loss; conducting TB research; and monitor the treatment of latent TB infection.<sup>(29)</sup>

The spread of the HIV epidemic is considered one of the main factors associated with the epidemiological profile of TB endemic. This is due to the compromised immune system of individuals infected with the virus. This favors the emergence of opportunistic diseases, including TB. On the other hand, TB and HIV co-infection is also often related to the development of multidrug resistance to TB, which aggravates the situation of patients, extends the time required for treatment and, consequently, increases the costs of control actions.<sup>(30)</sup>

Ineffective Health Control Conduct is defined as inappropriate behavior adopted by the patient



regarding the prescribed therapeutic regimen, so as not to improve health status. OD refers to question patients/ families/caregivers about adherence to prescribed care and to assess the results of laboratory tests according to normality standards.<sup>(31,32)</sup>

The difficulties that permeate the maintenance of therapeutic conducts in PVA are related to the low socio-cultural level and lack of economic resources. Studies point to the financial factor as one of the main conditions for treatment abandonment, since the daily financial maintenance needs eventually exceed the clinical condition maintenance needs, and clinical control continues in the background.<sup>(33-35)</sup>

Other barriers found to maintain control conducts are related to adverse effects from antiretroviral therapy, such as body changes (lipodystrophies and peripheral venous prominence), mode of administration (drug size and quantity), as well as clinical manifestations (epigastric pain, nausea and emesis).<sup>(33)</sup>

Difficulty understanding the therapeutic plan is defined as the inability to acquire, apply, assimilate health-related information in an appropriate manner to health or absence, misdirection, or failure to follow the guidance provided by health professionals.<sup>(35)</sup> OD refers to questioning patients/family members/caregivers about routine practices guided by health professionals to see their understanding, as well as questioning the patient and the health team about the routine of patient, caregiver, family orientations.<sup>(23,24)</sup> Authors state that low education is a factor that hinders the understanding of the therapeutic plan. This was observed in studies whose individuals with less years of study had inadequate treatment compliance.<sup>(33,35)</sup>

It is noteworthy that in the current version of NANDA-I, ND “Non-adherence” was removed, but the term continues to be used sometimes as a risk factor, sometimes as a defining characteristic. In this sense, it is salutary that nurses, as a way to overcome the absence of this ND, know the peculiarities of patients’ routine, in order to identify gaps that may interfere with health control and, together with the patient and other team members, develop

solutions that address the identified difficulties, that is, propose effective interventions.

Thus, it becomes necessary to direct attention to the person rather than the disease. Thus, it is expected to build a bond of trust, respect and empathy between team and client, where there is a common purpose, information exchange and health decisions. It is found that when this occurs, there is greater self-control of health. In the context of the inclusion of clients in the responsibility for their health, supported self-care should be promoted, a concept in which the idea of empowering the population over their health control and self-management capacity is recognized, recognizing users as a central figure. To achieve self-care goals, nurses must work to strengthen patients so that they can then plan and act on a care plan that contains goals and methods, knowing that difficulties such as barriers can arise.

Moreover, it is inferred that this term was not listed in the defining characteristics and related factors, since it is believed that experts understand that this is a complex process and involves multiple factors. They were present in the components of the final proposal for ND Ineffective Health Control.

It is noteworthy that in the new version of NANDA-I, the ND Noncompliance was removed. This diagnosis was quite old, and the last review was made in 1998. Although it was translated into Portuguese as *Falta de Adesão*, in the English version, it was called “Noncompliance”. It had a sense of non-compliance and was no longer consistent with most current research in the area, which has a broader focus on the idea of adherence than compliance.

From this perspective, the content analysis of the studied ND may help the nurse to identify the indicators with greater precision and safety, thus establishing results and nursing interventions with greater chances of direction and effectiveness.

Finally, the study had limitations related to sample selection. It did not use scores to differentiate the length of clinical experience and was included as scientific production, as well as articles published in journals, congress proceedings, based on the fear that there are not enough experts. However, it pre-

sented as strength, in view of the adoption of such criteria, the possibility of expanding this sample in the assessment of the relevance of content of the items submitted for validation, enhancing a multiple look at a particular aspect, in this case, the studied ND.

## Conclusion

Experts considered the definition proposed for the nursing diagnosis ineffective health control to be adequate: a dynamic and multifactorial process that involves physical, psychological, behavioral, socio-cultural, environmental and economic aspects. A process related to the difficulty in following the therapeutic plan agreed between the person/caregiver and the health professional, negatively affecting their clinical condition and quality of life, and bringing personal, social and economic consequences. In addition, the final proposal for ND, based on content analysis, considered the current location in taxonomy II appropriate by NANDA-I, Domain 1 (Health Promotion), Class 2 (Health Control). Eight defining characteristics were considered adequate, namely: inefficient decisions to achieve treatment goals; failure to practice risk factor reduction; failure to incorporate treatment into daily life; complications associated with the development of the disease; opportunistic infections; TB and HIV co-infection, ineffective health management conduct; difficulty understanding the therapeutic plan. In addition, 19 related factors were indicated, namely: alcohol abuse; side effects to medications; depression; stigma; illicit drug use; forgetfulness; religious beliefs incompatible with the therapeutic plan; fear of releasing the disease; difficulty of adequate access to care; lack of social support; denial of the disease; lack of support from partner and family; lack of hope for the future; change in routine that makes it difficult to implement the scheme; customer-taster barriers; difficulty understanding health team guidelines; lack of expectations for clinical improvement; negative health beliefs incompatible with the plan; dissatisfaction with care.

## Acknowledgments

A special thanks to *Universidade Federal do Rio Grande do Norte* for its institutional support and the Coordination for the Improvement of Higher Education Staff (*Coordenação de Aperfeiçoamento de Pessoal de Ensino Superior*) for the Master's scholarship granted to Santos WN.

## Collaborations

Silva RAR, Santos WN, Souza FMLC, Santos RSC, Oliveira IC, Silva HLL and Lima DM cooperated with the project design, data analysis and interpretation, article writing, relevant critical review of the intellectual content and final approval of the version to be published.

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