

## CLINICAL VALIDATION OF THE NURSING DIAGNOSIS "NONCOMPLIANCE" AMONG PEOPLE WITH HYPERTENSION

Validação clínica do diagnóstico de enfermagem "falta de adesão" em pessoas com hipertensão arterial

Validación clínica del diagnóstico de enfermería "ausencia de adhesión" en personas con hipertensión

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### ABSTRACT

**Objective:** To clinically validate the nursing diagnosis Noncompliance in people with hypertension. **Method:** This methodological study used the Clinical Diagnostic Validation method. The content of the diagnostic proposal was initially validated by experts and then clinically validated in 128 patients with hypertension cared for by a Primary Health Care service in Crato (CE) Brazil. Two clinical nurses, experts in nursing terminologies and therapy adherence collaborated. **Results:** After the clinical validation, the diagnosis was expanded to contain six defining characteristics and twelve related factors. **Conclusion:** This study provided a direction for the efficient use of the assessed clinical indicators, contributing to the improvement of the nursing diagnosis Noncompliance and its constituent parts. Nursing professionals should appropriate these technologies to increase and broaden their use, contributing to the improvement of healthcare delivery.

**Keywords:** Nursing diagnoses; Patient compliance; Medication adherence; Validation studies.

### RESUMO

O objetivo deste estudo foi validar clinicamente o diagnóstico de enfermagem Falta de Adesão em pessoas com hipertensão arterial. **Métodos:** Trata-se de um estudo metodológico, utilizando-se o modelo de validação clínica de diagnóstico. O conteúdo da proposta do diagnóstico foi inicialmente validado perante especialistas e depois clinicamente com 128 pacientes com hipertensão arterial atendidos pela Atenção Primária de Crato-Ceará, com o auxílio de duas enfermeiras clínicas, especialistas em terminologias de enfermagem e adesão terapêutica. **Resultados:** Após a validação clínica, o diagnóstico passou a contar com seis características definidoras e doze fatores relacionados. **Conclusão:** Considera-se que o estudo forneceu direção para a eficiência do uso dos indicadores clínicos avaliados, contribuindo com o aprimoramento do diagnóstico Falta de Adesão e seus elementos constituintes. A Enfermagem deve se apropriar de suas tecnologias, buscando incrementar e amplificar sua utilização, contribuindo com a melhoria da assistência prestada.

**Palavras-chave:** Diagnóstico de enfermagem; Cooperação do paciente; Adesão ao medicamento; Estudos de validação.

### RESUMEN

**Objetivo:** Validar clinicamente el diagnóstico de Enfermería "Ausencia de adhesión en personas con hipertensión". **Métodos:** Estudio metodológico que utiliza el modelo de validación clínica del diagnóstico. El contenido de la propuesta fue validado inicialmente con expertos y luego clinicamente validado con 128 pacientes con hipertensión arterial tratados en la Atención Primaria a la Salud del municipio de Crato, Ceará - Brasil, con la ayuda de dos enfermeras-clínicas especialistas en terminología y adhesión terapéutica. **Resultados:** Después de la validación clínica, el diagnóstico cuenta con seis características definitorias y doce factores relacionados. **Conclusión:** Se considera que el estudio proporcionó la dirección para el uso eficiente de los indicadores clínicos evaluados, lo que contribuye para la mejora del diagnóstico de "ausencia de adhesión" y sus componentes. La Enfermería debe apropiarse de sus tecnologías, con el objetivo de desarrollar y ampliar su uso, contribuyendo para la mejora de la atención.

**Palabras-clave:** Diagnóstico de Enfermería; Cooperación del paciente; Adhesión a la medicación; Estudios de validación.

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## INTRODUCTION

The object of study is the nursing diagnosis Noncompliance, as there is an acknowledged difficulty among patients with chronic diseases in maintaining good levels of therapy adherence, among them treatment for hypertension<sup>1,2</sup>. Additionally, revising and validating a diagnostic is relevant given the widely recognized need to study the system of classification of nursing diagnoses proposed by NANDA International.

Uncontrolled lifestyles and habits of modern societies have collaborated in the increased incidence of non-infectious chronic diseases, especially those of cardiovascular origin. These diseases have stood out as one of the world's major public health problems, requiring multiple abilities from nurses and other health professionals to establish actions that promote health and control disease<sup>3</sup>.

Among cardiovascular diseases, hypertension is one of the most frequent morbidities among adults and elderly individuals. Because it is a silent and aggressive disease and also because controlling it depends on the collaboration and active participation of patients, adherence to the therapeutic measures devised by the health staff is an essential aspect in the reduction of such consequences<sup>4-6</sup>.

Considering that adherence goes beyond mere compliance and extends to the regimen prescribed by health professionals, the identification of factors responsible for failure to follow treatment is useful and allows nurses to more effectively work with patients who present poor adherence and devise strategies to circumvent such factors in order to obtain higher levels of adherence<sup>7</sup>.

Because nursing practice is characterized by the constant task of collecting, storing and using information from patients in order to enable care, there is increasingly greater need for uniform and clear language that enables the recording and digitalization of nursing information<sup>8</sup>.

For that, one of these tools is NANDA-I taxonomy, which consists of an acknowledged nursing language and is a classification system accepted as a practice that supports the profession through a clinically useful terminology<sup>9</sup>.

A growing tendency has been observed in Brazil to do studies addressing the NANDA-I taxonomy, both to standardize this classification system and to validate diagnoses or their components to be used in practice, teaching or research<sup>4,10</sup>. Even though the diagnoses proposed for this taxonomy are well-acknowledged and applied in diverse situations and settings, they are not static, since research in specific populations may enable their improvement.

Therefore, understanding that the validation of a nursing diagnosis is an essential step in the development of knowledge for clinical practice, the validation process of diagnostic content should be an important goal for nursing. Studies proposing the validation of nursing diagnoses are the basis for the improvement of diagnoses already established or for the development of new diagnoses. Clinical validation is an important step in this process because it enables dealing with specific human responses in real situations, facilitating the identification of defining characteristics and related factors<sup>9,11-13</sup>.

As mentioned earlier, total or partial non-adherence to a prescribed regimen is among the main problems experienced by individuals with hypertension. Hence, there is an urgent need for the early identification of the nursing diagnosis Noncompliance so that solutions can be devised by the entire health staff together with patients and their respective families.

Along with the issue of patients fully complying with their anti-hypertensive treatment, there is also a difficulty of nurses in inferring diagnoses, especially identifying their defining characteristics and related factors; thus, a series of questions emerge: Are the defining characteristics identified in the patient really significant in the confirmation of the corresponding diagnosis? Is the diagnosis established the correct one? Does the diagnosis Noncompliance, proposed by NANDA-I, represent the real situations or problems experienced by patients with hypertension? Do the related factors presented by NANDA-I represent the probable causes of the phenomenon of noncompliance among individuals with hypertension?

This knowledge can support the performance of nursing care focused on the healthcare of the population with hypertension, adapting the practice of nurses to this population's real needs. Hence the objective was to clinically validate a new proposal for the nursing diagnosis Noncompliance among individuals with hypertension.

## METHOD

This is a methodological study. Various methodological models that can be used to validate nursing diagnoses have been described, among them Fehring's model, which was used in content validation (Diagnostic Content Validity-DCV) and the clinical validation of diagnosis (Clinical Diagnostic Validation - CDV)<sup>12,14</sup>.

This study covers the third stage of a study with the objective of revising and validating the nursing diagnosis Noncompliance. The diagnosis was previously revised and submitted to content validation (through diagnostic content

validation) by nurse-experts in nursing terminologies and/or therapeutic adherence. This process determined which defining characteristics (DC) and related factors (RF) present the best meaning to represent the diagnosis Noncompliance among individuals with hypertension, which elements indicate the existence of the diagnosis, and its appropriateness and definition<sup>15</sup>.

According to NANDA-I the diagnosis Noncompliance is defined as the extent a person and/or caregiver fails to follow a health promoting or therapeutic plan agreed upon by the person (and/or family or community) and health professionals. It presents the following defining characteristics: Behavior indicative of failure to adhere; Evidence of exacerbation of symptoms; Evidence of development of complications; Missed appointments; Therapeutic effect not achieved or maintained; and Objective tests (e.g. physiological measures, detection of physiological markers). The factors related to the diagnosis Noncompliance are divided into: Individual factors (Development ability; Personal skills; Knowledge relevant to complying with the treatment regimen; Health beliefs; Motivational forces; Skill relevant to complying with the treatment regimen; Cultural beliefs; Significant people; Patient's value system; Spiritual values); Factors related to the healthcare plan (Complexity, Cost, Duration, Plan's financial flexibility, Intensity); Factors related to the network (Perceived beliefs of significant people; Involvement of family members in the healthcare plan; Social value in relation to the plan); Factors related to the health system (Access to healthcare; Provider's regular follow-up; Individual's health coverage; Continuity enabled by the provider; Healthcare convenience; Provider credibility; Provider's ability to teach; Provider reimbursement; Client-provider relationship; Satisfaction with healthcare)<sup>9</sup>.

Two new defining characteristics were created and the related factors were reorganized (including renaming some factors), after the integrative review of literature on hypertension therapy adherence and content validation that the experts performed, which resulted in a new proposal for the nursing diagnosis Noncompliance<sup>15</sup>.

At this point the diagnostic content validation model (CDV), in which validation is grounded on collecting evidence concerning the existence of a certain diagnosis based on a real clinical situation<sup>14</sup>, was used. When the nature of the diagnosis is related to performance or physiology, the model proposes that two nurses perform clinical observation and measurements. When, however, the diagnosis involves mainly cognitive or affective responses, clinical information should be directly obtained from the patient<sup>9</sup>.

Clinical validation took place when the presence of the diagnosis and its elements were investigated in patients with hypertension cared for in a Primary Health Care unit in Crato (CE), Brazil from November 2010 to March 2011.

To gain greater statistical reliability, the sample was computed considering a confidence level of 95% with an error of 5%. The prevalence of the phenomenon under study comes from the frequency of the nursing diagnosis Ineffective Management of Therapeutic Regimen (IMTR) as correlated to the diagnosis Noncompliance in 85% of the participants in a study developed in Fortaleza, CE, Brazil<sup>16</sup>. The prevalence of IMTR was used due to the absence of studies addressing the prevalence of Noncompliance and because this is the current nursing phenomenon that is closest to Noncompliance in the population under study.

The average population of hypertensive patients receiving care monthly in the health unit where the study was conducted is approximately 360 patients. Based on the sampling calculation, a minimum of 128 patients should be independently assessed to verify whether or not they present the ND.

The following criteria were used to select the participants: being 18 years old or older; having had the diagnosis of hypertension for at least one year; being under anti-hypertensive medication therapy for at least six months.

The nurses were contacted to participate in the study and were trained in advance to use the assessment script constructed with the defining characteristics and related factors (and their definitions) that were reviewed in the content validation step<sup>16</sup>. The instruments used were previously tested with five patients, who were then excluded from the final sample, and adjusted for the final application.

Data collection was initially planned to be conducted in a city in Fortaleza simultaneously by both the evaluators and the researcher. However, due to the researcher's change of address, data collection took place in Crato and the script was used by the researcher to collect data without the presence of the evaluators.

The instrument addressed socio-demographic and clinical-epidemiological characteristics and identified both medication and non-medication treatment of patients. With this information at hand, individual clinical cases were developed by the researcher and sent to the expert nurses who were supposed to verify the presence or absence of defining characteristics and related factors and, consequently, whether the nursing diagnosis was present or not.

The rate or level of agreement for each element was computed dividing the number of cases of agreement on the element from the two nurses by the number of agreements added to the number of disagreements multiplied by 100. Then, we proceeded to the calculation of the total agreement index for the studied nursing diagnosis, which is the sum of the indexes of the defining characteristics divided by the total number of DCs<sup>15</sup>.

The reliability coefficient (R) weighted between the clinical experts was computed using Fehring's<sup>14</sup> formula, which allows identifying the frequency of each defining characteristic, preventing the assessment of any characteristic that is seldom observed. By definition, the closer a coefficient is to 1 (one), the greater the reliability of the characteristic in representing the diagnosis.

We verified the level at which each characteristic is indicative of the diagnosis, observing the frequency of defining characteristics in the study's participants and then classified those with a frequency equal to or greater than 80% as "primary", those with a frequency between 79% and 51% as "secondary", and as "unimportant" those with a frequency equal to or less than 50%.

The study was approved by the Institutional Review Board at the Federal University of Ceará (Protocol No. 210/09). The experts and patients signed free and informed consent forms and the study that was conducted in the premises of the health unit was authorized by the Crato City Health Department.

## RESULTS AND DISCUSSION

Having the new proposal for the concept and elements of the diagnosis Noncompliance, which was previously validated by experts, we proceeded to the diagnosis' clinical validation; that is, the presence or absence of the diagnosis was verified in a real population.

The literature shows that DCs are considered valid if they are identified in a group in a clinical situation. Validation is a process-task, since whether a nurse identifies and treats a given situation as a complex situation varies according to cultural, social, economic and individual characteristics<sup>13</sup>.

We present the main profile of the expert nurses invited for this stage: two young women who graduated less than seven years ago and who each obtained a Master's degree. They worked in the Family Health Strategy with hypertensive patients with adherence problems and had deep knowledge and practice in nursing terminologies, especially nursing diagnoses and interventions.

The socio-demographic profiles of the studied patients were: mainly female (73.4%) individuals with

a partner (54.7%); elderly (average age 63.6 years old + 11.3); low level of education (average 4.3 schooling years + 3.6 years); and low monthly income (average of 1.9 times the minimum wage + 1.1). The prevalence of these characteristics is similar to that found in other studies<sup>1,2,15,17</sup>.

What most draws attention in the socio-demographic data is the large proportion of elderly individuals. As a result of the expressive increase in life expectancy and population aging, infectious or parasitic diseases have given way to non-transmissible chronic diseases; hypertension is one of the most prevalent<sup>1,7,8</sup>.

In relation to the patients' clinical characteristics, 43.8% of the patients were overweight, when using the cut-off point proposed by the Brazilian Society of Cardiology<sup>14</sup>, and presented large abdominal circumferences. It is worth noting that women presented larger abdominal circumferences than men, which is agreement with the results of similar studies<sup>2,17</sup>.

A total of 32% of the patients presented altered high blood pressure even though they were systematically monitored in the health unit. Of these, 18.8% presented isolated systolic hypertension, especially older individuals.

Having the socio-demographic and clinical characteristics and knowledge concerning anti-hypertensive treatment followed by the patients, individual clinical cases were developed and independently assessed by the experts. According to the nurses, 51/6% of the patients presented the nursing diagnosis Noncompliance.

In relation to the experts' agreement concerning diagnostic inferences, we verified there were variations in the judgment of the elements presented, while satisfactory and unsatisfactory indexes of agreement were found in this study. This variability was attributed to the differences of interpretation, possibly due to the way the set of clinical indicators were obtained and sent to the nurses, in addition to the subjectivity of these elements, which is related to the need for evaluators to have personal contact with the patient, which did not occur in this study<sup>15</sup>.

Data concerning the behavior of the defining characteristics assessed in patients in this clinical step are presented:

Table 1 shows that the defining characteristics that were most frequently observed by nurses were "Inappropriate management of non-medication therapy" and "Behavior indicative of failure to adhere", with the highest indexes of reliability (R = 0.56 and 0.44), even though the lowest levels of agreement were obtained between the two nurses. We infer that these characteristics represent important manifestations of Noncompliance in individuals with hypertension, since they were classified as the main DCs in the content validation and identified with great frequency

in the clinical validation process. It is important to note that these two were the most frequently present characteristics in all the patients, regardless of the presence of the diagnosis.

Additionally, there was a high absolute frequency of the CD6 (Inappropriate management of non-medication therapy), which can be explained by acknowledging that there is a lower rate of non-medication adherence compared to adherence to medication therapy due to changes required in the patients' routines, such as restrictive diets, changes in family dynamics, and cultural conflicts concerning diet, among other factors<sup>7,17</sup>. Patients using medication have even more difficulty adhering to non-medication therapy because of a belief that the medication itself is sufficient to control the disease<sup>2,17</sup>.

It is important to highlight that successfully modifying one's life style is the most difficult item in achieving non-medication treatment adherence because it requires a greater effort on the part of patients. For that, health professionals should more strongly emphasize and provide information that facilitates such achievement<sup>1</sup>.

It is noteworthy that 'agreement' in this study means the frequency of inter-rater agreement in relation to the presence or absence of the defining characteristics in the individuals regardless of their diagnoses.

The highest rates of agreement were found for the DCs "Evidence of development of complications" and "Evidence of exacerbation of symptoms," while this agreement was mainly due to the absence of the characteristics in the studied population, as attested by the two nurses.

It is clear that agreement on these characteristics occurs due to the ease and objectivity involved in detecting and confirming changes in the blood pressure values of individuals in continuous treatment and the emergence

of some complication accruing from the disease. Recent scientific evidence indicates that blood pressure parameters should be lower depending on individual's health condition, so that increasing benefits are observed, such as a reduced number of primary clinical events (fatal and non-fatal acute myocardial infarction and stroke and other complications)<sup>18</sup>.

When assessing the formula proposed by Fehring<sup>14</sup> to obtain the reliability index (R) among experts in establishing a defining characteristic, we observe that R is directly proportional to the number of times that a DC is identified. This means that R is high when the characteristic is identified with a high frequency and low when the characteristic is not a good manifestation of the diagnosis, that is, it is not frequently observed in a clinical real environment. It is observed that R was quite low for all the characteristics seldom observed.

These low frequencies and the relative disagreement between the clinical nurses can be explained by the fact they did not personally assess the patients; rather, they assessed the instruments completed by the researcher. Some DCs are related to behaviors and attitudes of patients, which are sometimes identified only after bonding is established between patient and professional.

Additionally, when data concerning the content validation performed by the experts were reported, we observed that the experts considered some defining characteristics as the main manifestation of the diagnosis Noncompliance in people with hypertension, but some of these manifestations may not be frequently identified in clinical practice, which reduces the R value.

**Table 1.** Defining characteristics of the nursing diagnosis Noncompliance among patients participating in the study, Clinical Validation of The Nursing Diagnosis "Noncompliance", among People with Hypertension according to frequency of occurrence defined by experts, inter-rater agreement and reliability coefficient. Crato, CE, Brazil, 2011.

DEFINING CHARACTERISTICS	Rater A		Rater B		Agreement		R*
	F	(%)	F	(%)	F	(%)	
DC1: Behavior indicative of failure to adhere	57	(44.5)	70	(54.7)	81	(63.3)	0.44
DC2: Inappropriate management of medication	21	(16.4)	61	(47.7)	82	(64.0)	0.27
DC3: Difficulty in complying with decisions agreed upon with the health staff	17	(13.3)	18	(14.1)	96	(75.0)	0.12
DC4: Evidence of development of complications	5	(3.9)	16	(12.5)	114	(89.0)	0.10
DC5: Evidence of exacerbation of hypertension	15	(11.7)	29	(22.7)	109	(85.1)	0.18
DC6: Inappropriate management of non-medication treatment	59	(46.1)	124	(96.5)	57	(44.5)	0.56

n = 128 patients

\*R = Reliability coefficient: Computed with data only from patients who presented the diagnosis.

When the accuracy measures are observed, we verify the almost all the characteristics were very specific and that DC1 and DC6 presented considerable sensitivity (above 90%). The characteristic "Behavior indicative of failure to adhere" can be considered the most accurate in identifying the diagnosis Noncompliance in people with hypertension.

In relation to predictive power, we observe that the characteristics "Behavior indicative of failure to adhere" and "Inappropriate management of medication treatment" presented the highest values of positive predictive power, reinforcing the importance of these indicators as good clinical signs to identify the diagnosis Noncompliance. Additionally, an absence of these findings is strongly related to the absence of the ND. The most sensitive DCs for identifying the diagnosis Noncompliance among individuals with hypertension were "Inappropriate Management of non-medication therapy" and "Behavior indicative of failure to adhere," while the DC "Difficulty in complying with decisions agreed upon with the health staff" was considered the most specific and the characteristic "Behavior indicative of failure to adhere" was the most clinically accurate for identifying the nursing diagnosis.

Finally, after clinical validation, the defining characteristics classified as the main ones (frequency > 80%) were: "Inappropriate management of non-medication treatment" and "Behavior indicative of failure to adhere". No characteristic was classified as secondary (51% to 79%), while the remaining characteristics were classified as having low relevance in clinical practice (frequency < 50%), which

does not mean nurses should not be attentive when facing a patient with such characteristics.

All the aspects concerning anti-hypertensive therapy should be well-investigated with the patient and all decisions should be made jointly between the patient and the healthcare staff so that adherence to medication and the non-medication regime and follow-up visits are the best possible<sup>4,17</sup>.

At the time which the individual faces a chronic disease such as hypertension, s/he has to make decisions and show a disposition to adopt behaviors and perform activities designed to control and minimize the impact of the disease for the long run. When the individual is not capable of adopting the medication regimen or changes in lifestyle, and does not regularly adhere to the proposed regimen and implementation of activities in daily life that are essential to preventing or treating the disease, the individuals has adherence issues<sup>2</sup>.

For that, authors stress that nurses should always encourage patients to maintain therapeutic relationships with the health staff. The professionals, in turn, should encourage this interaction and become more accessible and available, since communication between the team and hypertensive patients is an efficient tool to lead patients to share decisions, seeking feasible alternatives for all those involved<sup>1</sup>.

Data concerning factors related to the diagnosis Noncompliance assessed in the patients with hypertension are presented:

**Table 2.** Factors related to the nursing diagnosis Noncompliance among patients participating in the study Clinical Validation of The Nursing Diagnosis “Noncompliance” among People with Hypertension according to frequency of occurrences defined by experts, inter-rater agreement and reliability coefficient. Crato, CE, Brazil, 2011.

DEFINING CHARACTERISTICS	Rater A		Rater B		Agreement		R*
	F	(%)	F	(%)	F	(%)	
RF1: Loss of personal skills	13	(10.2)	45	(35.2)	89	(69.5)	0.21
RF2: Insufficient knowledge to comply with the medication and non-mediation regimens	41	(32.0)	122	(95.3)	47	(36.7)	0.32
RF3: Beliefs and values of the individual related to the health/disease continuum	23	(18.0)	61	(47.7)	68	(53.1)	0.19
RF4: Cultural beliefs	11	(8.6)	10	(7.8)	111	(86.7)	0.08
RF5: Lack of support from people significant to the patient	08	(6.3)	12	(9.4)	118	(92.2)	0.09
RF6: Complexity of the therapeutic medication regimen	02	(1.6)	02	(1.6)	124	(96.8)	0.01
RF7: The treatment’s financial cost	10	(7.8)	07	(5.5)	111	(86.7)	0.10
RF8: Duration of treatment	--	--	123	(96.1)	5	(3.9)	0.007
RF9: Treatment’s side effects	07	(5.5)	42	(32.8)	79	(61.7)	0.15
RF10: Failure in health system coverage	16	(12.5)	20	(15.6)	103	(80.5)	0.17
RF11: Health staff having insufficient teaching skills	02	(1.6)	12	(9.4)	107	(83.6)	0.05
RF12: Impaired client-provider relationship	05	(3.9)	96	(75.0)	35	(27.3)	0.10

n = 128 patients

\*R = Reliability coefficient; Computed only with data of patients who presented the diagnosis.

The assessment of related factors performed by the two clinical experts show that the factors more frequently identified were: "Insufficient knowledge to follow the medication and non-medication therapeutic regimen" followed by "Duration of treatment" and "Impaired client-provider relationship," identified by Rater B.

The highest percentage of agreement between the nurses was observed for the RFs "Complexity of therapeutic medication regimen", "Lack of support from significant people", "Cultural beliefs", "Treatment's financial cost", "Health staff's insufficient teaching skills" and "Failure in the health coverage".

All the related factors were classified as secondary in clinical practice even though it is through the identification of these factors that nurses find out the real motives behind lack of treatment adherence. The factor Duration of treatment obtained an index of agreement between the raters of only 3.9%. This fact shows that factors require new adjustments in their constitutive definition so their application can be clearer for clinical nurses.

Once more, the coefficients of reliability were low, showing that our experts had a high level of disagreement or that the related factor was seldom observed in patients, or that the factor requires adjustment to be better assessed in clinical practice, as is the case of the RFs "Duration of treatment" and "Treatment side effects".

It is worth nothing that RF9 was described by NANDA-I as "intensity"<sup>9</sup>. This denomination was replaced by "Treatment side effects" after an integrative review of the literature and the diagnostic content validation that took place prior to clinical validation, because we believed that intensity corresponded to how strongly these effects were.

In relation to the identification of two factors (RF8 and RF9), the patient should express that there were failures or interruptions in therapeutic adherence due to the chronic nature of the disease and the long period of treatment (confirming that the factor Duration of treatment is present). As for RF9, it should be clear that the presence of side effects only is not indicative of lack of adherence: the patient should be asked whether these effects interfere in adherence and, if the answer is positive, then the factor is present.

It is known that the longer the duration of treatment and occurrence of side effects accruing from the medication, the higher is its negative interference in adherence<sup>2,17</sup>. In the case of the study's patients, however, few reported that time of treatment or side effects caused them to fail in maintaining therapy adherence.

In absolute terms, factor 2 "Insufficient knowledge to comply with medication and non-medication therapy" was the most frequently identified in patients, followed by the factor "Individual beliefs and values related to the health/disease continuum" which was identified in almost 30% of the patients with the diagnosis Noncompliance.

Successful adherence to anti-hypertensive treatment depends on a sum of factors and the joint participation of patients, health staff and families. The early identification of elements that negatively interfere in adherence through the investigation of factors related to the presence of the nursing diagnosis Noncompliance can enable nurses to establish efficient interventions to reach the diagnosis<sup>2,15,17</sup>.

These interventions include: Establishment of ties of trust with the staff based on the attitudes of health professionals, such as accessible language, showing respect for the patient's beliefs and embracement to generate trust on the part of patients, resulting in better adherence; Encouraging their support network (family, friends, close people); Strengthening guidance regarding the disease and treatment; Simplifying the therapeutic regime; Facilitating access to the health system and resources; Continuous health education and involvement of patients and their families in the patient's therapy<sup>1-3,15,17</sup>.

When patients are sensitized concerning the harmful effects of hypertension, in addition to the risks inherent to its treatment, its peculiarities and benefits, nurses help individuals become active subjects in their own care. The work of multidisciplinary teams where the patient has the chance to maintain harmonious relationships with the entire staff enables patients to have a clear and broader view of his/her treatment and such an understanding leads the patient to analyze the situation, organize his/her own strategies and better adapt them to life, making adherence to therapy effective and efficient<sup>1</sup>.

Finally, after this validation process, we present the new proposal for the referred diagnosis in people with hypertension:

Lack of adherence (to specify): Intentional or non-intentional behavior of individuals that does not partially or totally coincide with health promotion or a therapeutic plan and with the recommendations agreed upon through decisions shared with the health professional/ multidisciplinary health team and the individual, family and/ or community, including difficulty with medication and non-medication treatment and attendance to the health service's activities (consultations, group interventions), which can lead to non-effective or partially effective clinical outcomes; DCs Inappropriate management of non-medication

treatment, Behavior indicative of failure to adhere, Difficulty in complying with decisions agreed upon with the health staff, Inappropriate management of medication treatment, Evidence of exacerbation of hypertension, Evidence of development of complications; Individual RFs (Loss of personal skills, Insufficient knowledge to comply with the medication and non-medication therapeutic regime, Individual beliefs and values related to the health/disease continuum, Cultural beliefs); RF concerning the support network (Lack of support from significant people); RFs related to treatment (Complexity of the medication therapeutic regime, Treatment's financial cost, Duration of treatment, Treatment's side effects); RF concerning the health system and the health staff (Failure in the health system coverage, Health staff's insufficient teaching skills, Harmed client-provider relationship).

## CONCLUSIONS

After the clinical validation of the nursing diagnosis Noncompliance, we observed that the diagnosis, as proposed by NANDA-I, does not fully represent the real situations experienced by patients with hypertension since there was a need to review some of the characteristics. Two DCs were excluded while two new ones, more appropriate to the reality of hypertensive patients and more significant in the confirmation of the presence of the diagnosis, were created. There was also a need to restructure some elements concerning related factors presented by NANDA-I so they would more faithfully represent the probable causes of the phenomenon Noncompliance among individuals with hypertension in clinical practice.

Therefore, this study achieved its initial objective, which was to qualify the delivery of nursing care to meet the real healthcare demands of the population with hypertension. That is, the new proposal for the nursing diagnosis Noncompliance had its elements both reviewed and validated in relation to its content and in clinical practice investigated regarding a clientele with hypertension.

Studies validating nursing diagnoses, however, require greater dissemination and documentation in Brazil so that diagnoses are validated in specific contexts and based in specific cultural contexts.

We also consider the study to have provided a direction for the efficient use of the clinically assessed indicators, contributing to the improvement of the nursing diagnosis Noncompliance and its constituent elements. Therefore, nursing professionals should appropriate these technologies seeking to improve

and broaden their use, contributing to the integrality of care delivery.

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