Introduction

Bandura (1986, p. 377) defined Self-efficacy as the "judgments that each individual makes about their abilities, from which they will organize and carry out their actions to allow the achieve objective behavior." This concept is an important predictor in adopting and maintaining healthy behaviors. A low self-perception of self-efficacy in the health context corresponds to related factors of several diagnoses, such as risk-prone health behavior, maintenance behaviors of ineffective health, ineffective health self-management, and sedentary lifestyle (Herdman et al., 2021).

Study Gap & Study purpose

Low self-efficacy has already been analyzed as a diagnostic construct for nursing and has theoretical-causal and content validation, confirmed by thirteen clinical indicators (CI) and eighteen etiological factors (FE), (Barreiro et al., 2020 ; Barreiro & Lopes, 2022). Therefore, it was necessary to carry out a clinical validation to verify the precision measures of the CIs and to determine the causal relationships between the EFs in a real clinical environment, and thus determine the components of its diagnostic structure and identify the elements that may be of greater importance to classify individuals as having or not having this human response. The objective of this study is to verify the clinical validity of the nursing diagnosis (ND) of low health self-efficacy (LSH) in patients with arterial hypertension (AH).

Method

A cross-sectional and diagnostic validation study was developed. The sensitivity and specificity of each CI were verified using a latent class model. A logistic regression model was fitted with Odds Ratio (OR) measures to estimate the effect magnitude of the EF, considering a significance level of 5%.

Clinical validation of the nursing diagnosis of low self-efficacy in health in patients with arterial hypertension.

Reinaldo Gutiérrez Barreiro 1,2* **Marcos Venícios de Oliveira Lopes** 1,
1 Program in Nursing. Federal University of Ceará, Fortaleza, Brazil
2 Department of Nursing, Surcolombiana University, Neiva, Colombia.
*E-mail: reinaldo.gutierrez@usco.edu.co

Table 1 Measurements of diagnostic accuracy for the IC of LHS obtained from the latent class model adjusted with the application of random effects.

Clinical Indicator	Se	95% CI		Sp	95% CI	
Risk-prone health behavior	0,9999	0,9989	1,0000	0,4075	0,2365	0,6026
Inadequate adherence to treatment regimen	0,7194	0,6336	0,7865	0,9052	0,3182	0,9935
Failure to take action that prevents health problems	0,9694	0,8816	0,9927	0,3969	0,2536	0,5693
Avoidance behavior	0,9214	0,8702	0,9553	0,3426	0,2150	0,4913
Inadequate health-related quality of life	0,8329	0,6820	0,9208	0,7194	0,5263	0,8568
Insufficient self-control	0,9266	0,7128	0,9851	0,7966	0,2557	0,9724
Low degree of empowerment	0,8117	0,6552	0,9067	0,9992	0,9784	1,0000
Negative health self-perception	0,8959	0,8279	0,9375	0,4257	0,2883	0,5911
Prevalence: 76,61% G²: 267,1		GI: 238		p = 0,094		Entropy: 0,89

Se: sensitivity, Sp: specificity. CI confidence interval, G2: Likelihood ratio test. GL: degree of freedom

Table 2. Univariate logistic regression for etiological factors of Low Self-Efficacy in Health

Etiological factors	β	SE	χ²	gl	P value	OR	95%CI	
Anxiety	0,27	0,06	20,92	1	<0,001	1,31	1,16	1,46
Inadequate social support	-0,03	0,01	3,73	1	0,054	1,03	1,00	1,06
Inadequate trust in health personnel	0,28	0,06	20,30	1	<0,001	1,32	1,17	1,49
Individuals with low level of education	-0,10	0,03	9,59	1	0,002	1,10	1,04	1,18
Inadequate communication skills	0,24	0,07	12,16	1	<0,001	1,27	1,11	1,45
Inappropriate justification of unhealthy behavior choices	1,28	0,31	17,50	1	<0,001	3,61	1,98	6,58
Inadequate health literacy	-0,17	0,03	33,90	1	<0,001	1,18	1,11	1,25
Pain	0,31	0,06	26,40	1	<0,001	1,36	1,21	1,53
Excessive stress	0,13	0,02	34,05	1	<0,001	1,13	1,09	1,18
Experience of failure	-1,06	1,06	0,99	1	0,318	2,86	0,36	25,0
Fatigue	0,06	0,02	7,90	1	0,005	1,06	1,02	1,10
Older adults	0,05	0,01	19,24	1	<0,001	1,05	1,03	1,08
Significant comorbidity	0,45	0,10	21,68	1	<0,001	1,57	1,30	1,91
Fear	0,10	0,03	12,57	1	<0,001	1,10	1,04	1,17
Perceived health-related barriers	2,44	0,32	57,07	1	<0,001	11,43	6,07	21,50
Unrealistic perception of seriousness of condition	0,25	0,04	39,49	1	<0,001	1,28	1,19	1,38
Powerlessness	0,19	0,02	62,78	1	<0,001	1,22	1,16	1,28
Precarious economic situation	0,00	0,00	0,21	1	0,646	1,00	1,00	1,00

* P value: Z test; SE- standard error; OR- Odds Ratio; CI – confidence interval.

Results

This study enrolled 302 individuals aged over 18 years. It was identified that the estimated prevalence of the LSH diagnosis was 76.61%. After adjusting the model, eight CIs remained, which showed statistical significance. As for the EFs, fifteen were more likely to develop an LSH.

Conclusion

Eight of thirteen CIs had a good fit by latent class analysis. Of the eighteen EFs, fifteen were significantly associated with LSH

Impact

Clinical validation provides accurate measurements of the components of nursing diagnoses, which can help nurses to correctly identify LSH in patients with arterial hypertension, thus favoring the implementation of interventions that lead people to perceive themselves as capable of carrying out actions for the promotion of health and the prevention of the progression of the disease in patients with arterial hypertension.

References

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.
Barreiro, R. G., Lopes, M., & Cavalcante, L. P. (2020). Middle-range theory for the nursing diagnosis of low self-efficacy in health. *Revista Brasileira de Enfermagem*, **73**(5), e20190370. https://doi-org.ezproxy.unal.edu.co/10.1590/0034-7167-2019-0370
Barreiro, R. G., & de Oliveira Lopes, M. V. (2022). Content validity of the nursing diagnosis low self-efficacy in health. *International Journal of Nursing Knowledge*, 00, 1– 10. https://doi-org.ezproxy.unal.edu.co/10.1111/2047-3095.12395
T. H. Herdman, S. Kamitsuru, & C. T. Lopes (Eds.). (2021). *NANDA international nursing diagnoses: Definitions & classification*. Thieme.
.

BOSTON COLLEGE
Connell School of Nursing