Abstract

Objective: To build and validate an instrument for self-assessment of soft skills in authentic nursing leadership.

Methods: This methodological research was developed in three stages: literature review, development of the instrument entitled “LEADERSKILLS”, and validation of the instrument’s content by experts using the Delphi Online Technique. The first stage consisted of two narrative reviews. The second stage included a pilot test for the development of the instrument containing a narrative description of the most relevant soft skills (related to the exercise of authentic leadership by nurses) that were presented by the narrative literature review. The third and final stage included changes to the instrument after considerations made by the experts.

Results: In the first round, the panel of experts was composed of 13 participants. Of the 17 multiple-choice questions evaluated in the first round, only two (pertaining to the content and language components) did not obtain the Content Validity Index (CVI) ≥0.85. The first question was about the inadequate understanding of what the titles and subtitles of “LEADERSKILLS” were, and the second was about the instrument’s clarity and objectivity. The judges’ main suggestions were concentrated on the content, language, and layout components. The second round consisted of responses from five experts, and reaching a consensus on the questions was possible by obtaining CVI ≥0.80.

Conclusion: The instrument constructed to develop soft skills in nursing was considered valid in terms of content, layout, language, motivation, and culture, achieving coherent assessment and applicability to the target audience.

Keywords
Social skills; Self-testing; Leadership; Nursing; Validation study

Descritores
Habilidades sociais; Autoteste; Liderança; Enfermagem; Estudo de validação

Descriptores
Habilidades sociales; Autoevaluación; Liderazgo; Enfermería; Estudio de validación

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Resumo
Objetivo: Construir e validar um instrumento para autoavaliação de soft skills em liderança autêntica de enfermagem.

Métodos: Pesquisa metodológica desenvolvida em três etapas: revisão de literatura, elaboração do instrumento intitulado “LEADERSKILLS” e validação de conteúdo do instrumento com experts, usando a Técnica Delphi Online. A primeira etapa foi composta por duas revisões narrativas. A segunda etapa incluiu um teste piloto ao desenvolvimento do instrumento contendo a descrição narrativa das soft skills mais relevantes (relacionadas ao exercício da liderança autêntica do enfermeiro) que foram apresentadas pela revisão narrativa da literatura. A terceira e última etapa incluiu a alteração do instrumento após as considerações realizadas pelos experts.

Resultados: O painel de experts da primeira rodada foi composto por 13 participantes. Das 17 questões de múltipla escolha avaliadas na primeira rodada, só duas (pertencentes aos componentes conteúdo e linguagem) não obtiveram Índice de Validade de Conteúdo (IVC) ≥0.85. A primeira questão era sobre a compreensão inadequada do que seriam os títulos e subtítulos do “LEADERSKILLS” e a segunda era sobre
Introduction

Given the process of globalization and the transfiguration of the VUCA (volatile, uncertain, complex, and ambiguous) world to a BANI (brittle, anxious, nonlinear, and incomprehensible) world, the work environment of nurses, who perform leadership among other activities, requires a more contemporary leadership style as authentic leadership.

In this context, this leadership style expands to studies in the areas of health and nursing. As nurse leadership can empower the team to enable care, this type of leadership can promote healthy work environments, allowing greater satisfaction in professional activities.

The action of leaders is characterized by their principles and beliefs, with authenticity as its essence. Furthermore, authentic leadership is characterized as competence, being exercised through a triad of behaviors, skills, and attitudes.

Skills are a part of this triad, consisting of what we know as technical skills (hard skills) and behavioral skills (soft skills). Soft skills refer to the skills for interpersonal communication and problem-solving. They are personal characteristics that allow one to have good interpersonal relationships, integrate various interests, and use these skills as a strategy for making decisions.

As the development of soft skills has a direct relationship with authentic leadership, and the search for self-knowledge is part of self-development, people must improve these skills to achieve this leadership style.

Thus, people must perform a self-evaluation, including their moment in life and professional career, defining what is important to them. Then, building a skill development plan is important to support the issues that require improvement.

Although a single way does not exist for nurses to become effective leaders and be successful in leadership, the differential aspect of authentic leaders is in their ability related to self-knowledge and values dimensioning.

The possibilities for self-knowledge found in the literature involve various forms of development. Tools that help to seek self-knowledge and self-development in various contexts, such as the models by Barret and Marston, and the individual development plan by Costa Junior et al. (2021), are among these possibilities.

In addition, the SWOT matrix is a widely used tool in organizations. It allows people and organizations to recognize areas that require improvement by assessing their strengths, weaknesses, opportunities, and threats.

Although its usefulness is facilitated by its adaptability and flexibility, this tool has limitations.
such as its wide use may be more related to intuitive employment than to produced results; there is no adequate definition of the matrix’s strengths, weaknesses, opportunities, and threats; Furthermore, SWOT analysis does not provide strategies for implementing inferences based on its application.\(^{(19)}\)

Researchers such as Phadermrod, Crowder, and Wills (2019) sought to develop instruments to improve the use of this tool, thus allowing to optimize results with the original SWOT matrix.\(^{(21)}\)

This study applied the Importance of Performance Analysis together with the SWOT matrix to observe the aspects that should be improved from the customers’ point of view. Thus, the combined use of two instruments made it possible to organize information and formulate efficient strategic planning.\(^{(21)}\)

Furthermore, research on self-assessment paths supported by instruments that describe and present parameters focused on the development of soft skills is deficient in the context of authentic leadership in nursing. Therefore, developing and validating a soft skills self-assessment instrument for authentic leadership in nursing were the objectives of the present study.

**Methods**

This methodological study was carried out from June 2021 to January 2023 to develop an auxiliary instrument for filling out the SWOT Matrix tool.

Among the self-knowledge tools described in the literature, the SWOT matrix was chosen due to its intensive use by organizations around the world. Furthermore, the ease with which it can be used and its functional and intuitive natures show flexibility and adaptability to use in various contexts.\(^{(19)}\)

The SWOT matrix is used to explore the internal and external environments of organizations (concerning their strengths, weaknesses, opportunities, and threats), acting as a starting point for developing an action plan.\(^{(22)}\)

Although this tool has facilitating aspects, it also has limitations for its use, such as subjectivism, lack of a hierarchy of priorities, and imprecision in defining factors or dimensions (strengths, weaknesses, opportunities, and threats).\(^{(19)}\)

Thus, to achieve the proposed objective, the process was developed in three stages: literature review, instrument preparation, and content validation by experts using the Delphi Online Technique.

The literature review comprised two narrative reviews carried out in the period May-June 2021. The objective of the first review was to identify the most relevant soft skills related to authentic leadership in the context of organizations, using the Scientific Electronic Library Online (SciELO) and Google Scholar databases. The keywords soft skills, impact, leadership, and influence were used. A total of 50 articles published in English and Portuguese were used.

The second review sought to gather information about situations of strength, weakness, opportunity, or threat. This was done by seeking information about contextualization and elucidation in the situations shown in the quadrants of the SWOT matrix. The SciELO, Google Scholar, and Regional Portal of the Virtual Health Library databases were used. The keywords were the same as those of the main soft skills raised in the literature review stage, and 50 articles were evaluated.

The instrument preparation stage included carrying out a pilot test of the previous version of the instrument. It was evaluated concerning the layout and language by the research group of this study (two doctoral students and three master’s students).

Thus, it received suggestions to modify and improve the language (change the writing to improve the fluidity of reading and readability of fillers), in addition to reducing the amount of text both in the guiding question, at the beginning of the instrument, and in the definition of the situations described in the quadrants of the SWOT matrix.

In addition, this stage was also composed of the elaboration of the instrument itself, describing the most relevant soft skills presented in the narrative review of the literature, and related to the exercise of authentic leadership by nurses. The chart was composed of rows and columns that included the following: presentation of the guiding question (presented in the tool’s self-completion); information necessary
to support the description of soft skills; information necessary for the quadrants (strength, weakness, opportunity, and threat) of the matrix; and references and authorship. Furthermore, the tool obtained the license from the Creative Commons (CC-By-SA) and was titled “LEADERSKILLS”.

“LEADERSKILLS” was formatted with the help of two scientific initiation scholarship holders (one from the graphic design course and the other from the computer course at the Federal University of Paraná), whose elaborate art was submitted for validation by experts.

The content validation of the instrument was carried out by experts using the Delphi Online Technique in two rounds between June 2022 and January 2023. Nurses from all regions of Brazil were selected via the Lattes Platform (National Council for Scientific and Technological Development) through the simple search field with the keyword “Leadership in nursing”.

The experts were selected using an intentional non-probabilistic approach, following the inclusion criteria of Joventino (2010). Nurses who did not update their resumes on the Lattes Platform in the last 12 months or did not present any production on the topic of leadership were excluded.

At the end of each round, the experts’ considerations were evaluated and the instrument underwent the necessary readjustments.

In the first round, invitations to participate in data collection were sent to 100 experts from all regions of Brazil (via the Lattes Platform contact tab), including an access link to the Survey collection platform Survey Monkey® for online research, Free and Informed Consent Form (TCLE), PDF file to view the tool created, and the deadline for return.

The judges were approached twice during the validation process: in the participant recruitment stage and during the second round of instrument evaluation. In the first round, the deadline for participants to respond was 15 days. This deadline was extended eight times as the number of respondents was much lower than expected. In the second round, the deadline for returning the invitation was 30 days.

In the Survey Monkey® platform, the form was divided into four sections: 1. Introductory text with a link to access the full text of the TCLE, 2. Question about acceptance of participation in the research, 3. Participant profile data, and 4. Items for content validation.

In the scientific literature, a lack of a universal instrument was observed in the content validation process for educational purposes. An adapted version of Sousa and Turrini (2012) was then used, in which 17 multiple-choice questions (Q) were prepared on five themes: 1. content (Q: 10-14), 2. language (Q: 15-17), 3. layout (Q: 18-22), 4. motivation (Q: 23-25), and 5. culture (Q 26). Questions 10-26 were answered using the five-point scale from Likert. When completing the SWOT matrix, two essay questions were also asked about the instrument’s real ability to help and whether it could be considered a tool for self-development of skills related to authentic leadership (Q: 27-28).

This form was answered anonymously. Acceptances from 13 experts were obtained in the first round. After the experts completed the matrix, the data collected in the first round were returned to those who indicated the form’s response (in the form of a report) via the email used for this research, including the two questions that did not reach a consensus in the first round. The second round received responses from five experts.

For quantitative analysis of content validation, the Content Validity Index (CVI) was applied, allowing the items to be analyzed individually. For the suitability of the “LEADERSKILLS” instrument, content validity indicators (CVI) ≥0.85 and ≥0.80 were considered satisfactory levels of consensus in the first and second rounds, respectively. This value was based on previous studies that used consensus values in the range of 0.5-0.8.

Other statistical tests were not used to analyze the internal consistency of the applied questionnaire due to the nature of the product developed.

The analysis of the results of the essay questions was done using the content analysis technique according to Câmara.

The present study was carried out following the standards of the National Health Council (Resolution 466; 12/12/2012) and guidelines from CONEP (Circular Letter 02/2021), and was ap-
Results

After the narrative literature review focusing on the main soft skills related to authentic leadership in nursing, the following 18 skills were highlighted: self-awareness; collaboration; entrepreneurship; critical thinking; lifelong learning; information management; ethics and moral professional skills; problem-solving; communication; flexibility; positive attitude; resilience; responsibility; teamwork; persuasion; negotiation; proactivity; and conflict resolution. Furthermore, the second review made it possible to obtain the necessary information to describe each of them in the quadrants of the SWOT matrix. After the literature review and tool development steps, reaching the first version (sent to the judges for the first round) of “LEADERSKILLS” was possible (Figure 1).

In this version (18 soft skills on five pages), the descriptions were presented in the rows, and the definitions of the quadrants of the matrix were in the columns. A guiding question at the beginning of the instrument, a table with the final score (after completing the self-assessment), and a list of references were also presented. After the first round of consensus, 13 valid responses were obtained. The expert panel was made up mainly of female nurses (n=10; 76.2%). The mean age was higher in the range of 41-50 years (38.5%). Regarding degrees, the numbers of masters and doctors were equal (six professionals each; 46.2%), and one of them had a postdoctoral degree (7.7%). Regarding formation time, the 13 specialists had <1 (4; 30.8%), 1-5 (5; 38.5%), 6-10 (1; 7.7%), 11-20 (2; 15.4%), 21-30 (1; 7.7%), >30...
years (none). Regarding employment bonds, they worked in higher education institutions (8; 61.5%) and health services (3; 23.0%); one of them was retired (1; 7.6%). Of the 17 multiple-choice questions evaluated in the first round, only two (content and language components) did not obtain CVI≥0.85. The first question was about an inadequate understanding of the titles and subtitles of “LEADERSKILLS” and the second was about the clarity and objectivity of the instrument. The judges’ main suggestions (concentrated on the content, language, and layout components) were the following:

**CONTENT:** regarding “far-fetched language”, the need to improve the wording of the instrument was mentioned; some definitions (strengths, weaknesses, opportunities, and threats of soft skills) presented a lot of explanation while others presented no explanation; some items required a review of the meaning of words; in descriptions, verbs should be more expansive (not reactive); in the list of soft skills, including “emotional intelligence” was suggested; concerning the sequence of the text, presenting the skills in increasing order of complexity was suggested; for skills development, including interprofessionalism was suggested.

**LANGUAGE:** make changes to improve the clarity and objectivity of the writing; need to standardize terms such as “is capable” or “presents capacity”; need to improve the introductory question to complete the instrument; some items were persuasive and others were narrative; need to make the writing more attractive, and modify titles and subtitles.

**LAYOUT:** modify the colors used; add the quadrant competencies at the beginning of each page; standardize the size of soft skills descriptions, and change the number of references in superscript.

After a careful review of the suggestions by the judges, reaching the second and final version of “LEADERSKILLS” was possible (Figure 2).

After the second round, five experts responded to the two-question form that did not reach a consensus in the first round. The profile of participating experts followed the trend of the first round: female (3; 6%) and male (2; 4%). They had doctorate (3; 6%) and master (2; 4%) degrees. Regarding formation time, they were 1-5 (1; 20%), 11-15 (2; 40%), 21-30 (2; 20%), and more than 30 (1; 20%) years old. The second round allowed reaching a consensus on the questions, obtaining CVI≥0.80.

**Discussion**

Nursing care is centered on promoting life, dialogue, and the individual potential of each subject. In addition, nursing professionals are primarily responsible for the health-disease process. Then, the construction of instruments to develop skills and put them into action are topics that deserve to be highlighted.(26)

Such aspects can be observed in national(27) and international studies.(28) They mention that the use of the SWOT matrix makes it possible to organize the development of personal skills (soft skills) but this methodology is still little used.

Given the updates in the digital world, the development of these skills is essential to achieve goals and stand out in the job market.(27,28)

This reinforces the potential use of “LEADERSKILLS”, as it enhances the application of the matrix for self-development based on the critical analysis of fillers’ skills. This process, known as self-knowledge, is part of the course of self-development,(16) which includes the construction of study material.

In addition, the SWOT matrix is a fundamental tool for approaching complex strategic situations, reducing the amount of information, and improving decision-making.(29)

Furthermore, its use is widespread in organizations, within businesses, and at the individual level, making it possible to better assess the situation of people seeking to stand out in the job market.(30)

The SWOT matrix has already been used in several health institutions to identify weaknesses as well as the proposal for the development of this research. Its use made it possible to develop improvement strategies,(31,32) and build technological devices to optimize access to information,(33) in addition to helping in the diagnosis and better treatment of patients with endometriosis.(34)

In the current scenario, research shows that organizations and nurse managers still prioritize the technical skills of nursing professionals,(13,35) Then,
technical practice must be added to the reflection on actions so that soft skills are developed and quality purposeful assistance is possible.

As the literature describes the limitations of the SWOT matrix, it needs tools to facilitate its use. "LEADERSKILLS" made this use possible, as it not only correctly defines the factors in each dimension but also allows an understanding of possible interrelationships. (20)

According to the literature, a definitive improvement of the SWOT matrix does not exist yet. However, the use of associated tools can be useful despite the risk of making it more complex. Then, the matrix should not be used alone but integrated into strategic planning. (19)

Therefore, its validation is essential to research as it seeks to find the conceptual translation of a construct. Although this process is subjective, carrying out quantitative assessments is important to assess content validity.

Thus, "LEADERSKILLS" was judged by experts in the construct area and obtained agreement after the second round using the online Delph Technique. (36) The majority of judges showed satisfaction with the material presented; furthermore, "LEADERSKILLS" obtained a satisfactory overall CVI in the first round. (24)

Such results highlighted the harmony and robustness of the instrument developed. In addition to the broad acceptance of experts, their contribu-
tions made it possible to improve the text of the instrument, making its language more familiar and meaningful to respondents.

The most frequent mean age (41-50 years) in the first round agrees with studies carried out in Brazil showing that a tendency towards a more mature age exists. This probably happened due to greater technical training related to academic qualifications and professional experience.\(^{(37)}\)

Five valid responses were recorded in the second round. It is worth highlighting that the choice and number of experts tend to be concerning when seeking to validate an instrument. The literature shows the difficulty of obtaining them in the acceptance and permanence items until the conclusion of the study. Losing participants is possible in each round although without implications for data analysis.\(^{(36)}\)

In addition, the study allowed observing that self-knowledge is fundamental for authentic leadership as following the path of self-regulated learning is essential for effective leadership.\(^{(38)}\)

Although this process is influenced by instructors, coaches, or supervisors, the protagonism in this search lies with the leader. Then, considering studies on the construction of materials is essential for the self-development of leaders.\(^{(39)}\)

Therefore, the construction of educational technologies facilitating access to information is necessary for the self-development of authentic nursing leaders. Such technologies are essential didactic instruments for teaching as they help learners build their autonomy with a growing interest in the search for their knowledge.\(^{(40)}\)

This study had limitations regarding the low adherence of participants in the validation process, although the response deadline was extended eight times in the first round. As carrying out a pre-test was not possible with the target population in the last stage of content validation, this is one of the objectives in the progress of this research.

**Conclusion**

The study allowed us to see that the “LEADERSKILLS” instrument is valid in terms of content, language, layout, motivation, culture, and dissertation themes. It has good or excellent appearance, insight, and relevance and applies to the target population of nurse leaders. It can be safely used to guide and assist in the self-assessment of soft skills for authentic leadership in nursing. It makes it possible to understand the points that require improvement and should be integrated into strategic career planning. It can also be applied to future validation research including the target audience.

**Collaborations**

Beltran RIL, Figueiredo KC, Peres AM, and Nunes EMGT contributed to the design of the study, analysis, and interpretation of the data, writing of the manuscript, relevant critical review of the intellectual content, and approval of the final version to be published.

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