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MULTIDIMENSIONAL NURSING GENERATIONS QUESTIONNAIRE: ADAPTAÇÃO TRANSCULTURAL E VALIDAÇÃO DE CONTEÚDO PARA O CONTEXTO PORTUGUÊS
MULTIDIMENSIONAL NURSING GENERATIONS QUESTIONNAIRE: CROSS-CULTURAL ADAPTATION AND CONTENT VALIDATION FOR THE PORTUGUESE CONTEXT
MULTIDIMENSIONAL NURSING GENERATIONS QUESTIONNAIRE: ADAPTACIÓN TRANSCULTURAL Y VALIDACIÓN DE CONTENIDO PARA EL CONTEXTO PORTUGUÉS

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RESUMO

Introdução: A diversidade geracional é suscetível de influenciar os ambientes de prática de enfermagem, sendo crucial avaliar este fenómeno nos contextos da prática. Contudo, em Portugal não existe nenhum instrumento para o efeito.
Objetivo: Adaptar culturalmente e validar o conteúdo do instrumento *Multidimensional Nursing Generations Questionnaire* (MNGQ) para o contexto português.
Métodos: Estudo metodológico assente em seis fases: tradução, síntese, retrotradução, comité de peritos, pré-teste e validação do processo pelo autor do instrumento original.
Resultados: Os três estágios iniciais foram concluídos sem dificuldades. O comité de peritos avaliou o conteúdo do instrumento traduzido quanto às equivalências semânticas, idiomáticas, culturais e conceituais, à clareza e à relevância. Foi determinado o Índice de Validade de Conteúdo dos quarenta e oito itens do instrumento e três por apresentarem valores inferiores a 0,90 foram submetidos a avaliação em segunda ronda. Nesta obteve-se consenso entre os peritos. A usabilidade do instrumento foi avaliada no estágio de pré-teste, tendo mais de 93% dos participantes concordado com a informação sobre as instruções, itens e opções de resposta da versão portuguesa do instrumento. A aprovação deste processo pelo autor do instrumento original finalizou o estudo.
Conclusão: A adaptação transcultural e validação de conteúdo do instrumento para o contexto português revelam-se uma etapa promissora para a sua validação, estudo e compreensão da diversidade geracional nos ambientes de prática de enfermagem.

Palavras-chave: enfermagem; relações intergeracionais; estudo de validação; ambiente de trabalho

ABSTRACT

Introduction: Generational diversity is likely to affect nursing practice environments, making the assessment of this phenomenon in practical contexts essential. However, no instrument exists in Portugal for this purpose.
Objective: Culturally adapt and validate the content of the Multidimensional Nursing Generations Questionnaire (MNGQ) instrument for the Portuguese context.
Methods: A methodological study consisting of six stages: translation, synthesis, back-translation, expert committee review, pre-test, and validation of the process by the original instrument`s author.
Results: The first three stages were completed without difficulty. The expert committee evaluated the translated instrument's content with respect to semantic, idiomatic, cultural, and conceptual equivalence, as well as clarity and relevance. The Content Validity Index was calculated for the forty-eight items, and three items with scores below 0.90 were reviewed in the second round. In this round, the experts reached consensus. The instrument's usability was tested in the pre-test phase, with over 93% of participants agreeing with the instructions, items, and response options of the Portuguese version. The process was approved by the original instrument author, concluding the study.
Conclusion: The cross-cultural adaptation and content validation of the instrument for the Portuguese context represent a promising step toward its validation, study, and understanding of generational diversity in nursing practice environments.

Keywords: nursing; intergenerational relations; validation study; work environment

RESUMEN

Introducción: Es probable que la diversidad generacional influya en los entornos de práctica de enfermería, y es crucial evaluar este fenómeno en dichos entornos. Sin embargo, en Portugal no existe ningún instrumento para este fin.
Objetivo: Adaptar culturalmente y validar el contenido del instrumento Multidimensional Nursing Generations Questionnaire (MNGQ) al contexto portugués.
Métodos: Estudio metodológico basado en seis etapas: traducción, síntesis, retrotraducción, comité de expertos, pre-prueba y validación del proceso por el autor del instrumento original.
Resultados: Las tres etapas iniciales se completaron sin dificultades. El comité de expertos evaluó el contenido del instrumento traducido en cuanto a equivalencias semánticas, idiomáticas, culturales y conceptuales, claridad y relevancia. Se determinó el índice de validez del contenido de los cuarenta y ocho ítems del instrumento y tres de ellos, al presentar valores inferiores a 0,90, se sometieron a una segunda ronda de evaluación. En esta se obtuvo consenso entre los expertos. La usabilidad del instrumento se evaluó en la fase de pretest, y más del 93 % de los participantes estuvieron de acuerdo con la información sobre las instrucciones, los ítems y las opciones de respuesta de la versión portuguesa del instrumento. La aprobación de este proceso por parte del autor del instrumento original puso fin al estudio.
Conclusión: La adaptación transcultural y la validación del contenido del instrumento para el contexto portugués se revelan como una etapa prometedora para su validación, estudio y comprensión de la diversidad generacional en los entornos de práctica de enfermería.

Palabras clave: enfermería; relaciones intergeneracionales; estudio de validación; condiciones de trabajo

INTRODUCTION

Nursing practice environments encompass characteristics that can either support or hinder nursing practice, thereby affecting nurses' leadership, quality of care, professional relationships, support, and engagement (Ribeiro et al., 2020). In this context, it is also essential to highlight another increasingly common feature: the presence of multigenerational nursing teams composed of professionals from four different generations (Sanches et al., 2024).

The term "generation" refers to individuals born around the same time who experience significant technological, economic, and social events, leading them to share similar perspectives (Kim et al., 2024). Therefore, it is reasonable to assume that each generation of nurses has distinct values, attitudes, competencies, expectations, and levels of professional engagement (Hisel, 2020). Studies from 2023 and 2024 (Bacon, 2023; Sanches et al., 2024) identify that nursing teams currently consist of the following generations: Baby Boomers (born between 1946 and 1964), Generation X (born between 1965 and 1979), Generation Y or Millennials (born between 1980 and 1995), and Generation Z (born after 1995).

In the development of more senior nurses in professional practice, the Baby Boomer generation views nursing career and professional ethics with greater significance, being recognized as nurses who "live for work" (Sanches et al, 2024). Many Baby Boomers hold leadership and management positions within healthcare organizations and nursing teams. (Bacon, 2023). Generation X focuses on "living from work," seeking independence and informality in their professional lives while making time for personal pursuits. They tend to reject authority positions and prioritize work-life balance, technological and communication innovation, and global diversity (Cardoso, 2020). Millennial nurses value a sense of community and prefer team-oriented work environments. They also wish to be involved in organizational and team decision-making. They are tech-savvy and show strong skills in this area. They seek respect, are optimistic and confident, are adaptable within their teams, and acknowledge their civic responsibilities (Hisel, 2020; Sanches et al., 2024). Generation Z nurses tend to prefer individual work over collaboration and require more ongoing feedback, continuous assessments, and positive reinforcement than previous s generations (Kim et al., 2024). They rely on new technologies and prefer modern team communication methods (Bacon, 2023).

The phenomenon of generational diversity in nursing practice settings has been acknowledged as an important factor influencing multiple areas (Stevanin et al., 2018). Among these, nurses' work engagement and professional satisfaction are identified according to their generation, with better results foundin older generations (Sanches et al., 2024, Stevanin et al., 2018). Stress and resilience levels are also examined, and younger generations have been found to experience higher stress and lower resilience (Stevanin et al., 2018). Each generation's perspective on nurses' autonomy and leadership styles in professional practice is another crucial domain to understand (Stevanin et al., 2018). Younger generations tend to prefer transformational leadership styles, valuing leaders who inspire, motivate, and promote the personal and professional development of their teams, in contrast to more traditional styles preferred by previous generations (Sanches et al., 2024; Stevanin et al., 2018). Finally, the turnover intentions stands out, which is more pronounced among younger generations, considering the importance they attribute to the balance between personal and professional life, innovation, technology, and communication, combined with well-being and flexibility in work contexts (Bacon, 2023; Sanches et al., 2024; Stevanin et al., 2018).

The diverse perspectives that characterize each generation of nurses pose an additional challenge for team balance and management. However, recognizing these generational differences and integrating them constructively into the management and organization of work is essential to ensuring the cohesion, harmony, and motivation of team members (Cardoso et al., 2022; Stevanin et al., 2018). This requires leaders to adopt a flexible and adaptive approach (Bacon, 2023; Stevanin et al., 2018).

Therefore, due to this issue and the lack of a tool to evaluate generational diversity within Portuguese nursing, this study aims to culturally adapt and validate the content of the Multidimensional Nursing Generations Questionnaire (MNGQ) for use in the Portuguese context.

1. THEORETICAL FRAMEWORK

In 2019, Stevanin et al. published the Multidimensional Nursing Generations Questionnaire (MNGQ), an instrument designed to assess the characteristics of various nurse generations within a particular context, thereby informing management strategies that promote a more positive and inclusive work environment for all. Among the strategies are promoting more effective leadership, adopting adjusted intergenerational communication practices, and implementing mentoring or professional development programs tailored to the specific needs of each generation (Bacon, 2023). Such initiatives have the potential to produce positive effects on nursing professionals (such as increased satisfaction, well-being, and reduced conflict), patients (enhanced safety and quality of care), and healthcare organizations (greater team cohesion, retention of professionals, and improved organizational efficiency) (Bacon, 2023; Kim et al., 2024; Stevanin et al, 2018).

The Multidimensional Nursing Generations Questionnaire (MNGQ) is a 48-item tool distributed across six dimensions. The dimensions "Conflicts between generations" and "Patient safety view" each assess ten items, whereas the "Relationship issues between generations" dimension includes eight items. The dimension "Working as a multigenerational team" comprises six items, and the dimensions "Orientation to change" and "Work propensity and availability" each consist of seven evaluation items

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3

(Stevanin et al., 2019). The participant assesses each item using a five-point Likert scale, ranging from one (strongly disagree) to five (strongly agree). The higher the score assigned, the stronger the professional's agreement with the item's content (Stevanin et al., 2019). The instrument demonstrated satisfactory psychometric properties across its 48 items. The Cronbach's alpha values derived from evaluating the instrument's internal consistency range from 0,73 to 0,88 (Stevanin et al., 2019).

2. METHODS

This methodological study focuses on the cross-cultural adaptation and content validation of the Multidimensional Nursing Generations Questionnaire (MNGQ) for the Portuguese context. Adapting an instrument for use in a country other than its original one, with distinct cultural contexts and language, requires researchers to employ a rigorous methodology beyond mere linguistic translation. This process requires thorough cultural adaptation to make sure the original and target versions are equivalent, which is crucial for validating content and maintaining the instrument's overall integrity.

The international recommendations of Beaton et al, published in 2007, were adopted for this methodological study. These recommendations are described as the most widely used in research using this methodology (Oliveira et al., 2018). The authors' recommendations encompass six stages of study development: initial translation, synthesis of translations, back-translation, expert committee, test of the pre-final version, and submission of the process to the original instrument's author (Beaton et al., 2007).

This methodological study began in May 2024 in the Portuguese context after receiving written authorization from the author responsible for the original version of the instrument and concluded in February 2025.

This study received a favorable opinion from the ethics committee of the São João Local Health Unit (Approval No. 334-2024).

Stage I: Initial translation

In the first stage of this study, the original Multidimensional Nursing Generations Questionnaire, originally in English, was translated into Portuguese by two independent translators residing in Portugal. These translators were fluent in the instrument's original language and were native Portuguese speakers. The two translations produced were labeled T1 and T2. The translator who conducted the T1 translation was informed about the project's concepts and objectives and had expertise in the health field. In contrast, the translator responsible for T2 received no guidance and lacked expertise in the health field, leading to the language being closer to that of the general population. In both translations, the translators had the chance to report challenges and provide critical comments on the translation process (Beaton et al., 2007; Cruchinho et al., 2024).

Stage II: Synthesis of the translations

The second stage involved synthesizing the translations. From the versions produced (T1 and T2), a third translator created the synthesis version (T12). This translator resolved ambiguities in word usage between the T1 and T2 versions, resulting in a consensus on the synthesis version (T12) (Beaton et al., 2007; Cruchinho et al., 2024).

Stage III: Back-translation

In the third stage, the T12 version of the instrument in Portuguese was back-translated into the original language (English) by two translators who are fluent in Portuguese and are native English speakers. This stage enables verification of validity and identification of errors, inconsistencies, and ambiguous wording in the translations, ensuring that the content of the translated items is equivalent to that of the original, thereby guaranteeing the quality and consistency of the translation. The translators lacked knowledge of the instrument's study area, were unfamiliar with its original version, and were not informed about the concepts and objectives of back-translation. These criteria are essential for avoiding information bias and for identifying inappropriate item meanings in the synthesis version (T12) (Beaton et al., 2007).

Stage IV: Expert committee

In the fourth stage, a committee of experts evaluated and consolidated the items from the translated versions (T1, T2, T12) and the instructions, thereby achieving cross-cultural equivalence of the translated instrument. The participants in the committee were selected for convenience and comprised nine experts, following the guidelines of several authors who recommend a minimum of five experts (Cruchinho et al., 2024; Oliveira et al., 2018). The committee included nurses, specialist nurses, nursing professors, methodologists, and translators with knowledge and expertise in the methodological process (Beaton et al., 2007), all of whom held a minimum master's degree and had at least four years of professional experience.

Each expert's involvement in the study demonstrated their formal acceptance of the informed consent. After the original instrument and the translation versions were made available to the committee through an online Google Forms form, which included two parts, their translations were accessible to the committee. The first part contained the items from the original version of the instrument, T1, T2, and T12. The experts were asked to evaluate the semantic equivalence (meaning of the words), idiomatic

usage (referring to colloquial expressions), cultural relevance (congruence between the terms used in the target population of the country of the original version with the experiences and daily life of the target population of the country of the translation version related to that term), and conceptual accuracy (whether the items assess the focus phenomenon) of each item. They also evaluated clarity (the item is understandable, with no possibility of multiple interpretations) and relevance (the item is pertinent for assessing the dimensions in question in the target country/language) (Beaton et al., 2007; Oliveira et al., 2018).

A four-point Likert scale was used for each assessment. For equivalence, the options were: 1) Not equivalent; 2) Needs a significant revision to be equivalent; 3) Needs a slight revision to be equivalent; or 4) Equivalent. Regarding clarity, the options included: 1) Not clear; 2) Unclear; 3) Clear; or 4) Extremely clear. For relevance, the options were: 1) Irrelevant; 2) Not very relevant; 3) Relevant; or 4) Extremely relevant. When experts rated an item as 1 or 2, they were asked to provide suggestions for improvement (Cruchinho et al., 2024).

The second part of the form included the experts' sociodemographic characteristics (gender, age, marital status), academic qualifications, and professional background (including professional status and years of experience).

Microsoft Excel for Windows® was employed to process the data from the form, utilizing simple descriptive statistics to characterize the committee of experts.

Responses related to item equivalence, clarity, and relevance were subjected to a quantitative assessment, corresponding to the calculation of the Content Validity Index (CVI). This method is commonly used in the health sector. It enables the assessment of experts' agreement on how well each item of the instrument represents the content addressed (Cruchinho et al., 2024). Thus, in cases with six or more experts, the literature indicates that evaluating only the CVI per item is a sufficient quantitative method. An item is considered valid and retained in the final instrument if it achieves a value of ≥ 0.90 (Oliveira et al., 2018; Polit & Beck, 2021).

Items that did not meet the minimum threshold of 0.90 were evaluated qualitatively based on experts' suggestions for improvement, resulting in a second assessment round. This helped achieve the recommended minimum CVI value, resulting in the pre-final version of the completion of the fourth stage.

Stage V: Test of the pre-final version

The Portuguese pre-final version of the MNGQ was subjected to a pre-test, including the fifth stage, to evaluate the practical aspects of the instrument's use, such as administration time and usability. A group of 31 nurses from a hospital setting, each with at least one year of professional experience, tested it according to the guidelines (Beaton et al, 2007).

The online platform Google Forms was used to administer the questionnaire on the pre-final version of the instrument. In this study, participants recorded the start and end times of completing the instrument after providing informed consent to participate. They answered questions about the ease of understanding the instructions for filling out the instrument, the items, and the answer options. To this end, a five-point Likert scale was employed, corresponding to: 1) Strongly Disagree, 2) Disagree, 3) Neutral, 4) Agree, and 5) Strongly Agree. If participants selected scores 1 or 2, they were asked to contribute suggestions for improvement. At the end of the questionnaires, participants responded to questions regarding their sociodemographic, academic, and professional characteristics. The data obtained at this stage were processed using Microsoft Excel for Windows® and analyzed through simple descriptive statistics.

Stage VI: Submission of the process to the original instrument's author

In the sixth stage, the final phase of the study, the cross-cultural adaptation of the MNGQ to the Portuguese context—including the versions created and the results obtained at each step—was submitted to the author of the original instrument for review and evaluation. (Beaton et al., 2007; Oliveira et al., 2018).

3. RESULTS

The three initial stages of the study—translations, translation synthesis, and back-translation—were carried out without difficulty. In the translation stage, the translators produced versions T1 and T2 and reported how they resolved ambiguous situations, which informed the synthesis version, T12. The T12 version was subjected to two back-translations (BT1 and BT2) by two independent translators who reported no complexities.

Ten experts were invited to join the expert committee in the fourth stage; nine accepted the invitation. Most experts were female (77.8%), with an average age of 41 years. Eighty-eight % were married, or in a non-marital partnership, 77.8% held a master's degree, and 22.2% held a doctorate degree. The average length of professional practice was 18 years. The committee comprised three nurses (33.3%), three specialist nurses (33.3%), and three nursing professors (33.3%), including a translator and a methodologist. The sociodemographic, academic, and professional characteristics of the expert committee are shown in Table 1.

Table 1 - Characterization of the experts committee (N=9)

Variables	Values
Age (Years) Mean ± Standard Deviation	40.55 ± 7.40
Gender n (%)	
Female	7 (77.8%)
Male	2 (22.2%)
Marital Status n (%)	
Married / non-marital partnership	8 (88.9%)
Divorced	1 (11.1%)
Academic Degree n (%)	
Master's degree	7 (77.8%)
Doctorate degree	2 (22.2%)
Professional Category n (%)	
Specialist nurse	3 (33.3%)
Nurse	3 (33.3%)
Nursing professor	1 (11.1%)
Nursing professor and translator	1 (11.1%)
Nursing professor and methodologist	1 (11.1%)
Time of professional practice (Years) Mean ± Standard Deviation	18.00 ± 6.89

In the first round of evaluating the 48 items, only three items (7, 14, 42) did not achieve a minimum CVI of 0.90 in the experts' assessments. Item 7 showed insufficient CVI scores in semantic, idiomatic, conceptual equivalence, and clarity. This item is part of the "Conflicts between generations" dimension, with the description "Care is affected by different feelings towards change between generations of nurses. "Item 14 achieved a CVI of 0.89 in idiomatic equivalence. This item, called "I feel comfortable asking questions when something does not seem right," falls under the "Patient safety view" dimension. Lastly, item 42 had a CVI of 0.90 or higher only for cultural equivalence and relevance. This item corresponds to the statement "Nursing care has personal meaning for me", which belongs to the "Work propensity and availability" dimension. The values of the Content Validity Index for equivalence, clarity, and relevance of these three items are presented in Table 2.

Table 2 - Values of Content Validity Index

Items	Equivalence				Clarity	Relevance
	Semantic	Idiomatic	Cultural	Conceptual		
7	0.78	0.89	1.00	0.89	0.89	1.00
14	1.00	0.89	1.00	1.00	1.00	1.00
42	0.89	0.89	1.00	0.89	0.89	1.00

During the translation of Item 7, semantic, idiomatic, and conceptual challenges arose. Phrases like "feelings towards change" were hard to translate directly because words such as "feelings" and "change" can have broad or unclear meanings in Portuguese. On a conceptual level, it was important to clarify that the item refers to different generational perceptions of changes in professional practice. Additionally, the original sentence structure did not sound natural in Portuguese, which affected clarity. The adjustments made aimed to improve conceptual accuracy, smoothness, and consistent understanding among the various generations of nurses.

Item 14, with a CVI of 0.89, had its translation changed from "I feel comfortable asking questions when something does not seem right" to "I feel free to ask questions when something doesn`t seem correct." The change is justified for idiomatic reasons: "feel free" better conveys the idea of having the freedom to ask questions naturally, whereas "comfortable" could be understood only as a feeling of well-being. Replacing "doesn't seem right" with "doesn't seem correct" preserves the original meaning more clearly and flows better in Portuguese.

Item 42, phrased initially as "Nursing care has personal meaning for me," was changed. The expression "personal meaning" could be interpreted ambiguously, suggesting significance only in a personal or subjective sense, which might limit understanding of the item. Replacing it with "a lot of meaning" preserves the original sense of valuing the importance and relevance of nursing care, ensuring greater clarity and naturalness. This change ensures that the item is easily understood and consistently assessed by respondents while maintaining fidelity to the original concept.

Based on the improvement suggestions provided by the experts for these items, changes were made and then reviewed by the committee in a second round. As a result, item 7 was revised to "Care is influenced by the different feelings of the various generations of nurses regarding change." Item 14 was adjusted to "I feel free to ask questions when something doesn`t seem correct." Item 42 was updated to "Nursing care has a lot of meaning for me." These modifications helped these items achieve a CVI=1.00 in all evaluations during the second round. Following content validation, a pretest was administered to 31 nurses. Most participants were female (80.7%) and married or in a non-marital partnership (71.0%), with an average age of 38 years. Academic

qualifications indicated that 25.8% of the sample held a master's degree, while the remainder had a bachelor's degree. Most of them worked as nurses (67.7%), followed by specialist nurses (29.0%) and nurse managers (3.2%). The average length of professional practice was 15 years, with a standard deviation of 10.09. The sociodemographic, academic, and professional characteristics of the sample participating in the pre-test stage are presented in Table 3.

Table 3 - Characterization of the sample participating in the pre-test stage (N=31)

Variables	Values
Age (Years) Mean ± Standard Deviation	38.22± 10.00
Gender n (%)	
Female	25 (80.7%)
Male	6 (19.4%)
Marital Status n (%)	
Married / non-marital partnership	22 (71.0%)
Single	8 (25.8%)
Divorced	1 (3.2%)
Academic Degree n (%)	
Bachelor's degree	23 (74.2%)
Master's degree	8 (25.8%)
Professional Category n (%)	
Nurse	21 (67.7%)
Specialist nurse	9 (29.0%)
Nurse manager	1 (3.2%)
Time of professional practice (Years) Mean ±Standard Deviation	15.25 ±10.09

The average time to complete the pre-test was 7.96 minutes (Standard Deviation: 3.39). Participants reported that the instructions for completion, understanding the items, and answer options were easy to understand, with agreement percentages of 96.8%, 93.6%, and 96.8%, respectively.

This process was finalized in the sixth stage, with the original instrument's author approving the Portuguese version's cross-cultural adaptation.

4. DISCUSSION

This study has proven fundamental, as it enabled cross-cultural adaptation and content validation of the Multidimensional Nursing Generations Questionnaire (MNGQ) for the Portuguese cultural context. Generational diversity in nursing presents a new challenge for healthcare institutions, nursing leaders, and nurses. Increased longevity and shifts in the labor market will continue to influence this characteristic in practice environments. It is vital to value this diversity because it affects the quality of care and outcomes for all stakeholders. (Sanches et al., 2024). Therefore, it is essential to evaluate this phenomenon in context and implement strategies that transform generational diversity into a beneficial attribute within nursing practice environments.

All steps in the selected methodological process were completed in accordance with the guidelines. Since the original instrument was written in English, a universal language, it facilitated the selection of translators who met the recommended criteria (Beaton et al., 2007), resulting in minimal differences between the translations that were easy to resolve.

It is important to note that performing back-translation of the T12 version, although labeled as optional by some authors (Cruchinho et al., 2024), provides greater rigor in aligning the original English version of the instrument with the English version produced in the first three stages of this study. This stage allows for validating the content of the items and ensuring that the meanings and concepts are consistent between the original and the adapted version.

Regarding the expert committee involved in the fourth stage of the study, the characteristics of the group that match those recommended by the chosen methodological process are highlighted. An intentional selection of experts was conducted to meet the process's goals, given the difficulty of finding qualified individuals in the Portuguese context through other means. However, some studies advocate using research platforms and recruiting a probabilistic sample, providing greater methodological rigor (Dias et al., 2022; Oliveira et al., 2023).

On the other hand, the online administration of the instrument's content validation questionnaire (two rounds) was beneficial at this stage, as it enabled nine of the ten experts invited to join the committee. This strategy has helped overcome inherent geographical barriers and promoted the impartiality of evaluations, as well as the temporal and local freedom to respond to the questionnaire.

The defined CVI for content validation of each instrument item was set at a minimum of 0.90. This value and recommendation are emphasized as a more rigorous attribute of the study, given that similar studies used recommendations for lower CVI values (Ribeiro et al, 2020; Ventura et al., 2023).

In the pre-test stage, the participants suggested no changes. They achieved an agreement rate of over 93% in comprehending the instructions, items, and answer options, indicating strong consensus on the pre-final version. The average time to complete the

questionnaire (7.96 minutes) aligns well with the recommendations in the literature (10 minutes) for questionnaires with up to 50 items (Campbell et al., 2022).

In the future, the availability of this instrument in Portuguese clinical practice and research will allow for a deeper understanding of generational dynamics in nursing, with positive impacts on team cohesion, job satisfaction, talent retention, organizational climate, leadership, and work engagement. This contribution will pave the way for research aimed at improving nursing practice environments, enabling the development and implementation of effective management and leadership strategies that transform generational diversity into an advantage for healthcare institutions, patients, and nurses.

5. LIMITATIONS

Despite the relevance of this study, as it corresponds to the first phase of the instrument validation process for the Portuguese population, it is important to recognise some limitations. As this is an initial stage focused on cross-cultural adaptation and content validation, the results should be interpreted within this methodological framework. The consolidation of the validation process requires subsequent stages, namely the assessment of psychometric properties, which will allow for a deeper understanding of the scientific robustness of the instrument in the national context.

Another limitation of this study is the absence of experts representing all regions of the country. Demographic characteristics should be considered when generalizing to other contexts.

CONCLUSION

The cross-cultural adaptation and content validation of the Multidimensional Generations in Nursing Questionnaire (MNGQ) is essential for nursing, given that currently, it is fundamental to assess and characterize generational diversity in practice settings in Portugal, and no instrument is available for this purpose. This study contributes to the completion of one of the methodological steps necessary to eliminate this gap. In addition to providing evidence of the validity of the MNGQ in the Portuguese context, it demonstrates that the instrument is easy to use, direct, and relevant, and confirms the importance of the 48 items that constitute the instrument.

The process and results demonstrate the purpose of the instrument, highlighting the need for other methodological steps to complete its validation (the evaluation of psychometric properties, such as construct validity and reliability).

Therefore, it is highlighted that in the future, contexts that apply the instrument will have the possibility of identifying attractive and motivating management and leadership strategies for different generations of nurses, thus reinforcing the retention of professionals, engagement in work, well-being, and performance of Portuguese nurses.

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AUTHORS' CONTRIBUTION

Conceptualization, S.C., L.T. and O.R.; Data curation, S.C., M.R., L.T. and O.R.; Formal analysis, S.C., M.R., D.S., L.T. and O.R.; Investigation, S.C., M.R., L.T. and O.R.; Methodology, S.C., M.R., L.T. and O.R.; Project administration, S.C., L.T. and O.R.; Resources, S.C., M.R., L.T. and O.R.; Software, S.C., M.R., D.S., L.T. and O.R.; Supervision, S.C., M.R., D.S., L.T. and O.R.; Validation, S.C., M.R., D.S., S.S., L.T. and O.R.; Visualization, S.C., M.R., D.S., S.S., L.T. and O.R.; Writing-original draft, S.C., M.R., L.T. and O.R.; Writing – review & editing, S.C., M.R., D.S., S.S., L.T. and O.R.

CONFLICT OF INTERESTS

The authors declare no conflict of interests.

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