TRANSLATION AND CROSS-CULTURAL ADAPTATION OF RESILIENCE AT WORK SCALE INTO BRAZILIAN PORTUGUESE

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ABSTRACT

Objective: to translate and cross-culturally adapt the Resilience at Work Scale for the Brazilian context.

Method: Methodological study comprising the stages of conceptual, item, semantic, and operational equivalences. Resilience at Work Scale is composed of 25 items (long version) and 20 items (short version), rated on a seven-point Likert scale. A test-retest was applied to a sample of 45 educators and health workers. Quadratic weighted Kappa and intraclass correlation were used.

Result: The adaptation of the 25 items followed the phases of translation, back translation, external assessment, expert committee, pre-tests, test-retest reliability, and equivalence between the original and adapted versions. Two items initially showed less than 90% comprehensibility, but satisfactory results were obtained in a new pre-test after adjustments. The overall Intraclass correlation coefficient was 0.83.

Conclusion: The final version of the Resilience at Work Scale 25-Brasil was properly adapted to the Brazilian culture to measure resilience at work. It is an Emancipatory Technology as it enables the implementation of knowledge that contributes to thinking, reflecting, and acting in the face of the individual or collective health-disease continuum.

DESCRIPTORS: Resilience, psychological. Occupational health. Work. Translation. Surveys and questionnaires. Validation study.

TRADUÇÃO E ADAPTAÇÃO TRANSCULTURAL DA *RESILIENCE AT WORK SCALE* PARA O PORTUGUÊS DO BRASIL

RESUMO

Objetivo: realizar a tradução e adaptação transcultural da *Resilience at Work Scale* para o contexto brasileiro.
Método: estudo metodológico, em que foram executadas as etapas da equivalência conceitual, de itens, semântica e operacional. A *Resilience at Work Scale* é uma escala *Likert* de sete pontos, composta por 25 itens em sua versão longa e 20 itens na versão curta. O teste-reteste foi aplicado a uma amostra de 45 docentes e trabalhadores da saúde. Para esta avaliação, utilizou-se o coeficiente *Kappa* ponderado com ponderação quadrática, e correlação intraclasse.
Resultados: a adaptação dos 25 itens da *Resilience at Work Scale* pautou-se nas fases tradução, retrotradução, avaliação externa, comitê de especialistas, pré-testes e confiabilidade teste-reteste, verificando as equivalências entre o instrumento original e o adaptado. Dois itens, inicialmente, apresentaram clareza inferior a 90%. Eles foram reajustados e novo pré-teste indicou resultado satisfatório. O coeficiente de correlação intraclasse geral da *Resilience at Work Scale* foi de 0,83.
Conclusão: a versão final da *Resilience at Work Scale* 25 – Brasil mostrou-se promissora e com adaptação adequada à cultura brasileira para mensuração da resiliência no trabalho. Trata-se de uma Tecnologia Emancipatória, pois possibilita concretizar conhecimentos que contribuem quanto ao pensar, ao refletir e ao agir diante de um processo de saúde/doença, seja individual ou coletivo.

DESCRITORES: Resiliência psicológica. Saúde do trabalhador. Trabalho. Tradução. Inquéritos e Questionários. Estudos de Validação.

TRADUCCIÓN Y ADAPTACIÓN TRANSCULTURAL DE *RESILIENCE AT WORK SCALE* PARA EL PORTUGUÉS DE BRASIL

RESUMEN

Objetivo: realizar la traducción y adaptación transcultural de la *Resilience at Work Scale* para el contexto brasileño.
Método: estudio metodológico, en el cual fueron realizadas las etapas de equivalencia conceptual, de ítems, de semántica y operacional. La *Resilience at Work Scale* es una escala Likert de siete puntos, compuesta por 25 ítems en su versión larga y 20 ítems en la versión corta. El test-retest fue aplicado a una muestra de 45 docentes y trabajadores de la salud. Para esta evaluación, se utilizó el coeficiente Kappa ponderado con ponderación cuadrática y correlación intraclase.
Resultados: la adaptación de los 25 ítems de la RAW siguió las fases de traducción, retrotraducción, evaluación externa, comité de especialistas, pre-pruebas y confiabilidad test-retest, verificando las equivalencias entre el instrumento original y el adaptado. Inicialmente, dos ítems presentaron clareza inferior a 90%. Ellos fueron reajustados y un nuevo pretest indicó un resultado satisfactorio. El coeficiente de correlación intraclase general de la RAW fue de 0,83.
Conclusión: la versión final de la *Resilience at Work Scale* 25–Brasil se mostró promisora y con adaptación adecuada a la cultura brasileña para medir la resiliencia en el trabajo. Se trata de una Tecnología Emancipadora, ya que posibilita concretizar conocimientos que contribuye en lo que se refiere a pensar, reflexionar y actuar delante de un proceso de salud/enfermedad, sea este individual o colectivo.

DESCRIPTORES: Resilience psicológica. Salud laboral. Trabajo. Traducción. Encuestas y cuestionarios. Estudio de validación.

INTRODUCTION

The contemporary world of work is fast-paced, digitalized, and interdependent. It is loaded with demands, and the need to solve complex situations, and one must remain necessary in a constantly changing market. Such a world is also described as volatile, uncertain, complex, and ambiguous. As workers must be prepared to face such demands[1], some competencies are required, such as self-management, being able to use differentiated resources to face conflicting or difficult situations, and the ability to propose creative solutions and to cope with the tension, pressure and ruptures inherent to this environment, in addition to cognitive reappraisal to increase resilience[2].

Personal resilience in the workplace concerns one's ability to manage challenges at work, whether dealing with uncertainty arising from a higher workload at an emotional, physical, or psychological level or adapting and learning from it to prepare for future challenges proactively[1].

Some instruments were developed to measure overall resilience[3–5]. However, Australian researchers developed the Resilience at Work (RAW)[6] scale, an easy-to-apply instrument used to assess personal resilience in the workplace. It also helps to identify resilience elements that can be modified based on the acquisition of skills and training[6].

The RAW scale was recently published in English and has been used in Australia, the United States of America, and Sri Lanka[7]. Although this scale was adapted to other contexts, studies addressing this instrument in Brazil are incipient. Using theoretical-methodological instruments, in this case, Resilience at Work, allows for identifying aspects that favor workers' health and support coping with work-related stressors.

Furthermore, RAW is considered Interpretive Consumer Situation Technology, as it has the potential to identify problems inherent to the health of individuals. This typology of technology comprises the so-called Emancipatory Technologies, as it actualizes knowledge, which, when technically associated with determined purposes, favors thinking, reflecting, and acting in the face of individual or collective health/disease continuum. Applied to this theoretical-conceptual model, RAW supports critical awareness and individual self-management to experience freedom, autonomy, integrity, and aesthetics. These aspects converge towards a search for quality of life so that individuals can achieve self-realization[8].

Given the previous discussion, this study aims to translate and cross-culturally adapt the Resilience at Work Scale (RAW) scale to the Brazilian context.

METHOD

This methodological study was performed between October 2017 and April 2018. The cross-cultural adaptation adopted the Universalist perspective (conceptual, semantic, operational, and item equivalences)[9–11], including an initial analysis of the items, translation, back-translation, external assessment, expert committee assessment, and pre-test[11–13].

First we emailed the authors of the original RAW scale, asking for their consent to culturally adapt it into Brazilian Portuguese. They consented to it free of charge, provided it was used for academic purposes. RAW has 25 items (extended version) and 20 items (short version) rated on a seven-point Likert scale ranging from Strongly Disagree = 0 to Strongly Agree = 6. The items in both versions are distributed in seven domains (Chart 1): Living authentically, Finding your calling, Maintaining perspective, Managing stress, Interacting Cooperatively, Staying Healthy, and Building Networks[1,9].

All domains are interrelated and equally important for overall resilience. Each can be improved through self-awareness of current effectiveness, followed by specific strategies[1,9]. Workers can move through all of them, and limitations in one area may be compensated for in others[1,9].

Figure 1 shows a diagram of the RAW Scale 25 – Brazil's transcultural adaptation process covering conceptual, item, semantic, and operational equivalences.

For the conceptual and item equivalence, an expanded literature review was performed in Brazilian and international databases to include concepts and instruments measuring resilience at work. Additionally, occupational health and psychometrics experts were consulted to support the RAW Scale's transcultural adaptation process.

The first phase was intended to obtain semantic equivalence and involved the translation (T) of the instrument from English into Brazilian Portuguese. Two bilingual Portuguese native speakers proficient in English independently translated the instrument. They were instructed to emphasize the terms' semantic equivalence instead of their literal translation. Furthermore, the translators were asked to assign grades (between 0 – no difficulty and 10 – maximum difficulty) to describe the difficulty level in translating each item. A meeting was held between the researchers and translators to analyze both versions (T-1 and T-2) and obtain a reconciled version (T-12) that was later back-translated.

Chart 1 – Domains of the Resilience at Work Scale and its respective concepts. Brazil, 2018.

| Domain	Concept
a) Living Authentically – *Vivendo Autenticamente* (four itens):	It concerns knowing and maintaining personal values, implementing personal strengths, and a good level of emotional awareness and regulation. Emotional regulation is related to the ability to manage mood and emotional responses under pressure.
b) Finding your calling – *Encontrando sua vocação* (four itens)	Seeking for a job that has a purpose, a sense of belonging, and fits one's core values and beliefs. It shows that individuals are more resilient when one's work gives meaning beyond daily tasks and where organizational values are congruent with personal beliefs.
c) Maintainning perspective – *Mantendo o equilíbrio* (four itens):	It concerns the ability to overcome setbacks, stay focused on solving problems, and manage negative aspects. Interpreting events, especially adverse ones, is central to resilient thinking.
d) Managing stress – *Administrando o estresse* (four itens):	It means employing work and life routines that help control/minimize daily stress, balance professional life, and ensure resting time. It also involves ensuring adequate time for relaxation and establishing limits and routines that ensure that work demands do not compromise one's home life.
e) Interacting Cooperatively – *Interagindo Cooperativamente* (three itens):	Seeking feedback, advice, and support. Resilience involves anticipating and preparing for future obstacles and positive coping. Workers who ask for performance feedback can change it in the appropriate direction.
f) Staying Healthy – *Mantendo-se saudável* (three itens):	Maintaining a good level of physical strength and eating a healthy diet is essential for maintaining focus and resistance, even in work that is not physically demanding.
g) Building Networks – *Construindo redes* (three itens):	Developing and maintaining personal support networks. Large (professional) support networks are considered a means of professional development and career progression. Resilience involves developing a support network in all areas of life, both at work and home.
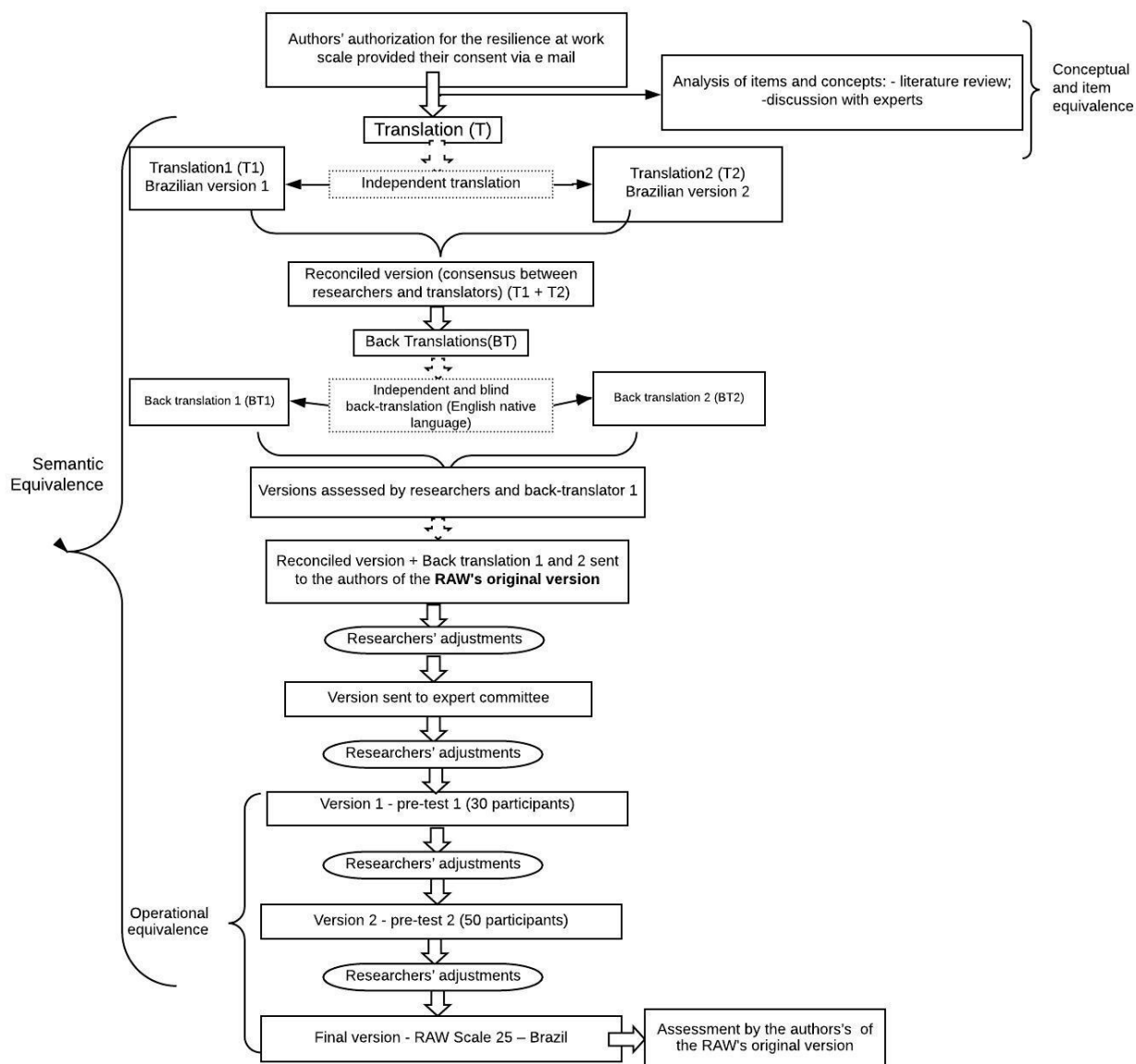
Figure 1 – Summary of the transcultural adaptation process – RAW 25-Brazil.

The second phase involved two independent translators unaware of the original scale to back translate (BT) the Brazilian version into its source language (English). The criteria for selecting the translators in this stage were being English native speakers, proficient in Portuguese, and preferably having a background in the health field. Hence, two English-language versions of the T-12 Brazilian version (BT-1 and BT-2) were obtained.

In the third phase, the reconciled translated version (T-12) and both back translations (BT-1 and BT-2) were sent to the authors of the original RAW scale. They provided suggestions, which were implemented, resulting in the instrument's first Brazilian version.

The fourth phase involved organizing a form containing RAW's original version and its version in Portuguese, which was sent to an expert committee. This committee analyzed the translated instrument's semantic, idiomatic, cultural, and conceptual equivalences. The experts were asked to indicate in the form whether the Brazilian version of each item was equivalent, not equivalent, or

impossible to evaluate; they could also add comments if needed. The committee's members were intentionally invited to include professionals experienced with resilience and occupational health and cross-cultural adaptation studies. Eleven experts from all Brazilian regions were invited; however, only four replied: three were from the South, and one was from the Midwest. All their suggestions were noted, organized, and taken into consideration.

Finally, a preliminary Brazilian version of the RAW Scale was obtained for the pre-test phase. The pre-test aimed to assess the items' comprehensibility level. Hence, 30 professionals were invited (e.g., educators from technical and undergraduate programs and health workers). The participants chose one of three options for each translated item: Very clear, Partially clear, or Unclear. The participants were asked to explain the item's lack of clarity and suggest new redaction, paraphrasing it whenever they considered an item partially clear or unclear; all items with less than 90% comprehensibility were reviewed and adjusted[12–13]. Thus, a new version was obtained and subjected to another round of pre-testing. Fifty professionals (e.g., educators and health professionals) participated in the second pre-test, and the version obtained after the pre-tests and adjustments, called RAW Scale 25 – Brazil, was sent to the authors of the original instrument, who approved it.

Operational equivalence, which concerns the relevance of the items' format, survey method, and response options, was assessed during the pre-tests. The participants were asked whether the instrument's layout was suitable for a self-administered questionnaire, which also addressed apparent validity.

The test-retest reliability (temporal stability) of RAW Scale – Brazil was performed with 45 participants, and an interval of seven to 14 days between the test and retest was considered. A convenience sample was adopted; i.e., when the participants were invited for the test, they were also invited for the retest, and the day for the retest was scheduled with those who consented. Quadratic weighted Kappa (κw) and intraclass correlation were used in this assessment, allowing for equivalent interpretation between both. The criteria for agreement were: a) almost perfect: 0.80 to 1.00; b) considerable: 0.60 to 0.80; c) moderate: 0.40 to 0.60; d) minor: 0.20 to 0.40; d) poor: 0 to 0.20; e) very poor: -1.00 to 0[14]; 95% confidence intervals were also estimated.

This study followed Resolution 466/2012, which establishes guidelines for research involving human subjects. The institutional Review Board approved the study, and the authors of the original RAW Scale[6] provided their consent. Additionally, the participants were included in the study after voluntarily signing free and informed consent forms.

RESULTS

The RAW Scale's culturally adapted version was named in Portuguese *Escala de Resiliência no Trabalho* (RAW Scale 25 – Brazil). Adjustments in the items' translation/back-translation considered the suggestions provided by the experts, the original scale's authors, educators and health professionals, intending to improve the instrument's comprehensibility and understanding in its target population.

Two bilingual Portuguese native speakers independently translated the scale to obtain semantic equivalence. One of the translators is Brazilian, currently lives in Australia, has a degree in Literature and a Ph.D. in Linguistics, and the other is Brazilian and holds a Ph.D. in Nursing with a doctoral internship in Canada.

The terms identified as the most difficult to translate were "afraid," "strengths," "feedback," "believe," "its well," "overshadow," "sense of purpose in life," and "reliable." Aspects concerning semantics were discussed during the meeting with the translators to ensure the items' correct meanings. The items in which agreement was the most difficult to achieve by researchers and translators were 5,9,14,15,18,19, and 23.

Two native English speakers, proficient in Portuguese, back-translated the reconciled version. One of the translators has a degree in applied biology from the United Kingdom and currently works in Brazil translating scientific nursing papers; the other is a professor, holds a Ph.D., and currently lives in the United States of America. After obtaining the back-translations, the material was organized for external evaluation, containing the original version, the reconciled version of the translations (T-12), back-translation 1 (RT-1) and back-translation 2 (RT-2), which was then sent to the authors of the original scale.

The original scale's authors asked to review the translation of the "Maintaining perspective" domain, which had been translated as "Mantendo o foco" [Maintaining focus]. The reason is that "focus" does not have the same meaning as "perspective," which would be more related to "balance." Therefore, the translation of this domain was replaced with "Mantendo o equilíbrio" [Maintaining balance] to ensure conceptual and semantic equivalence.

In item 1, "Hold fast" and "Work life" was considered to be better translated as "Manter" [Maintain] or "Preservar" [Preserve] and "vida de trabalho" [work life] or "vida laboral" [labor life], respectively. In item 5, the authors noted that "sense of purpose" is related to "meaningful."

In item 7, the authors noted that "perfectly" would be too strong and intense for the item's purpose. Hence, the translation was adapted to "se ajusta apropriadamente" [adjusts appropriately]. Item 9 required a review, as it did not meet the intended meaning. Therefore, the term "overshadow" was corrected to mean "adversely" or "negatively." In item 12, the term "focus" meant "concentrate" instead of simply "seek."

After this step, a preliminary Brazilian version was obtained and submitted to an expert committee whose members were experienced with resilience or occupational health, proficient in Portuguese and English, and knowledgeable in the cross-cultural adaptation of instruments. The committee made suggestions regarding semantic, idiomatic, cultural, and conceptual equivalences and also suggested assessing some terms during the pre-test, observing how the participants would react to some of the words. For example, they noted items 16 – "Eu tenho o cuidado de assegurar que meu trabalho não 'tome conta' da minha vida pessoal" [I am careful to ensure my work does not dominate my personal life] and 17 – "Eu frequentemente solicito '*feedback*', para que eu possa melhorar o meu desempenho no trabalho" [I often ask for feedback so that I can improve my work performance]. The other items, which we waited for the participants' perceptions of, were 4,5,14,18,19, and 22. Thus, version 1 of the RAW Scale 25 – Brazil was obtained and pre-tested.

In the pre-test, items 1 – "Eu tenho valores fundamentais, os quais mantenho na minha vida laboral" [I have important core values that I hold fast to in my work-life] and 8 – "Geralmente gosto do que tenho em meu ambiente de trabalho" [Generally I appreciate what I have in my work environment] obtained less than 90% comprehensibility (86.6% and 83.3%, respectively). Hence, adjustments were implemented after pre-test 1 to ensure the target population would understand the instrument better. Note, however, that even though the previous items did not obtain the recommended 90% comprehensibility level, the participants' suggestions provided in pre-test 1 could not be implemented: the participants asked in item 1 what "fundamental values" were and a participant asked to explain "work environment" in item 8.

In pre-test 2, items 1 and 8 obtained a higher level of comprehensibility (92%, 88% respectively). At the end of pre-test 2, the versions (pre-test 1 and pre-test 2) were sent to the authors of the original scale, who authorized its use. The original version and the final adapted version are presented in Chart 2.

As for reproducibility estimates, the RAW Scale-Brazil presented similar means in the test and retest. Quadratic weighted Kappa (kw) ranged from 0.31 to 0.79 (items 1 and 6, respectively), and intraclass correlation coefficient (ICC) ranged from 0.31 to 0.80 (items 1 and 6, respectively).

Chart 2 – Original version and Final version of the 25-item RAW *Scale*, culturally adapted to Brazilian Portuguese. Brazil, 2018.

	Original version – English		Final version – Portuguese Resilience at Work Scale (RAW)*
	Living authentically		**Vivendo autenticamente**
1	I have important core values that I hold fast to in my work-life.	1	Eu tenho valores fundamentais, os quais mantenho na minha vida laboral.
2	I know my personal strengths and make sure I use them regularly in my work.	2	Eu conheço meus pontos fortes e me asseguro de usá-los regularmente no meu trabalho.
3	I am able to change my mood at work when I need to.	3	Eu sou capaz de mudar meu humor no trabalho quando necessário.
4	I know myself and my feelings honestly and realistically.	4	Eu conheço a mim mesmo(a) e meus sentimentos de forma verdadeira e realista.
	Finding your calling		**Encontrando sua vocação**
5	The work that I do helps to fulfil my sense of purpose in life.	5	O trabalho que eu faço ajuda a dar sentido à minha vida.
6	My workplace is somewhere where I feel that I belong.	6	O meu local de trabalho é um lugar ao qual eu sinto que pertenço.
7	The work that I do fits well with my personal values and beliefs.	7	O trabalho que eu faço se ajusta bem aos meus valores e crenças pessoais.
8	Generally I appreciate what I have in my work environment.	8	Geralmente gosto do que tenho em meu ambiente de trabalho.
	Maintaining perspective		**Mantendo o equilíbrio**
9	When things go wrong at work, it usually tends to overshadow the other parts of my life *(Recode – reverse scored)*.	9	Quando as coisas dão errado no trabalho, isso geralmente tende a afetar de forma negativa os outros aspectos da minha vida. (R)[†]
10	Nothing at work ever really 'fazes me' for long.	10	Nada no trabalho me incomoda por muito tempo.
11	Negative people at work tend to pull me down *(Recode – reverse scored)*[†].	11	Pessoas negativas no trabalho tendem a me colocar para baixo. (R)[†]
12	When problems arise at work I focus on finding a solution rather than just worrying about them.	12	Quando surgem problemas no trabalho eu me concentro em encontrar uma solução ao invés de simplesmente me preocupar com eles.
	Managing stress		**Administrando o estresse**
13	I make sure I take breaks to maintain my strength and energy when I'm working hard.	13	Eu me asseguro de fazer intervalos para manter minha força e energia quando estou trabalhando de forma intensa.
14	I have developed some reliable ways to relax when I'm under pressure at work.	14	Eu desenvolvi algumas estratégias para relaxar quando estou sob pressão no trabalho.
15	I have developed some reliable ways to deal with the stress of challenging events at work.	15	Eu desenvolvi algumas estratégias para lidar com o estresse de situações desafiadoras no trabalho.
16	I am careful to ensure my work does not dominate my personal life.	16	Eu tenho o cuidado de garantir que meu trabalho não "tome conta" da minha vida pessoal.

Chart 2 – Cont.

	Versão original inglês		Versão final português da Resilience at Work Scale (RAW)*
	Interacting Cooperatively		**Interagindo cooperativamente**
17	I often ask for feedback so that I can improve my work performance.	17	Eu frequentemente solicito *feedback* (retorno), para que eu possa melhorar o meu desempenho no trabalho.
18	I believe in giving help to my work colleagues, as well as asking for it.	18	Eu acredito na importância de oferecer e solicitar ajuda dos meus colegas de trabalho.
19	I'm not afraid to seek advice and support if and when I need help with my work.	19	Se eu precisar de ajuda com o meu trabalho, não hesito em pedir conselhos e apoio.
	Staying healthy		**Mantendo-se saudável**
20	I have a good level of physical fitness.	20	Eu tenho boa resistência física.
21	I am careful about eating well and healthily.	21	Eu tenho o cuidado de comer bem e de forma saudável.
22	Keeping physically fit helps me cope with the demands of my work.	22	Me manter fisicamente saudável me ajuda a lidar com as demandas do trabalho.
	Building networks		**Construindo redes**
23	I have friends at work I can rely on to support me when I need it.	23	Eu tenho amigos no trabalho com quem posso contar quando preciso de ajuda.
24	I have a strong and reliable network of supportive colleagues at work.	24	Eu tenho uma rede forte e confiável de colegas que me dão apoio no trabalho.
25	My personal support network is important to my coping at work.	25	A minha rede de apoio pessoal é importante para o meu enfrentamento no trabalho.
	Options of responses		**Opções de resposta dos itens**
	(0) Strongly Disagree (1) Disagree (2) Some what Disagree (3) Neither Agree nor Disagree (4) Somewhat Agree (5) Agree (6) Strongly Agree		(0) Discordo Totalmente (1) Discordo (2) Discordo um pouco (3) Nem concordo nem discordo (4) Concordo um pouco (5) Concordo (6) Concordo Totalmente

Note: *The scale was originally developed by Winwood et al., 2013. Itens 4,12,19,22, and 25 were excluded from the 20-item RAW *Scale* Brazil. †Items 9 and 11 are reverse-coded.

DISCUSSION

This study aimed to translate and culturally adapt RAW, a scale assessing resilience at work. RAW's Brazilian version showed good acceptance among Health and Applied Linguistics experts. The expert committee identified and corrected issues in the translated version, ensuring the semantic, idiomatic, conceptual, and cultural equivalences of the adapted instrument, helping to improve data obtained in the pre-test phase. A face-to-face pre-test was implemented to culturally adapt the scale.

The following studies using RAW were published thus far: a theoretical study[7], a scale development study[6], literature reviews[15–16], an adaptation of the scale to be used with students[17], controlled and randomized clinical studies to evaluate the impact of a resilience program,[18] and psychometric assessment addressing Indian workers[19], and a psychometric study was performed with public servants and non-governmental organizations[20]. The original English version was used in all these studies. In Brazil, there is a psychometric evaluation study of this scale's Brazilian version among educators and health workers[21]. However, no studies were found adapting this instrument to other cultures and languages, which partially restricts discussions. Comparisons of results obtained abroad for the same instrument require valid cross-cultural adaptations, i.e., equivalence between the original version and versions adapted for other cultures[11]. There is growing literature on how to improve the quality of cross-cultural adaptations and assess the equivalence of instruments in different languages. Like developing a new instrument, a cross-cultural adaptation requires methodological rigor to ensure reliability and validity[22–23].

The items that demanded the most significant changes to ensure conceptual, idiomatic, and semantic equivalences were 1,5,7,9, and 12, while those considered the most difficult to adapt were items 3 and 8. Item 3 concerned difficulty understanding mood changes at work, while item 8 raised doubts among the participants for not specifying "work environment." In terms of semantics, these two items were the most difficult for the respondents to understand; however, changes could not be implemented because they would alter these items' structure and content.

Regarding comprehension of items, at least 90% comprehensibility/understanding is recommended[12–13]. The RAW Scale 25 – Brazil's final version obtained 90% or higher levels of comprehensibility in all items, except item 8, due to previously mentioned reasons.

As for test-retest reliability, the intuitive method can be used to assess the consistency of scores over time[24]. Quadratic weighted Kappa (kw) ranged from 0.31 to 0.79, and intraclass correlation coefficient (ICC) ranged from 0.31 to 0.80, indicating moderate to substantial reliability.

Two factors influence the stability of information: the participants remembering the answers they provided in the test, possibly overestimating the estimates, and actual changes occurring in the participants' conditions during the interval, which would underestimate the results[24]. In this study, a period of seven to 14 days between the test and retest was considered. Such a period is deemed appropriate, neither too short nor too long[25]. The number of response options may be a complicating factor for respondents. Note that the RAW Scale-Brazil maintained the same response options as the original version, ranging from completely disagree (0) to completely agree (6), possibly explaining the results; i.e., the more options one has, the more doubts may arise.

The findings regarding consistency confirm the version's quality, as an instrument that proves reliable in repeated measurement processes corroborates its operational potential for use in population studies[12]. Note that other studies assessing RAW's psychometric properties did not adopt test-retest reliability[6,19], hindering comparisons.

External assessment (e.g., by an expert committee and authors of the original scale) is essential in a cross-cultural adaptation process, as it ensures that the adapted instrument holds the original version's intended meaning. The difficulties encountered in obtaining feedback via e-mail and

composing the experts committee are also highlighted. Since cross-cultural adaptation is a complex and continuous process, this is the first version of RAW adapted to Brazilian Portuguese. Hence, future studies are needed to address different professions and Brazilian regions, smoothing out rough edges and polishing this version to be used in the Brazilian context, especially considering the items previously mentioned.

Furthermore, this instrument can support interventions to promote resilience, bearing in mind that resilience is an ability that can be developed over time with the relationships established between people and the environment[15]. In this sense, it is worth highlighting an important aspect of the RAW Scale concerning its use in clinical practice among workers, favoring the organization of strategies to promote resilience.

From the perspective of cross-cultural adaptation, RAW Scale 25-Brazil can serve as a measurement tool for academic purposes and for identifying behaviors workers can develop and managers can encourage. Therefore, this instrument offers the possibility of investing in specific components of resilience in the work environment by promoting resilience at work. Moreover, it has the potential to minimize the harmful effects of stress and support occupational health in general.

In addition to the discussion presented here, it is worth considering and reinforcing that RAW Scale Brazil is also an important emancipatory technological tool.[7] Its use will enable the identification of resilience at work, an aspect directly related to occupational health. Once identified, actions can be implemented and enhanced to favor workers' health, enabling them to reflect, develop critical thinking, and take action in the face of occupational adversities.

This study followed appropriate guidelines for the cross-cultural adaptation of measurement instruments. However, there is a limitation concerning the fact that it was validated among health workers and educators only, which restricts comparisons. Additionally, no separate analyses according to subgroups were performed.

CONCLUSION

The final version of the RAW Scale 25 – Brazil showed its potential to play an essential role in assessing resilience at work among health workers and educators in the Brazilian context. It will enable comparisons with studies performed in other sociocultural and language contexts. RAW Scale 25 is an Emancipatory Technology, as it enables implementing knowledge that contributes to thinking, reflecting, and acting in the face of individual or collective health/disease continuum. Additionally, this instrument can be self-administered or administered through interviews.

Finally, authorization to use RAW Scale 25 – Brazil must be requested from the authors of the original version at workingwithresilience.com.au or through email contact@workingwithresilience.com.au, or from the cross-cultural adaptation's author, via email: pbtoscani@furg.br.

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NOTES

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CONFLICT OF INTEREST

There is no conflict of interest.

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