Clinical Validation of the Nursing Diagnosis Risk for Imbalanced Blood Pressure (00362) in Outpatient Hypertensive Patients

Validação Clínica do Diagnóstico de Enfermagem Risco de Pressão Arterial Desequilibrada (00362) Em Hipertensos Ambulatoriais

Validación Clínica del Diagnóstico de Enfermería Riesgo de Presión Arterial Desequilibrada (00362) en Hipertensos Ambulatorios

RESUMO

Objetivo: Verificar se o fator de risco seguimento inadequado do regime terapêutico é preditivo do diagnóstico de enfermagem risco de pressão arterial desequilibrada. **Método:** Análise secundária de dados, realizado com hipertensos em acompanhamento ambulatorial. O fator de risco foi avaliado pela Escala de Adesão Terapêutica de Oito Itens de Morisky (MMAS-8), aplicada no dia da consulta ambulatorial em 2019. Considerou-se como valor de controle da pressão arterial <140/90 mmHg. Houve aprovação ética. **Resultados:** Foram incluídos 253 hipertensos com tempo médio de diagnóstico de 20,78 (11,91) anos, sendo a maioria mulheres (61,7%), com idade média de 65 (13,3) anos. O número médio de medicamentos anti-hipertensivos utilizados foi de 3,7 (1,9). A adesão ao tratamento medicamentoso foi alta (82,2%), mas apenas (69,2%) teve a pressão arterial controlada. **Conclusão:** O fator de risco não foi preditivo do diagnóstico de enfermagem, provavelmente devido o MMAS-8 avaliar a adesão por meio de autorrelato.

DESCRITORES: Hipertensão Arterial; Adesão ao Tratamento Medicamentoso; Diagnóstico de Enfermagem.

ABSTRACT

Objective: To verify whether the risk factor inadequate follow-up of the therapeutic regimen is predictive of the nursing diagnosis risk for imbalanced blood pressure. **Method:** Secondary data analysis conducted with hypertensive patients under outpatient follow-up. The risk factor was assessed using the eight-item Morisky Medication Adherence Scale (MMAS-8), applied on the day of the outpatient visit in 2019. Blood pressure control was defined as <140/90 mmHg. Ethical approval was obtained. **Results:** A total of 253 hypertensive patients were included, with a mean time since diagnosis of 20.78 (11.91) years. Most participants were women (61.7%), with a mean age of 65 (13.3) years. The mean number of antihypertensive medications used was 3.7 (1.9). Medication adherence was high (82.2%); however, only 69.2% had controlled blood pressure. **Conclusion:** The risk factor was not predictive of the nursing diagnosis, probably because the MMAS-8 assesses adherence through self-report.

DESCRIPTORS: Hypertension; Medication Adherence; Nursing Diagnosis.

RESUMEN

Objetivo: Verificar si el factor de riesgo seguimiento inadecuado del régimen terapéutico es predictivo del diagnóstico de enfermería riesgo de presión arterial desequilibrada. **Método:** Análisis secundario de datos realizado con pacientes hipertensos en seguimiento ambulatorio. El factor de riesgo fue evaluado mediante la Escala de Adherencia Terapéutica de Morisky de ocho ítems (MMAS-8), aplicada el día de la consulta ambulatoria en 2019. El control de la presión arterial se definió como <140/90 mmHg. Se obtuvo aprobación ética. **Resultados:** Se incluyeron 253 pacientes hipertensos, con un tiempo medio desde el diagnóstico de 20,78 (11,91) años. La mayoría de los participantes eran mujeres (61,7%), con una edad media de 65 (13,3) años. El número medio de medicamentos antihipertensivos utilizados fue de 3,7 (1,9). La adherencia al tratamiento farmacológico fue alta (82,2%); sin embargo, solo el 69,2% presentó presión arterial controlada. **Conclusión:** El factor de riesgo no fue predictivo del diagnóstico de enfermería, probablemente porque la MMAS-8 evalúa la adherencia mediante autorreporte.

DESCRIPTORES: Hipertensión; Adherencia al Tratamiento Farmacológico; Diagnóstico de Enfermería.

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INTRODUCTION

The identification of nursing diagnoses and their risk factors in the care of people with hyper-

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tension is essential to ensure greater reliability and improvement in care, contributing to better health outcomes. This relevance is justified by the high prevalence of hypertension in most countries. Data from 200 countries estimated that the age-standardized global prevalence of hypertension in adults aged 30 to 79 years was 32% among women and 34% among men [1] .

The increase in global prevalence is mainly related to population aging and unhealthy lifestyles. In Brazil, hypertension affects 32.5% of adults and more than 60% of the elderly [2], contributing directly or indirectly to about 50% of deaths from cardiovascular diseases [3]. Hypertension is a systemic and multifactorial condition characterized by systolic blood pressure values greater than or equal to 140 mmHg and/or diastolic blood pressure values greater than or equal to 90 mmHg [4] .

Drug treatment and the adoption of healthy lifestyle habits are essential for controlling blood pressure and preventing complications and damage to target organs. However, uncontrolled hypertension is common, even in developed countries [5, 6]. The main cause of this unsatisfactory control is poor adherence to drug treatment [7-9], which represents a major challenge for health professionals, especially nurses.

Nurses use the nursing process as an essential tool to guide their interventions, and it is essential to correctly identify nursing diagnoses and their related and risk factors. Standardized nursing languages provide a common terminology to describe the contributions of nursing to health care, communicating the core elements of professional practice—diagnoses, outcomes, and interventions [10, 11].

In the NANDA International (NANDA-I) diagnosis classification, a nursing diagnosis consists of a clinical judgment about a human response to health conditions, life processes, or vulnerabilities to such responses. Each diagnosis has a title, definition, defining characteristics, related factors, and/or risk factors [12]. It is essential that nurses know these elements, as well as concepts related to human responses, to support their clinical reasoning and select effective interventions.

The nursing diagnosis Risk of Imbalanced Blood Pressure (00362), approved by NANDA-I in 2023, belongs to Domain 4 - Activity/Rest, Class 4 - Cardiovascular/Pulmonary Responses, and has a level of evidence of 3.2. It is defined as "susceptibility to recurrent increase or decrease in the force exerted by blood flow on the arterial wall, above or below desired individual levels," with one of the risk factors being inadequate adherence to the therapeutic regimen and the at-risk population being individuals with a history of hypertension [12].

The validation of risk factors for nursing diagnoses in clinical practice is an essential step in advancing knowledge in this area. Validation studies support the improvement of existing diagnoses, raising their level of evidence, or contribute to the development of new diagnoses [13]. The assessment of the risk factor inadequate adherence to the therapeutic regimen can be performed by direct or indirect methods of treatment adherence, with self-reporting being one of the most widely used due to its simplicity and low cost. Among the self-report scales, the Morisky Medication Adherence Scale (MMAS-8) stands out, widely used in Brazil due to its ease of application and good reliability.

The validation of risk factors related to nursing diagnoses strengthens the scientific credibility of professional practice and has been the subject of studies, including in the context of care for hypertensive individuals. Given the above, the question arises as to whether the risk factor of inadequate adherence to the therapeutic regimen, assessed through treatment adherence, would be predictive of the nursing diagnosis Risk of unbalanced blood pressure (00362).

Therefore, the objective of this study is to verify whether the risk factor of inadequate adherence to the therapeutic regimen, assessed through treatment adherence, is predictive of the nursing diagnosis Risk of unbalanced blood pressure (00362) and to characterize the sociodemographic and clinical data of people with hypertension.

METHOD

This is a methodological study based on a secondary analysis of data from an observational, descriptive, and exploratory study. The study was conducted in a high-complexity outpatient clinic specializing in hypertension, belonging to a teaching hospital located in the city of São Paulo, Brazil.

The sample consisted of 253 people with hypertension. The inclusion criteria were: age 18 years or older, outpatient follow-up for at least six months, and voluntary agreement to participate in the master's thesis entitled *"Control of hypertension in a specialized high-complexity outpatient clinic,"* authored by Mayra Cristina da Luz Pádua Guimarães. Pregnant women and people with any condition that made it impossible to conduct the interview were excluded.

Sociodemographic data, lifestyle habits, comorbidities, and information on antihypertensive drug treatment were collected. The risk factor "inadequate adherence to the therapeutic regimen" was assessed using the Morisky Medication Adherence Scale (MMAS-8), validated for Brazil-

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ian Portuguese by Oliveira-Filho et al. (2014)[16] . This scale assesses attitudes related to the use of antihypertensive drugs, assigning a score from 0 to 1 for each item. Adherence is classified as high (8 points), moderate (6 to 7 points), and low (less than 6 points). The adherence result according to the MMAS-8 classification was related to the participants' systolic and diastolic blood pressure values.

Blood pressure (BP) was measured three times with a validated semi-automatic device, considering the average of the last two measurements. Values below 140 mmHg for systolic pressure and 90 mmHg for diastolic pressure were considered controlled. Data were collected in 2019 during previously scheduled outpatient visits.

Data analysis was performed with the support of a statistical advisor, using R software (version 3.5.2). Descriptive data analyses and analyses of the specificity and sensitivity of the Morisky Scale were performed.

The study was approved by the Research Ethics Committee (opinions No. 2,831,454 and No. 3,003,912), and participants signed the Free and Informed Consent Form (FICF), in accordance with the requirements of Resolution No. 466/2012 of the National Health Council.

RESULTS

The study population consisted of 800 hypertensive patients. Of these, 547 patients were excluded because they did not meet the inclusion criteria. The sample consisted of 253 hypertensive patients. Table 1 shows the sociodemographic and clinical characteristics of the hypertensive patients included in the study.

Table 1. Sociodemographic and anthropometric characteristics, lifestyle habits, comorbidities, and drug treatment of participants.

Variables	n	%
Gender		
Female	156	61,7
Male	97	38,3
Ethnicity		
Yellow	1	0,4
Black	60	23,7
Brown	32	12,7
Non-white	93	36,8
White	160	63,2
Age, mean (SD)	65,0 (13,3)	
Marital status		
Married	133	52,8
Single	41	16,7
Divorced	28	11,1
Widowed	51	19,9
Level of education		
Illiterate	2	0,8
Incomplete elementary education	18	7,1
Complete elementary education	75	29,6
Incomplete secondary education	7	2,8
High school graduate	112	44,3
Incomplete higher education	9	3,6
Complete higher education/Postgraduate	30	11,9
Average monthly income (SD)	2.302,00 (1.781,00)	
Body Mass Index in Kg/m², average (SD)	29,5 (5,3)	

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Nutritional status		
Underweight	2	0,8
Eutrophic	45	17,8
Overweight	97	38,3
Obesity	109	43,1
Smoking		
Yes	19	7,5
Former smoker	92	36,4
Physical activity		
Active	55	21,7
Irregularly active	101	39,9
Sedentary	97	38,3
Consumes alcoholic beverages	102	40,3
Comorbidities		
Dyslipidemia	181	71,5
Diabetes mellitus	103	40,7
Chronic renal failure	48	19,0
Heart failure	34	13,4
Number of antihypertensive drugs prescribed, mean (SD)	3,7 (1,9)	

SD = Standard deviation

Most (61.7%) of the participants were female, self-declared white (63.2%), married (52.8%), overweight/obese (81.4%), with a mean age in the sixth decade of 65 years (13.3) and a salary income in the range of two minimum wages 2,302.00 (1,781.00). Less than half (44.3%) had completed high school with 10.2 (3.9) years of schooling. The medical prescription was for more than three antihypertensive drugs per day 3.7 (1.9).

Just over half of hypertensive patients reported not smoking (56.1%), and a significant number reported drinking alcohol (40.3%) and not exercising regularly (78.2%). Although the average body mass index was within the normal range, most were overweight/obese (81.4%). The most prevalent comorbidities were dyslipidemia (71.5%) and diabetes (40.7%).

Figure 1 shows the participants' responses to the eight items of the MMAS-8.

Figura 1. Resultado das respostas dos oito itens da MMAS-8 pelos participantes (n=253).

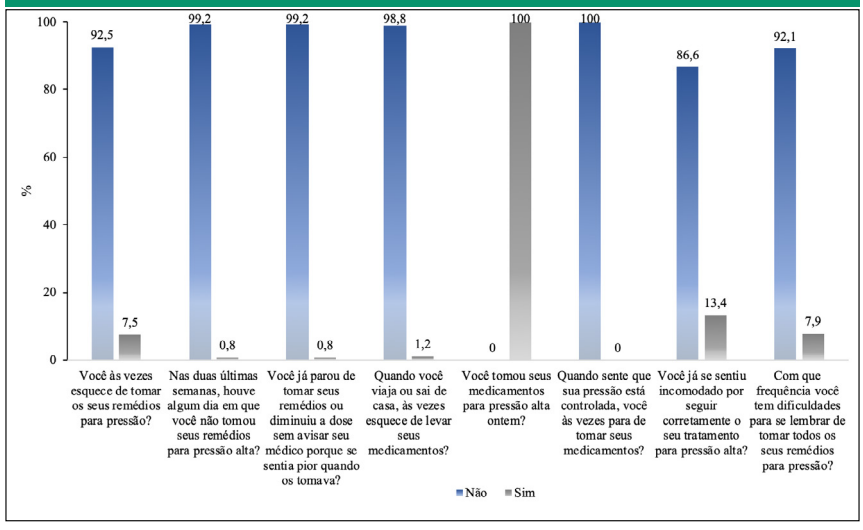

Figure 1 shows that more than 90% of hypertensive participants reported: not forgetting to take their medication (92.5%); not missing a dose in the last two weeks (99.2%); not stopping or reducing the dose when feeling worse (99.2%); did not forget to take it when leaving home or traveling (98.8%); had no difficulty taking all medications (92.1%); and 86.6% reported having taken antihypertensive medication the day before the interview. Therefore, most participants responded that they follow the treatment correctly and even when they feel that their blood pressure is

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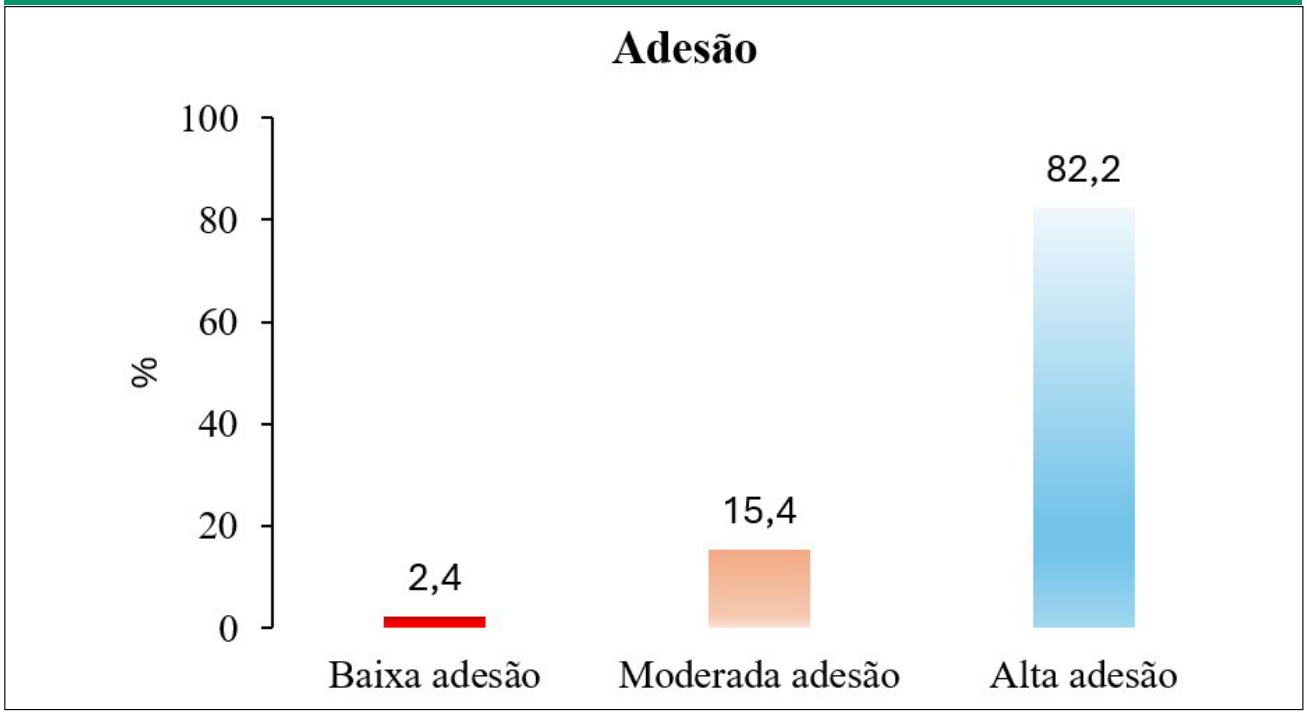
under control, they do not stop taking their medication.

Figure 2 shows the classification of treatment adherence according to the Morisky Medication Adherence Scale (MMAS-8).

Figure 2. Classification of participants' adherence to drug treatment according to MMAS-8 (n=253).



According to Figure 2, the vast majority (82.2%) of hypertensive participants in the study were classified as having high adherence to drug treatment according to the MMAS-8.

Figure 3 shows the relationship between participants' systolic and diastolic blood pressure and their classification of adherence to treatment according to the MMAS-8.

Figure 3 – Relationship between adherence to antihypertensive drug treatment according to MMAS-8 and participants' systolic and diastolic blood pressure values.

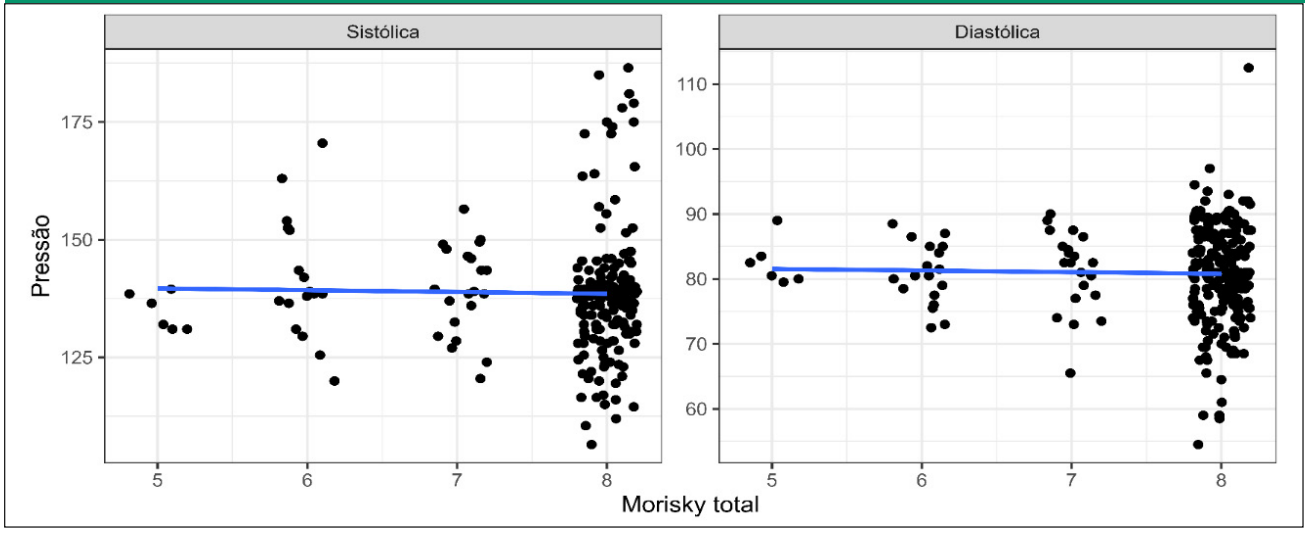


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Figure 3 shows that most participants, with controlled or uncontrolled blood pressure, were classified as having high adherence according to MMAS-8. Only 69.2% of hypertensive patients had controlled blood pressure. Table 2 shows the agreement values of the Morisky Scale (MMAS 8).

Table 2. Analysis of the specificity and sensitivity of the Morisky scale in relation to blood pressure control in hypertensive individuals.

Hypertensive individuals	Morisky <7.5	Morisky >7.5	Class accuracy (%)	Predictive values (%)
Controlled (n)	29	146	16.57	64.44
Uncontrolled (n)	16	62	79.49	29.81

Accuracy: 36.0; Cohen's Kappa: -0.027

The estimated cutoff point (7.5) was as close as possible to a sensitivity of 100% and specificity of 100%. Thus, in identifying uncontrolled hypertensive patients, sensitivity was 79.5%, but specificity was low, at only 16.5%. The accuracy of the instrument for assessing the proportion of correctly classified cases was only 36.0%, and Cohen's Kappa, a measure of agreement, was -0.027, as shown in Table 2.

Thus, there was no agreement between blood pressure control and treatment adherence as assessed by the Morisky Eight-Item Medication Adherence Scale (MMAS-8).

DISCUSSION

This study aimed to use the Morisky Eight-Item Medication Adherence Scale (MMAS-8) to verify the presence of the risk factor inadequate adherence to the therapeutic regimen for the nursing diagnosis of the NANDA International diagnosis classification, NANDA-I risk of unbalanced blood pressure (00362), in people with hypertension followed up at a high-complexity outpatient clinic.

The findings revealed a high rate (82.2%) of adherence to antihypertensive drug treatment. However, blood pressure control was achieved in only 69.2% of participants. The accuracy of the instrument used to assess adherence showed that only 36% of cases were correctly classified, and Cohen's Kappa coefficient (-0.027) indicated low agreement between adherence and blood pressure control.

These results suggest that the MMAS-8 scale was not able to adequately predict cases of uncontrolled blood pressure. The low accuracy (16.5%) and the absence of a significant association between adherence and blood pressure control indicate that the risk factor "inadequate adherence to the therapeutic regimen" may not be directly associated with the nursing diagnosis "Risk of unbalanced blood pressure" when measured only by self-reported adherence.

The MMAS-8 is an indirect, self-reported method that may not accurately reflect people's actual behavior regarding medication use. Self-reported adherence tends to be overestimated due to social desirability biases or memory lapses [20] . An integrative review conducted by de Sousa et al. [15] concluded that there is no gold standard method for measuring adherence in hypertensive individuals, reinforcing the need to develop new instruments and complementary methods. Despite these limitations, the Morisky adherence scales (four- and eight-item versions) continue to be widely used and validated in the management of hypertension [21, 22] .

The adherence rate observed in this study (82.2%) was higher than that described in the literature, where the highest rates are around 50% [9, 23-25] . Adherence to treatment is a complex and multifactorial phenomenon, influenced by aspects related to the disease, treatment, individual characteristics, and the health system itself, which determines access to treatment. Thus, it is recommended that adherence to drug therapy be assessed using more than one method in order to minimize possible biases.

Similar to our results, Padilha et al. [26] found that 56% of people with coronary artery disease were classified as non-adherent, with non-adherence being associated with the complexity of treatment, alcohol consumption, and care in public health services. In another study, da Silva et al. [19] found the nursing diagnosis "Ineffective self-management of health" in 37.5% of people with hypertension, with the clinical indicator "failure to include the therapeutic regimen in daily life" showing the highest sensitivity. Coelho et al. [27] also demonstrated an association between the number of prescribed medications and lack of adherence to treatment.

In the analysis of sociodemographic data, lifestyle habits, and comorbidities of the participants in this study, variables were identified that may contribute to non-adherence, such as the high number of prescribed medications 3.7 (1.9), alcohol consumption, and low physical activity. A study of hypertensive individuals identified a high prevalence (60%) of the nursing diagnosis "sedentary lifestyle," with the most frequent defining characteristics being lack of physical fitness and regular exercise, associated with age and diabetes.

The hypertensive individuals studied were followed up at a specialized high-complexity outpatient clinic, which characterizes a population with greater clinical severity, multiple comorbidities (diabetes, dyslipidemia,

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overweight/obesity), and the presence of target organ damage, such as chronic renal failure and heart failure. Non-adherence to antihypertensive treatment is identified as the main cause of inadequate control of hypertension [8] , favoring the emergence of complications, hospitalizations, and deaths, in addition to generating significant social and economic impacts [28, 29] . The importance of this control is reaffirmed by clinical guidelines [30].

This study has some limitations. Not all risk factors for the diagnosis of "unbalanced blood pressure risk" were evaluated. In addition, the cross-sectional design does not allow for the establishment of a cause-and-effect relationship, and the participants' previous blood pressure values were not considered.

Thus, the results point to the need for studies that combine indirect (self-report) and direct methods, such as measuring the active ingredient or metabolites of the medication in body fluids, in order to validate the presence of the risk factor "inadequate adherence to the therapeutic regimen."

Despite its limitations, this study contributes to the advancement of nursing knowledge by reinforcing the importance of validating diagnoses and risk factors in real clinical contexts. In addition, it highlights the relevance of using standardized nursing language (SNL), which strengthens communication between professionals, supports evidence-based practice, and makes nursing work more visible and comparable internationally.

CONCLUSION

The risk factor "inadequate adherence to therapeutic regimen," assessed through treatment adherence in the group of people with hypertension studied, was not predictive of the nursing diagnosis "Risk of unbalanced blood pressure (00362)." This result may be related to the use of the Morisky Eight-Item Medication Adherence Scale (MMAS-8), which is based on self-reporting, an indirect method that may overestimate adherence to antihypertensive treatment.

Further studies using combined direct and indirect methods are recommended to assess the presence of the risk factor "inadequate adherence to therapeutic regimen" in people with hypertension, in order to strengthen clinical evidence and contribute to the validation and improvement of nursing diagnoses related to blood pressure control.

References

1. Zhou B, Carrillo-Larco RM, Danaei G, Riley LM, Bixby H, Moinat A, et al. Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants. Lancet. 2021;398(10304):957–80. https://doi.org/10.1016/S0140-6736(21)01339-5

2. Barroso WKS, Rodrigues CIS, Bortolotto LA, Mota-Gomes MA, Brandão AA, Feitosa ADM, et al. Brazilian Guidelines of Hypertension – 2020. Arq Bras Cardiol. 2021;116(3):516-658. https://doi.org/10.36660/abc.20201287

3. Picon RV, Fuchs FD, Moreira LB, Riegel G, Fuchs SC. Trends in prevalence of hypertension in Brazil: a systematic review with meta-analysis. PloS One. 2012;7(10):e48255. 10.1371/journal.pone.0048255

4. Brandão AA, Rodrigues CIS, Bortolotto LA, Armstrong AC, Mulinari RA, Feitosa ADM, et al. Diretriz Brasileira de Hipertensão Arterial - 2025. Arq Bras Cardiol. 2025;122(9):e20250624. 10.36660/abc.20250624

5. Zhou B, Danaei G, Stevens GA, Bix H, Riley LM, Ezzati M. Long-term and recent trends in hypertension awareness, treatment, and control in 12 high-income countries: an analysis of 123 nationally representative surveys. Lancet. 2019;394(10199):639–51. 10.1016/S0140-6736(19)30841-4

6. Muntner P, Hardy ST, Fine LJ, Jaeger BC, Wozniak G, Levitan EB, Colantonio LD. Trends in Blood Pressure Control Among US Adults With Hypertension, 1999-2000 to 2017-2018. JAMA. 2020;324(12):1190–200. 10.1001/jama.2020.14502

7. Redon J, Mourad JJ, Schmieder RE, Volpe M, Weiss TW. Why in 2016 are people with hypertension not 100% controlled? A call to action. J Hypertens. 2016;34(8):1480–8. 10.1097/HJH.0000000000000985

8. Williams B, Mancia G, Spiering W, Agabiti Rosei E, et al. 2018 ESC/ESH Guidelines for the management of arterial hypertension. J Hypertens. 2018;36(10):1953–2041. 10.1097/HJH.0000000000001940

9. Burnier M, Azizi M, Magne J, Prejbisz A, Cunha V, Gupta P, Weber T. Patient perceptions, motivations and barrier to treatment adherence in hypertension: Results of a questionnaire-based survey in five European countries. Blood Press. 2025;1–15. 10.1080/08037051.2025.2458765

10. Clancy TR, Delaney CW, Morrison B, Gunn JK.

DOI: https://doi.org/10.36489/nursing.2026v31i333p13009-13032

The benefits of standardized nursing languages in complex adaptive systems such as hospitals. J Nurs Adm. 2006;36(9):426-34. 10.1097/00005110-200609000-00004

11. Argenta C, Conceição VM, Poltronieri P, Cubas MR. Sistemas de linguagens padronizadas de enfermagem. In: Processo de enfermagem: história e teoria. Chapecó: Editora UFFS; 2020. p. 26-46.

12. Herdman TH, Kamitsuru S, Lopes CT. Diagnósticos de Enfermagem da NANDA-I: Definições e Classificação. 13a ed. Porto Alegre: Artmed; 2024.

13. Oliveira CJ, Araújo TL, Costa FBC, Costa AGS. Validação clínica do diagnóstico "falta de adesão" em pessoas com hipertensão arterial. Esc Anna Nery. 2013;17(4):611–9. 10.1590/S1414-81452013000400018

14. Morisky DE, Ang A, Krousel-Wood M, Ward HJ. Predictive validity of a medication adherence measure in an outpatient setting. J Clin Hypertens (Greenwich). 2008;10(5):348–54. 10.1111/j.1751-7176.2008.08544.x

15. De Sousa DMP, Silva DL, Fontenele RP, Araujo PM, Carvalho ALM. Indirect methods to measure adherence to drug treatment in arterial hypertension: an integrative literature review. Boletim Informativo Geum. 2014;4(1):50-64.

16. De Oliveira-Filho AD, Morisky DE, Neves SJ, Costa FA, de Lyra DP Jr. The 8-item Morisky Medication Adherence Scale: validation of a Brazilian-Portuguese version in hypertensive adults. Res Social Adm Pharm. 2014;10(3):554–61. 10.1016/j.sapharm.2013.08.007

17. Guedes NG, Lopes MV, Moreira RP, Cavalcante TF, de Araújo TL. Prevalence of sedentary lifestyle in people with high blood pressure. Int J Nurs Terminol Classif. 2010;21(2):50–6. 10.1111/j.1744-618X.2010.01150.x

18. Pérez Rivas FJ, Martín-Iglesias S, Pacheco Del Cerro JL, Minguet Arenas C, Garcia López M, Beamud Lagos M. Effectiveness of Nursing Process Use in Primary Care. Int J Nurs Knowl. 2016;27(1):43–8. 10.1111/2047-3095.12078

19. Da Silva RC, De Lima NX, Lopes MV, Da Silva VM, Cavalcante AMRZ. Ineffective health management in people with hypertension: Accuracy study. Int J Nurs Knowl. 2023;34(1):55–64.10.1111/ijn.12061

20. Koglsdorf M, Costa Júnior ÁL. Self-report in health psychology research: methodological challenges. Psicol Argum. 2009;27(57):131-9.

21. Dosse C, Cesarino CB, Martin JF, Castedo MC. Factors associated to people' noncompliance with hypertension treatment. Rev Lat Am Enfermagem. 2009;17(2):201–6. 10.1590/S0104-11692009000200004

22. Raymundo AC, Pierin AM. Adherence to anti-hypertensive treatment with in a chronic disease management program: a longitudinal, retrospective study. Rev Esc Enferm USP. 2014;48(5):811–9. 10.1590/S0080-623420140000500017

23. Nielsen JO, Shrestha AD, Neupane D, Kallestrup P. Non-adherence to anti-hypertensive medication in low- and middle-income countries: a systematic review and meta-analysis of 92443 subjects. J Hum Hypertens. 2017;31(1):14–21. 10.1038/jhh.2016.34

24. Schneider APH, Gaedke MÂ, Garcez A, Barcellos NT, Paniz VMV. Effect of characteristics of pharmacotherapy on non-adherence in chronic cardiovascular disease: A systematic review and meta-analysis of observational studies. Int J Clin Pract. 2018;72(1):10.1111/ijcp.13044

25. Guimarães MC, Coelho JC, da Silva GV, Drager LF, Gengo E Silva Butcher RD, Butcher HK, Pierin AM. Blood Pressure Control and Adherence to Drug Treatment in People with Hypertension Treated at a Specialized Outpatient Clinic: A Cross-Sectional Study. Patient Prefer Adherence. 2021;15:2749-61. 10.2147/PPA.S339599

26. Padilha JC, Santos VB, Lopes CT, Lopes JL. Prevalence of pharmacological adherence in people with coronary artery disease and associated factors. Rev Lat Am Enfermagem. 2021;29:e3464. 10.1590/1518-8345.4263.3464

27. Coelho JC, Guimarães MCdL P, Campos CL, Santos VB, De Sousa AG, Pierin AM. Blood pressure control of hypertensive people followed in a high complexity clinic and associated variables. J Bras Nefrol. 2021;43(2):207-16. 10.1590/2175-8239-JBN-2020-0080

28. Izeogu C, Kalinowski J, Schoenthaler A. Strategies to Improve Adherence to Anti-Hypertensive Medications: a Narrative Review. Curr Hypertens Rep. 2020;22(12):105. 10.1007/s11906-020-00812-7

29. Delavar F, Pashaeypoor S, Negarandeh R. The effects of self-management education tailored to health literacy on medication adherence and blood pressure control among elderly people with primary hypertension: A randomized controlled trial. Patient Educ Couns. 2020;103(2):336–42. 10.1016/j.pec.2019.09.006

30. Whelton PK, Carey RM. The 2017 Clinical Practice Guideline for High Blood Pressure. JAMA. 2017;318(21):2073–4. 10.1001/jama.2017.18209

DOI: https://doi.org/10.36489/nursing.2026v31i333p13009-13032