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Analysis and development of validation methods of nursing diagnoses in adults: a review

Análisis y desarrollo de métodos de validación de diagnósticos de enfermería en adultos: una revisión

Análise e desenvolvimento de métodos de validação de diagnósticos de enfermagem em adultos: uma revisão

ABSTRACT

Objective: To analyze, according to the literature, the development of validation methods for nursing diagnoses in adults. **Methods:** Study carried out in June 2020, in database: Google academic, CAPES Journal Portal, Latin American and Caribbean Literature in Health Sciences (LILACS), Nursing Database (BDENF) and PubMed. In the years 2016 to 2020. The descriptors used were: "Validation studies" AND "Nursing diagnosis" AND "Adult" and their correspondents in English. **Results:** Thus, 09 articles entered the qualitative synthesis. Noteworthy are the Gordon and Sweeney clinical model, content validation, Fehring's differential clinical and concept analysis model, validation by specialists and Hoskins' clinical validation. **Conclusion:** Further studies on validation and accuracy of nursing diagnoses are essential.

ESCRITORES: Validation study; Nursing diagnosis; Adult.

RESUMEN

Objetivo: Analizar, de acuerdo con la literatura, el desarrollo de métodos de validación de diagnósticos de enfermería en adultos. **Métodos:** Estudio realizado en junio de 2020, en base de datos: académico de Google, Portal de Revistas CAPES, Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS), Base de Datos de Enfermería (BDENF) y PubMed. En los años 2016 a 2020. Los descriptores utilizados fueron: "Estudios de validación" Y "Diagnóstico de enfermería" Y "Adulto" y sus correspondientes en inglés. **Resultados:** Así, 09 artículos ingresaron a la síntesis cualitativa. Destacan el modelo clínico de Gordon y Sweeney, la validación de contenido, el modelo de análisis clínico y conceptual diferencial de Fehring, la validación por especialistas y la validación clínica de Hoskins. **Conclusión:** Es fundamental realizar más estudios sobre la validación y precisión de los diagnósticos de enfermería.

DESCRITORES: Estudio de validación; Diagnóstico de enfermería; Adulto.

RESUMO

Objetivo: Analisar, de acordo com a literatura, o desenvolvimento de métodos de validação de diagnósticos de enfermagem em adultos. **Métodos:** Estudo realizado em junho de 2020, em base de dados: Google acadêmico, Portal de Periódicos CAPES, Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS), Banco de Dados em Enfermagem (BDENF) e PubMed. Nos anos 2016 à 2020. Os descritores utilizados foram: "Estudos de validação" AND "Diagnóstico de enfermagem" AND "Adulto" e seus correspondentes em inglês. **Resultados:** Sendo assim, 09 artigos entraram na síntese qualitativa. Destacam-se o modelo clínico de Gordon e Sweeney, validação de conteúdo, clínico diferencial de Fehring e modelo de análise do conceito, validação por especialistas e validação clínica de Hoskins. **Conclusão:** Torna-se imprescindível a realização de mais estudos de validação e de acurácia dos diagnósticos de enfermagem.

DESCRITORES: Adulto; Diagnóstico de enfermagem; Estudos de validação.

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The nursing process (NP) consists of five stages: history / data collection, nursing diagnosis (ND), planning, implementation and evaluation. The ND is a fundamental moment for therapeutic decision-making, offering support for appropriate interventions.^{1,2}

Thus, the execution of the NP steps is necessary and systematic, which provides scientific support to the nursing team, as well as direction in the actions provided to the patient.³

Thus, ED are said to be "a clinical judgment regarding an undesirable human response to health conditions or life processes in an individual, family, group or community".⁴ Stage that guides the interventions in a specific way.⁵

That said, the preparation of the ND provides subsidies for clear communication between nurses and provides a more reliable care planning, thus adding advantages for patient care.⁴

In this sense, to determine that an ND demonstrates credibility, if such a taxonomy has reliability to express an individual's state of health, disease or well-being, it is necessary to validate it through validation studies.⁶

Therefore, a given diagnosis becomes reliable when its properties are anchored in evidence and are differentiated in different clinical contexts through validation methods.⁷

For this reason, the North American Nursing Diagnosis Association - International (NANDA-I) has encouraged researchers to subject NDs to validation processes, as a way to certify their rigor.⁸

Thus, since the 1990s, validation studies have shown relevant interest among researchers. This then encourages the creation of new diagnoses

for events not yet detailed in the taxonomy.^{9,10}

In this way, the validation of an ND tells us about the accuracy it presents to a particular health or well-being situation of the individual and his community, something important to improve the understanding of them for clinical practice.¹¹

With this, it is through the validation processes that it becomes possible to indicate whether the defining characteristics or the risk factors of a given ED are recognized by a significant number of nurses.^{12,13}

In this sense, the literature describes validation methods to assist nurses in the development of diagnostic deduction. Examples are the models proposed by Gordon and Sweeney (1979), Fehring (1987) and Hoskins (1989).^{6,12,14}

Still, there are studies of accuracy of clinical indicators proposed by Lopes, Silva and Araújo (2012) where it is described that to study the accuracy of clinical indicators based on the theory of diagnostic tests it is necessary to perform: concept analysis, content analysis by specialists and analysis of the accuracy of clinical indicators.¹⁵

In this context, research on ED becomes necessary to provide greater support and optimization of evidence from the NANDA-I diagnostic taxonomy, as well as to strengthen the nurse's clinical practice. Not only that, but validation studies are essential in order to contribute to the refinement of ND, being important to observe what has been researched in Brazil and in the world on this subject.¹⁶

Therefore, the aim of the present study was to conduct an integrative literature review in order to analyze the development of validation methods for nursing diagnoses in adults.

METHODS

An integrative literature review was carried out, as it provides us with knowledge through the results of studies carried out in practice.¹⁷ Thus, the analysis of the selected studies was guided by the following question: What validation methods for nursing diagnoses have been developed in Brazil and in the world in the last 5 years?

Therefore, the studies were selected by means of electronic research in the following databases: Academic Google, CAPES Journal Portal, Latin American and Caribbean Literature in Health Sciences (LILACS), Nursing Database (BDENF) and PubMed. The descriptors used were as follows: "Estudos de Validação" AND "Diagnóstico de enfermagem" AND "Adulto" and "Validation study" AND "Nursing diagnosis" AND "Adult" in all databases.

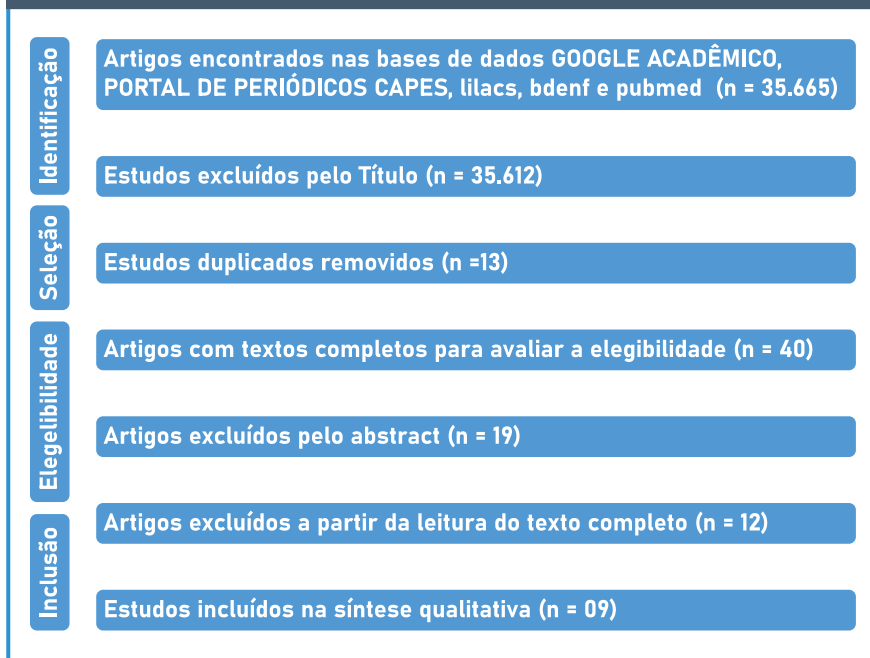
Thus, the inclusion criteria were: articles in English, Spanish and Portuguese in the last five years (2016 to 2020), involving the analysis and development of validation methods for nursing diagnoses in adults.

Hence, the exclusion criteria were articles of literature review, meta-analysis, editorials, letters to the editor and articles of reflection. From the searches in the databases and application of the eligibility criteria, 09 studies were included in the qualitative synthesis. Figure 1 shows the flowchart for selecting these studies, according to the prism method.

However, in order to select the studies, a thorough reading of the titles and abstracts was performed, including only those studies that met the aforementioned inclusion criteria.

For the final choice of articles, a critical analysis was carried out in order to answer the guiding question of this research. From the studies selected for

Figure 1. Flowchart and criteria for selection and inclusion of articles



the final sample, the following data were collected: year of publication, title of the article, authors, magazine, periodical and results. The data were submitted to descriptive analysis and the synthesis of the results was presented in tables.

RESULTS

The results of the present study are shown in Table 1.

DISCUSSION

The validation studies of nursing diagnoses are motivated by previously described methodologies, such as the clinical model of Gordon and Sweeney (1979); content validation and Fehring's differential clinical (1987) and concept analysis model, validation by specialists and clinical validation by

Table 1 - Statement of articles that integrate the Integrative Review.

N	Data	Título	Autores	Periódico	Resultados
1	2019	Validação clínica do diagnóstico de enfermagem 00085 mobilidade física Prejudicada em vítimas de múltiplos traumas	Ferreira RC, Duran ECM	Revista Latino Americana de Enfermagem	A amostra de 126 pacientes, onde a característica definidora com maior prevalência foi "dificuldade para virar-se" com porcentagem de 58,73%.
2	2018	Clinical validation of the nursing diagnosis of ineffective protection in hemodialysis patients	Tinoco JD, Paiva MGMN, Frazão CMFQ, Lucio KDB, Fernandes MICD, Lopes MVO, Lira ALBC	Journal of clinical nursing	Os indicadores "febre", "aumento do número de hospitalizações", "fraqueza" e "infectedos acesso vascular" configuram-se com alta especificidade.
3	2018	Acurácia dos indicadores clínicos dos diagnósticos de enfermagem do subconjunto terminológico "Community nursing" para usuários hipertensos e diabéticos	Costa PCP	Tese apresentada à Faculdade de Enfermagem da Universidade Estadual de Campinas	Os DE "hiperglicemia", "hipoglicemia" e "percepção tátil prejudicada" foram considerados acurados pela análise de acurácia.
4	2017	Validação do conteúdo do diagnóstico de enfermagem intolerância à atividade em pacientes com insuficiência cardíaca	Ferreira GL	Dissertação apresentada à Coordenação do Curso de Pós-Graduação em Enfermagem da Universidade Federal do Ceará	Em "resposta anormal da pressão sanguínea a atividade" e "resposta anormal da frequência cardíaca a atividade" os juízes sugeriram uma revisão conceitual.
5	2017	Validação clínica do diagnóstico de enfermagem "resposta disfuncional ao desmame ventilatório" em pacientes adultos internados em Unidade de Terapia Intensiva	Silva LCR	Dissertação apresentada ao Programa de Pós-Graduação da Escola de Enfermagem da Universidade Federal de Minas Gerais	Os indicadores clínicos identificados com maior frequência para determinação da "Resposta disfuncional ao desmame ventilatório" foram a "taquipnéia", "queda de saturação" e "taquicardia".

6	2017	Falta de adesão em pessoas vivendo com HIV: acurácia das características definidoras do diagnóstico de enfermagem	Silva RAR, Costa MMN, Neto VLS, Silva BCO, Costa CS, Andrade IFC	Revista Latino Americana de Enfermagem	O indicador mais sensível foi "falta a compromissos agendados" e "comportamento de falta de adesão e "falha em alcançar os resultados" apresentaram maior especificidade.
7	2017	Análise do "padrão respiratório ineficaz" e "ventilação espontânea prejudicada" de adultos com oxigenoterapia	Seganfredo DH, Beltrão BA, Silva VM, Lopes MVO	Revista Latino Americana de Enfermagem.	A maioria das CD apresentou baixa capacidade discriminativa e baixo percentual de variância.
8	2016	Validação do diagnóstico de enfermagem "risco de olho seco" em pacientes adultos internados em unidade de terapia intensiva	Botarelli FR	Tese apresentada ao Programa de Pós - Graduação em Enfermagem da Universidade Estadual do Rio Grande do Norte	Os fatores de risco validados foram: "lagofthalmia", "ventilação mecânica invasiva", "ausência ou redução do reflexo espontâneo de piscar", "analgésicos opioides", "sedativos", "antibióticos" e "vasodilatadores".
9	2016	Validação das características definidoras do diagnóstico de enfermagem "conforto prejudicado" em oncologia	Gonçalves MCS, Brandão MAG, Duran ECM	Acta Paulista de Enfermagem	Foram validados o conteúdo de 17 CD do DE estudado e mais outras 07 foram propostas.

Hoskins (1989).^{18,19}

Namely, among these models that are considered more traditional, the methodology described by Fehring stands out. In a study carried out in the production of graduate programs in Brazil on the subject, it was observed that 58,3% were based on what this author suggested.¹⁶

Therefore, Fehring initially proposed two models: diagnostic content validation and clinical validation. Then, it included a new method: differential diagnostic validation.²⁰

Thus, in order for a nursing diagnosis test to be carried out, it is essential to subject it to clinical validation through statistical studies, comparing at least two different methods, in order to be observed its relevance and guarantee of its clinical usefulness.²¹

However, obstacles to the realization of the aforementioned methods have been presented by the researchers. Especially with regard to concept analysis as well as the capture of the group of experts.^{18,22,23}

That said, in a study carried out on the clinical validation of the nursing diagnosis "dysfunctional response to ventilatory weaning" in adult patients, the difficulty in determining the conceptual and operational definitions of

the defining characteristics of the diagnosis was described as a limitation.¹⁹

However, the step of selecting experts becomes a delicate aspect in a study of validation of diagnostic content and although Fehring's method of selection is often narrated in the literature, putting it completely into practice is difficult.²⁴

Therefore, adaptations are made to the Fehring model and this is something that is efficient in the effort to promote a sample of expert nurses with a profile both as a healthcare assistant and as a researcher and who has knowledge about the NANDA-I taxonomy.^{19,25}

In addition, the time of professional experience can be considered a facilitating condition in the relationship with the patient, as the nurse improves his ability to identify needs so that actions can be planned.²⁶

In this way, expertise is gained as nurses experience different situations in their work environment. The newly graduated professional tends to be attentive to the minutiae, however this behavior reaches a peak, followed by stability and decay over time.²³

Thus, experts are not infallible and tend to make mistakes linked to the omission of important information and tendency to hypotheses. However, nur-

ses who undertake a postgraduate degree in nursing diagnosis tend to be able to make a meticulous judgment.^{23,27}

In this sense, as an alternative to the traditional validation models, there are studies of accuracy of clinical indicators, where the steps are proposed: concept analysis, content analysis by specialists and analysis of accuracy of clinical indicators.^{15,18,22,23}

In this context, in a study to validate the content of the nursing diagnosis activity intolerance in patients with heart failure, the construction of a medium-range theory (MRT) was observed. 18

Thus, a MRT is a less subjective alternative to the great nursing theories, in order to make them more appropriate for the moment of the nurse's practice.²⁸

However, the elaboration of TMA in research in nursing is somewhat deficient even though it is considered of great value to guide the practice of nurses both nationally and worldwide.²⁹

CONCLUSION

Validation studies, even though they are considered of great value for the scientific development of nursing, it is clear that they are scarce.

That said, it is essential to carry out more validation and accuracy studies

of nursing diagnoses, in different clinical situations. In order to make each item in the taxonomy more reliable for carrying out the work, as well as for it to have a more universal language among nurses. ■

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