# Kogan Scale – Attitudes toward old people: translation, cross-cultural adaptation and validation in Brazil

Kogan Scale – Attitudes toward old people: tradução, adaptação transcultural e validação no Brasil Kogan Scale – Attitudes toward old people: traducción, adaptación transcultural y validación en Brasil

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#### **Descriptores**

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# **Abstract**

**Objective:** To present the translation, cross-cultural adaptation and validation of the Kogan's Attitude towards Older People Scale (KAOP) into Portuguese in Brazil.

**Methods:** Methodological research into the translation, cross-cultural adaptation and validation of the Kogan scale on attitudes towards the older adult. Following international recommendations, the scale was translated by three native Brazilians and then a single version was drawn up by consensus considering semantic and cultural equivalences; it was back-translated and evaluated by a native British consultant for similarity analysis. The final version was applied to thirty students regularly enrolled in undergraduate courses as a pre-test. To validate the instrument, a cross-sectional study was carried out with 904 undergraduate students, including health courses, and the Cronbach's alpha index was obtained.

Results: In 47% (16) of the items there were exact similarities between the translations and in 53% (18) the similarities prevailed in terms of content, with few semantic differences. In relation to the pre-test, the majority of students were aged up to 25 (60%), female (76.6%) and single (70%), reporting adequate understanding of the Portuguese version, with no need for changes. The scale's internal consistency (Cronbach's alpha) was 0.70.

**Conclusion:** The process of translating, cross-culturally adapting and validating the Kogan scale from English into Brazilian Portuguese carefully followed the steps recommended in the literature. The resulting instrument was evaluated as comprehensible and with good internal consistency.

#### Resumo

**Objetivo:** Apresentar a tradução, adaptação transcultural e validação da Kogan's Attitude toward Older People Scale (KAOP) para a língua portuguesa no Brasil.

**Métodos:** Pesquisa metodológica de tradução, adaptação transcultural e validação da escala Kogan sobre atitudes em relação ao idoso. Seguindo recomendações internacionais, a escala foi traduzida por três nativos brasileiros e posteriormente elaborada versão única por consenso considerando equivalências semânticas e culturais; sendo retro traduzida e avaliada por consultor nativo britânico para análise de similaridade. A versão final foi aplicada em trinta estudantes regularmente matriculados em cursos de graduação na forma de préteste. Para validação do instrumento, foi realizado estudo transversal com 904 estudantes de graduação, incluindo cursos da área da saúde, obtendo-se o índice de Alfa Cronbach.

Resultados: Em 47% (16) dos itens houve exata similaridade entre as traduções e em 53% (18) as semelhanças prevaleceram em relação ao conteúdo, com poucas diferenças semânticas. Em relação ao

Conflict of interest: nothing to declare.

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pré-teste, a maioria dos estudantes tinha até 25 anos (60%), do sexo feminino (76,6%) e solteiros (70%), relatando adequada compreensão da versão em português, sem necessidade de alterações. A consistência interna (Alfa de Cronbach) da escala foi de 0,70.

Conclusão: O processo de tradução, adaptação transcultural e validação da escala Kogan da língua inglesa para o português do Brasil seguiu criteriosamente as etapas recomendadas na literatura. O instrumento resultante foi avaliado como compreensível e com boa consistência interna.

#### Resumen

Objetivo: Presentar la traducción, la adaptación transcultural y la validación de la Kogan's Attitude toward Older People Scale (KAOP) para el idioma portugués de Brasil.

**Métodos**: Estudio metodológico de traducción, adaptación transcultural y validación de la escala Kogan sobre actitudes hacia personas mayores. De acuerdo con las recomendaciones internacionales, la escala fue traducida por tres personas nativas brasileñas y luego se elaboró una versión única por consenso, considerando equivalencias semánticas y culturales. Después, un consultor nativo británico realizó una retrotraducción para el análisis de similitud. Se aplicó la versión final a 30 estudiantes regulares de carreras universitarias en forma de prueba piloto. Para la validación del instrumento, se realizó un estudio transversal con 904 estudiantes universitarios, que incluyó carreras del área de la salud, y se obtuvo el índice Alfa Cronbach.

Resultados: En el 47 % de los ítems (16) hubo similitud exacta entre las traducciones y en el 53 % (18) las similitudes prevalecieron con relación al contenido, con pocas diferencias semánticas. Respecto a la prueba piloto, la mayoría de los estudiantes tenía 25 años como máximo (60 %), de sexo femenino (76,6 %) y solteros (70 %), quienes relataron una comprensión adecuada de la versión en portugués, sin necesidad de modificaciones. La consistencia interna (Alfa de Cronbach) de la escala fue de 0,70.

Conclusión: El proceso de traducción, adaptación cultural y validación de la escala Kogan del inglés al portugués de Brasil siguió de forma criteriosa las etapas recomendadas en la literatura. El instrumento resultante fue evaluado como comprensible y con buena consistencia interna.

# Introduction

Issues related to the health care of the older adult have been highlighted due to population aging, especially in developing countries. (1) In this sense, a broad understanding of the continuous, gradual process of aging changes and its specificities related to illness becomes an important tool for providing quality care to this population group by health professionals. (2-4) The COVID-19 pandemic has shown a greater susceptibility of the older adult, as a result of the lack of knowledge and alignment of services for acute conditions.

The Covid-19 pandemic has shown, in addition to the prevalence of multimorbidity, a greater susceptibility of the older adult, as a result of the lack of knowledge and non-alignment of services for acute conditions, as well as restrictions on elective consultations and procedures. (5) This vulnerability may also be the result of ageism, considered to be age prejudice, negatively affecting the health of the older adult, a reality that is highly prevalent throughout the world, but more prevalent in poorer countries. (6)

Health services are important in this context, due to the need to offer appropriate gerontological services, and quality should be improved in academic training, making students aware of the various disciplines related to health at this stage of life.<sup>(7)</sup>

An integrative review study on ageism indicates that it has always been present, becoming more evident during the Covid-19 pandemic. (8) In this sense, assessing the global prevalence of age prejudice and associated factors can help to understand the magnitude of this public health problem. In addition, identifying the perceptions of students during their professional training that may have an impact on the way older people who need the service are cared for can help in the development of new policies and relevant changes to the curriculum. But how can these perceptions be identified without a good research tool? Among the instruments that investigate people's attitudes towards the older adult population, the Kogan's Attitude towards Older People Scale (KAOP), developed by Kogan (1961), (9) uses the semantic differential technique in its estimation and has two factors: positive attitude and negative attitude. However, despite its standardized use in numerous international studies, this instrument has not yet been translated in Brazil, making comparisons with the Brazilian population impossible. (10)

This study aims to present the translation, cultural adaptation and validation of the Kogan Scale on attitudes towards the older adult for the Portuguese language in Brazil among students from different areas of knowledge, including health.

# Methods

This study is a methodological investigation into the translation, cross-cultural adaptation and validation

of the Kogan scale for the Portuguese language spoken in Brazil among students from various fields of knowledge, including health. It followed the methodological guidelines proposed by Fortes & Araújo (2019), which propose a step-by-step process for the cross-cultural adaptation of instruments in the light of international recommendations, recommending seven stages: preparation, translation, reconciliation of translations, back-translation, revision, pre-testing and validation.<sup>(11)</sup>

The Kogan scale is made up of 17 pairs of "logical opposites", one of which has a negative content, N, and the other a positive content, P, for a total of 34 items, and is arranged on a six-term Likert scale, from "strongly disagree" to "strongly agree". (10) In order to facilitate the results obtained, the negative topics on the scale should be statistically inverted, with the higher the value, the more positive the attitude, and it has seven extensions: housing aspects (includes items focused on the housing of the older adult and the neighborhood); experiences stimulated by living with the older adult (tension, discomfort, contentment); individuality of the older adult (balance, variation); intergenerationality (conflicting, healthy); dependence (material and affectionate); style and cognitive abilities (wisdom, adaptation); personal appearance and personality (moods, appearance); political and economic power (influence of the older adult on society). (12)

The first stage consisted of obtaining the instrument and the respective authorization from the author of the Kogan Scale - KAOP, made available on the MedEdPORTAL website, an open-access journal indexed in MEDLINE with teaching and learning resources in the health professions, published by the Association of American Medical Colleges (AAMC).<sup>(13)</sup>

The next step was to translate the original instrument into Brazilian Portuguese. This translation was carried out independently by three Brazilian native speakers (translation 1 - T1, translation 2 - T2 and translation 3 - T3), who were proficient in English, from the areas of health, humanities and social sciences, with knowledge of the area in question. The translations took around 20 days and were carried out separately, after which a single final

version (T4) was drawn up from versions T1, T2 and T3 by consensus and approved by the review committee. The review committee took into consideration: for semantic equivalence, the preservation of the meaning of the words between the original instrument and the translated one; for idiomatic equivalence, the equivalence of colloquialisms or idiomatic expressions; for cultural equivalence, the coherence of the conference interpretation with the culture of the target population; and for conceptual equivalence, the assessment of whether the translated terms represented the same conception as the original terms.

The review committee was chosen after analyzing their CVs and was made up of four researchers from the fields of Nursing and Social Sciences, with a minimum doctorate degree, familiarity with the subject and at least three years' experience in the field, as well as knowledge of English and Portuguese.

The resulting version was then translated back into English by a hired professional, fluent in Portuguese and English, who did not have access to the original scale (version 5 - T5), which took around a week. The discrepancies found were analyzed and discussed with the review committee to obtain a final version of the back-translated scale (back-translated version - RT).

The final back-translated version was then submitted to a native British consultant, who after approximately ten days, presented his analysis of similarity, making the necessary adjustments (Final Version - TF).

A pre-test was carried out using the final translated scale with 30 students regularly enrolled in undergraduate courses. After completing the questionnaire, the students were asked to evaluate the following items: 1) possible doubts about the questions presented, 2) clarity of the instrument and 3) understanding of the statements contained therein, as well as the possibility of suggestions for improving the instrument.

The process of developing the translation, validation and cultural adaptation of the Brazilian KAOP took place between October/2022 and May/2023. In 47% (16) of the scale's items, there was exact sim-

ilarity between the translations and in 53% (18) the similarities prevailed in terms of content, with few semantic differences. For the design of the synthesis version (T5), the items were composed by adjusting the translations provided, taking into account the versions adapted in Portugal and Spain. (14,15)

For the validation stage, a cross-sectional study was carried out with 904 undergraduate students, including those in the health sector, to assess the reliability of all the items, analyzing the internal consistency of the instrument using the Cronbach's alpha index, a statistical tool that quantifies the reliability of a questionnaire on a scale of 0 to 1. Participants were recruited by convenience sampling at three public and private educational institutions in the interior of São Paulo. The study included undergraduate students in Nursing, Nutrition, Physiotherapy, Pharmacy, Biomedicine, Physical Education, Dentistry, Psychology, Administration, Law, Accountancy, Pedagogy and Social Services (Figure 1).

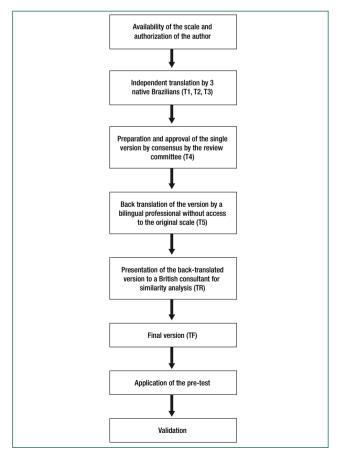


Figure 1. Flowchart of the translation stages

All ethical aspects were preserved as required by law. The project was approved by the Research Ethics Committee of the Unesp School of Medicine in Botucatu, under opinions 5.278.736 and 5.453.561 (Certificate of Presentation for Ethical Appraisal: 55762922.9.0000.5411), in accordance with Resolutions No. 510/2016 and 466/2012 - CNS. All participants in the research signed the Free and Informed Consent Form.

# Results

The understanding between the translators began with the standardization of the items, in order to ensure that sentences used more than once were used in the same way, as in the case of "elderly" for "older adult". However, the committee opted to keep "older adult" in items 6, 7, 9, 15 and 26, literally following the original, in order to better understand them. In some items, the text had to be adapted to maintain the logical content of opposition (negative/positive), such as items 13 and 14, when using "excessive power" and "insufficient power" in the translation. The back-translation (BT) showed some differences from the original, given the necessary adjustments mentioned above, without, however, showing conceptual errors or gross inconsistencies. Thus, the back-translated items reproduced the same idea as the items in the original version, and the back-translation phase was carried out to check validity and detect possible errors in the RT.

In March 2023, a pre-test was carried out using the Portuguese version with thirty students regularly enrolled in undergraduate courses in pedagogy and administration, recruited verbally from a private educational institution in a municipality in the interior of the state of São Paulo, after formal authorization from the institution. These students were chosen at random, taking into account that they were present on the day determined by the college management for the pre-test, regardless of the career they were studying. Most of the participants in the test sample were up to 25 years old (60%), female (76.6%) and single (70%). When evaluating the instrument, none of the students had any

doubts about the questions, and were positive about the clarity of the instrument and understanding of the statements. No suggestions were made in the field for this information. Therefore, no changes were necessary. This stage brought rigor and consistency to the cross-cultural adaptation process, maintaining a close link between the meaning and the construct explored (Chart 1).

In the analysis of the instrument's internal consistency, the overall Cronbach's alpha was 0.70 (95% CI 0.67 - 0.73), which was slightly higher

when the analysis was restricted to responses from health students (CA=0.74; 95% CI 0.68 - 0.74), as shown in Table 1.

# **Discussion**

This study describes the process of developing a Brazilian Portuguese version of the KAOP instrument for undergraduate students, using the translation, cross-cultural adaptation and validation of the

**Chart 1.** Kogan Scale: attitudes towards the older adult, original and translated version

Original scale	Translated version					
It would probably be better if most old people lived in residential units with people their own age.	Provavelmente seria melhor se a maioria dos idosos morasse em unidades residenciais com pessoas da sua idade.					
2. It would probably be better if most people lived in residential units with younger people.	2. Seria provavelmente melhor que a maioria os idosos vivesse em unidades residenciais tambér habitadas por pessoas mais jovens.					
3. There is something different about most people; it's hard to find out what makes them tick.	3. Há algo diferente na maioria dos idosos; é difícil descobrir o que os motiva.					
Most old people are really no different from anybody else; they're as easy to understand as younger people.	4. Na realidade, a maioria dos idosos não é diferente das outras pessoas; eles são tão fáceis de compreender como os mais jovens.					
5. Most old people get set in their ways and are unable to change.	5. A maioria dos idosos tem hábitos fixos e é incapaz de mudá-los.					
6. Most old people are capable of new adjustments when the situation demands it.	6. A maioria das pessoas idosas é capaz de se adaptar às novas situações quando necessário.					
7. Most old people would prefer to quit work as soon as pensions or their children can support them.	7.A maioria das pessoas idosas preferiria deixar o trabalho assim que a aposentadoria/pensão ou seus filhos pudessem sustentá-los					
8. Most old people would prefer to continue working just as long as they possibly can rather than be dependent on anybody.	A maioria dos idosos prefere continuar trabalhando enquanto pode, a depender de outras pessoas.					
9. Most old people tend to let their homes become shabby and unattractive.	9. A maioria das pessoas idosas tende a deixar que suas casas fiquem deterioradas e pouco atraentes.					
10. Most old people can generally be counted on to maintain a clean, attractive home.	10. A maioria dos idosos geralmente é capaz de manter uma casa limpa e agradável.					
11. It is foolish to claim that wisdom comes with age.	11. É tolice afirmar que a sabedoria vem com a idade.					
12. People grown wiser with the coming of old age.	12. As pessoas tornam-se mais sábias à medida que envelhecem.					
13. Old people have too much power in business and politics.	13. Os idosos têm poder excessivo nos negócios e na política.					
14. Old people should have power in business and politics.	14. Os idosos têm poder insuficiente nos negócios e na política.					
15. Most old people make one feel ill at ease.	15. A maioria das pessoas idosas faz com que nos sintamos pouco à vontade.					
16. Most old people are very relaxing to be with.	16. Em geral, os idosos são uma companhia muito relaxante.					
17. Most old people bore others by their insistence on talking "about the good old days".	17. A maioria dos idosos aborrece os outros pela insistência em falar "sobre os bons velhos tempos".					
18. One of the most interesting and entertaining qualities of most old people is their accounts of their past experiences.	18. Uma das qualidades mais interessantes e divertidas da maioria dos idosos são os relatos de suas experiências passadas.					
19. Most old people spend too much time prying into the affairs of others and giving unsought advice.	19. A maioria dos idosos passa muito tempo se intrometendo na vida alheia e dando conselhos não solicitados.					
20. Most old people tend to keep to themselves and give advice only when asked.	20. A maioria dos idosos tende a respeitar a privacidade dos outros e só dão conselhos quando solicitado.					
21. If old people expect to be liked, their first step is to try to get rid of their irritating faults.	21. Se os idosos esperam ser amados, o primeiro passo é tentar se livrar de seus defeitos irritantes.					
22. When you think about it, old people have the same faults as anybody else.	22. Pensando bem, os idosos têm os mesmos defeitos que qualquer outra pessoa.					
23. In order to maintain a nice residential neighborhood, it would be best if too many old people did not live in it.	23. Para manter um bairro residencial agradável, seria melhor se não morassem muitos idosos nele.					
24. You can count on finding a nice residential neighborhood when there is a sizeable number of old people living in it.	24. Você pode ter certeza de que um bairro residencial agradável existe quando há um número considerável de idosos morando nele.					
25. There are a few exceptions, but in general most old people are pretty much alike.	25. Há algumas exceções, mas em geral os idosos são muito parecidos uns com os outros.					
26. It is evident that most old people are very different from one another.	26. É evidente que as pessoas idosas são muito diferentes umas das outras.					
27. Most old people should be more concerned with their personal appearance; they're too untitdy.	27. A maioria dos idosos deveria se preocupar mais com sua aparência pessoal; eles são muito desleixados.					
28. Most old people seem quite clean and neat in their personal appearance.	28. Em geral, os idosos têm uma aparência limpa e cuidada.					
29. Most old people are irritable, grouchy, and unpleasant.	29. Na sua maioria, os idosos são irritantes, rabugentos e desagradáveis.					
30. Most old people are cheerful, agreeable, and good humored.	30. A maioria dos idosos é alegre, agradável e bem-humorada.					
31. Most old people are constantly complaining about the behavior of the younger generation.	31. A maioria dos idosos reclama constantemente do comportamento da geração mais jovem.					
32. One seldom hears old people complaining about the behavior of the younger generation.	32. Raramente se ouve os idosos reclamarem do comportamento da geração mais jovem.					
33. Most old people make excessive demands for love and reassurance than anyone else.	33. A maioria dos idosos exige muito mais amor e segurança do que qualquer outra pessoa.					
34. Most old people need no more love and reassurance than anyone else.	34. Em geral, os idosos não precisam de mais amor e segurança do que qualquer outra pessoa.					

**Table 1.** Application of the Cronbach's alpha coefficient

		CA general								CA – Health Area		
Item	mean	SD	min	max	CITC	CA-d		95%CI		CA	95	%CI
K2	3.82	1.491	1	6	0.136	0.707	0.68	0.717	0.69	0.75	0.69	0.75
K4	3.71	1.499	1	6	0.260	0.698	0.67	0.710	0.68	0.74	0.68	0.74
K6	3.77	1.809	1	7	0.344	0.691	0.66	0.706	0.67	0.74	0.67	0.74
K8	4.48	1.333	1	6	0.160	0.705	0.68	0.716	0.68	0.75	0.68	0.75
K10	4.20	1.424	1	6	0.257	0.699	0.67	0.710	0.68	0.74	0.68	0.74
K12	4.22	1.495	1	6	0.205	0.702	0.67	0.712	0.68	0.74	0.68	0.74
K14	2.89	1.389	1	6	-0.044	0.717	0.69	0.725	0.69	0.75	0.69	0.75
K16	4.54	1.249	1	6	0.371	0.692	0.66	0.701	0.67	0.73	0.67	0.73
K18	5.24	1.165	1	6	0.229	0.701	0.67	0.710	0.68	0.74	0.68	0.74
K20	3.27	1.320	1	6	0.354	0.693	0.66	0.703	0.67	0.73	0.67	0.73
K22	5.12	1.250	1	6	0.284	0.697	0.67	0.707	0.67	0.74	0.67	0.74
K24	4.22	1.501	1	6	0.214	0.702	0.67	0.711	0.68	0.74	0.68	0.74
K26	3.61	1.559	1	6	0.116	0.709	0.68	0.717	0.69	0.75	0.69	0.75
K28	4.10	1.240	1	6	0.328	0.695	0.67	0.707	0.67	0.74	0.67	0.74
K30	4.07	1.209	1	6	0.273	0.698	0.67	0.711	0.68	0.74	0.68	0.74
K32	2.43	1.326	1	6	0.147	0.706	0.68	0.715	0.68	0.74	0.68	0.74
K34	1.87	1.277	1	6	-0.035	0.716	0.69	0.724	0.69	0.75	0.69	0.75
K1P	4.80	1.266	1	6	0.165	0.704	0.68	0.715	0.68	0.74	0.68	0.74
K3P	3.72	1.449	1	6	0.157	0.705	0.68	0.714	0.68	0.74	0.68	0.74
K5P	3.14	1.498	1	6	0.177	0.704	0.68	0.714	0.68	0.74	0.68	0.74
K7P	4.19	1.436	1	6	0.151	0.706	0.68	0.715	0.68	0.74	0.68	0.74
K9P	4.80	1.307	1	6	0.287	0.697	0.67	0.707	0.67	0.74	0.67	0.74
K11P	4.00	1.729	1	6	0.185	0.704	0.68	0.714	0.68	0.74	0.68	0.74
K13P	4.10	1.398	1	6	0.027	0.713	0.69	0.720	0.69	0.75	0.69	0.75
K15P	4.69	1.375	1	6	0.344	0.693	0.66	0.704	0.67	0.73	0.67	0.73
K17P	4.57	1.439	1	6	0.339	0.693	0.66	0.703	0.67	0.73	0.67	0.73
K19P	4.12	1.430	1	6	0.437	0.687	0.66	0.698	0.66	0.73	0.66	0.73
K21P	4.99	1.348	1	6	0.312	0.695	0.67	0.705	0.67	0.74	0.67	0.74
K23P	5.52	1.059	1	6	0.303	0.698	0.67	0.708	0.68	0.74	0.68	0.74
(25P	3.19	1.402	1	6	0.124	0.707	0.68	0.717	0.69	0.75	0.69	0.75
K27P	5.04	1.210	1	6	0.321	0.696	0.67	0.706	0.67	0.74	0.67	0.74
K29P	4.83	1.278	1	6	0.407	0.690	0.66	0.702	0.67	0.73	0.67	0.73
K31P	2.67	1.344	1	6	0.202	0.702	0.67	0.713	0.68	0.74	0.68	0.74
K33P	2.47	1.441	1	6	-0.040	0.718	0.69	0.729	0.70	0.76	0.70	0.76
					CA	0.70	0.67	0.71	0.68	0.74	0.68	0.74

CITC - Corrected Item-Total Correlation; CA-d - Cronbach's alpha if the item is deleted; CA - Overall Cronbach's alpha

original language scale. Having followed the steps carefully, in accordance with the recommendations found in the literature, semantic, idiomatic, conceptual and cultural correspondence was obtained, with adequate understanding of the elements by the target population. In its application, our final version of the translated questionnaire showed good internal consistency.

A systematic review of instruments on attitudes towards the older adult and ageing identified the scarcity of measures that estimate the experiences of discrimination reported by the older adult and how the attitudes of other individuals towards this group are established.<sup>(16)</sup> The Kogan Scale has proven to

be one of the most widely used instruments worldwide, translated into countries such as Italy, Saudi Arabia, China, Spain and Turkey, among many others, proving to be an important resource, justifying its translation in Brazil. (15,17-20)

Designing research instruments is a complex process, as it requires skills and abilities about the various phenomena to be studied. The lack of official and objective research instruments for data collection has contributed to the increasing use of international tools in Brazil. On the other hand, the use of these scales allows comparisons with research in other countries, expanding the possibilities of successful interventions.

The cross-cultural adaptation of instruments is a meticulous process, involving several stages that take into account textual and technical aspects, contributing to the improvement of care for the older adult. (10) It also requires methodological rigor, the same adopted in the development of a new instrument, in order to maintain its reliability and validity. (21) The comprehensible translation of the instrument's items into the original language is not enough, and it is essential to adapt to the local individualities of the language, the cultural or working environment of the professionals who will be using the instrument (10) Cross-cultural adaptation is therefore necessary in the preparation and use of questionnaires, maintaining their validity and psychometric properties. (11)

During the forward and reverse translation phases, no difficulties were encountered in combining equivalent words from the target language, an obstacle that other researchers have encountered when translating questionnaires. This may have been due to the fact that the questionnaire dealt with people's daily lives and that the original KAOP questionnaire in English was written in simple, clear language, without idiomatic expressions or English slang. (22) These characteristics seem to have made it easier for translators without a background in the health field to understand, and the adaptation was comprehensible, with no comments about the inadequacy of any item, as demonstrated in the pre-test. A similar result was found in the study of the translation and cross-cultural adaptation of the Parental Perception on Antibiotics Scale, where the pre-test showed that the majority of respondents (97%) denied any difficulties in completing the questionnaire and that it was easy to apply and understand. (23) These results suggest that the questionnaire adapted in this study is an appropriate tool for assessing students' attitudes towards the older adult.

Although the KAOP was originally developed to be applied to nursing students<sup>(9)</sup> our study sought to expand the possibility of its use beyond the health area. Initially considered a challenge, we tried to adapt the instrument to meet the study's objective of assessing the attitudes towards the old-

er adult students in general, from as many undergraduate courses as possible, regardless of the level or career chosen. We scrupulously examined each item to see if it fell within the scope of practice of any professional and determined that no item needed to be excluded or changed. From an integrated perspective, by expanding its application, we have fulfilled the objective of enabling the curriculum to be adapted and improvements to be made to teaching in different areas in the search for change in a scenario where increased life expectancy is gaining ground in scientific productions, but the older adult population is still the victim of prejudiced attitudes in society. (24)

A Cronbach's alpha ( $\alpha$ ) value lower than 0.5 reflects unacceptable internal consistency, 0.5 <  $\alpha$  < 0.6 is poor, 0.6 <  $\alpha$  < 0.7 is questionable, 0.7 <  $\alpha$  < 0.8 is acceptable, 0.8 <  $\alpha$  < 0.9 is good and an  $\alpha$  value greater than or equal to 0.9 is considered excellent. (25) Thus, the Brazilian version of the KAOP, the result of this study, can be considered reliable in relation to the original version, since, through Cronbach's alpha, it showed an acceptable parameter (Cronbach's alpha ( $\alpha$ ) = 0.70). Results similar to the original version of the scale showed general Cronbach's alpha = 0.75, 0.76, 0.82, 0.84 and 0.89. (15-20)

In this context, the quantitative validation was fulfilled, as this is a translation of a measuring instrument. (11) The applicability of all the items in the instrument shows the validity of the content, making the scale acceptable and applicable to Brazilian culture and practice.

An integrative review on the validation of instruments in nursing found that these studies are widely used in various areas of knowledge, both in national and international literature. The Latin American panorama of productions on attitudes towards the older adult helped to highlight the gaps in the literature on issues related to attitudes towards the older adult, as well as the need to expand new research and instruments aimed at this area of knowledge, highlighting the relevance of the contributions of this study.

The KAOP, developed to measure attitudes towards the older adult, was built on the prem-

ise that this minority population suffers from age prejudice. The paradigm of stereotyped characteristics must be tackled by understanding its origin and, therefore, expanding the application of this instrument to nursing students, other health careers, as well as other groups of undergraduates, will be important for the implementation of public policies and improvements in university curricula.

Among the obstacles to completing this research was the end of the COVID-19 pandemic, which prevented us from organizing face-to-face meetings with the translators. However, virtual meetings provided by digital platforms made it possible to successfully complete the study.

# **Conclusion** =

The study resulted in a Portuguese version of the Kogan Scale on Attitudes towards the Older adult, duly translated and adapted for the Brazilian context, which was considered clear and comprehensible. According to the review committee, the Brazilian version of the scale maintained its semantic, idiomatic, cultural and conceptual equivalence. In addition, the validation made it possible to verify its significant reliability and that it can be applied among students from different areas of knowledge, including health. Kogan's scale in Brazilian Portuguese makes an important contribution to the current educational context as it is specific for assessing attitudes towards the older adult and ageing, since, as an instrument equivalent to the original, national research can compare data with international studies.

# **Collaboration**

Perez FCS, Colichi RMB, Urrutia VG, Figueroa AJ, Alves RC and Lima SAM contributed to the study design, data analysis and interpretation, writing the article, relevant critical review of the intellectual content and approval of the final version to be published.

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