

Recovery Experience Questionnaire: validity evidence of the Brazilian-Portuguese version

Questionário de Experiência de Restauo:
evidências de validade da versão em português brasileiro

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Abstract *The aim is to present validity evidence of the Brazilian-Portuguese Recovery Experience Questionnaire (REQ-PB) by applying a procedure to decentering cross-cultural scales translation and adaptation. First, we had a phase with bilingual experts, which assessed different criteria of translation quality. In sequence, we conducted the replication of the original research to achieve validity indicators in the Brazilian context. We carried out both Confirmatory Factor Analysis (to find structural validity indicators) and correlations with various external variables (to find convergent validity indicators). Step 1 showed promising results of decentering translation. In step 2 participated 164 workers and the CFA confirmed the four-factor model: psychological detachment from work, relaxation, mastery experience, and control over leisure time. The convergent validity showed a significant correlation with external variables. The REQ-PB showed adequate psychometric properties and may explain and compare empirical evidence of the recovery topic. We concluded that we have a good quality scale to be used in future research and integrated with other constructs to support interventions.*

Key words *Validity and reliability, Scale, Survey, Workload recovery, Recovery experience*

Resumo *O objetivo é apresentar evidências da validade do Questionário de Experiência de Restauo em português brasileiro (REQ-PB) por meio da aplicação de um procedimento de descentralização para tradução e adaptação de escalas transculturais. Inicialmente, tivemos uma fase com especialistas bilíngues que avaliaram a qualidade da tradução utilizando diferentes critérios. Na sequência, realizamos a replicação da pesquisa original para alcançar os indicadores de validade no contexto brasileiro. Efetuamos tanto a análise fatorial confirmatória (para encontrar indicadores de validade estrutural) quanto correlações com variáveis externas (para encontrar indicadores de validade convergentes). O passo 1 mostrou resultados promissores na tradução descentralizada. No passo 2, participaram 164 trabalhadores e a análise fatorial confirmatória confirmou o modelo de quatro fatores: distanciamento psicológico do trabalho, relaxamento, experiência de domínio e controle do tempo livre. A validade convergente mostrou uma correlação significativa com variáveis externas. O REQ-PB mostrou propriedades psicométricas adequadas capazes de explicar e comparar evidências empíricas do tópico de restauo. Em resumo, a escala pode ser utilizada em pesquisas futuras e integrada a outros construtos para orientar intervenções.*

Palavras-chave *Validade e confiabilidade, Escala, Levantamento, Recuperação da carga de trabalho, Experiência de restauo*

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The repeated insufficient recovery experiences invoke accumulated overload and fatigue, leading to health deterioration¹. Need for recovery scale and work-related recovery opportunities were developed^{1,2} and showed relation to insomnia, burnout, stress, and depression^{3,4}. Nevertheless, to maintain the necessary level of health, it is essential to experience recovery from the psychological sense^{5,6}. The recovery process occurs each day after work, and these experiences are considered a mediator between work characteristics and health outcomes^{1,7}.

Recovery has different definitions, such as repairing or recovering something damaged, re-establishing, recomposing, reinvigorating, and giving new strength. For Sonnentag and Fritz⁵, the recovery experience is understood as opposed to illness; it is an attempt to restore and improve a system that is sick or on the way to sickness. In this sense, it can be observed that the recovery experience is something procedural, i.e., a continuum⁵. According to Sonnentag⁸, recovery can occur at the end of working hours and weekends and may be more critical in maintaining and protecting well-being than during holiday periods⁸.

Recovery is the process by which an individual's functioning returns to its natural level, and work-related stresses are reduced⁹. It can be seen as a concept borrowed from the healthcare field, where research on post-surgery recovery strategies is common^{10,11}. More recently, recovery experiences have gained prominence in research on the mental health of professionals working on the front lines with COVID-19^{12,13}. Recovery moments are essential to everyday life as they prepare people for new challenges while also preventing fatigue, which can cause serious health problems at high levels¹. In practice, recovery occurs when we rest and perform physical activity or sleep¹⁴.

Recovery, then, includes experiences whereby individuals temporarily feel relieved from work tasks and can be discerned off-the-job (e.g. vacation, leisure time) or recovery time on-the-job (e.g. rest breaks)². For the recovery experience to occur, it is necessary to withdraw from activities that require the same internal resources used during the work period, allowing workers to recuperate from work tasks reducing overload². Thus, for example, for his/her recovery activity, an individual who needs attention at work is preferred that he/she does not need this same effort (i.e., attention in this case).

According to individual possibilities and preferences, there are different paths to recovery,

as strategies vary from person and environment. These strategies are related to people's activities to "unburden" themselves from issues related to their jobs^{15,16}. Some studies describe that activities vary, which is implied by the fact that individuals use different recovery practices and have different job opportunities to do so. Thus, more than the effectiveness of a particular activity, it is crucial to describe the experience one has from that activity. However, although the activities are distinct, the effects are similar; that is, the underlying idea of recovery is the psychological processes developed from the strategies performed^{5,17-19}.

Specific activities do not form recovery experiences, nor is there a script to be followed. What makes them restorative are the inherent attributes of these activities, i.e., what may be a recovery experience for some may be normal for others. This point is the limitation found in the occupational health literature where recovery experience is described in terms of activity rather than how the individual experiences it. Sonnentag and Fritz in 2007 proposed a model describing four types of recovery experiences. These underlying processes are Psychological Detachment, Relaxation, Mastery and Control.

Psychological Detachment is the ability of the subject to mentally detach from the work and not dwell on the problems i.e., it does not only involve physical detachment from the workplace but all issues related to it. In these circumstances, the subject is out of contact with everything negative related to work. When there is no such distancing, the thoughts associated with it continue to demand resources, which increases the chance of feeling fatigue²⁰. Examples of activities could include seeing films, going out for a drink²¹.

Relaxation is characterised by moments of leisure that provide positive feelings, leading to a state of low activation. There is an attenuation of sympathetic activation, muscle tension, and heart rate²⁰. Examples could include yoga, meditation²²⁻²⁴.

The activities performed outside the work environment, which provide challenges and learning in other fields and allow for exploring skills, fall within the *Mastery* dimension. Such activities do not necessarily require an effort but rather self-regulation, such as hobbies (5). Activities could include learning a new language, painting a watercolour, attending workshops²⁵.

The fourth dimension is *Control*, which is the extent to which the subject can decide about the activities he or she will perform, both at work

and during leisure time⁵. In the same vein, a high score in autonomy²⁶ is central to psychological well-being; having the feeling of control of our lives is important in leisure time.

This model has been used to understand the recovery experience over time⁵ supporting research^{10,21} and the development of instruments to assess this phenomenon. The recovery experience scale originated in Germany and has already been adapted to different cultural contexts: Spain, Finland and Japan, with minor adjustments, which did not interfere with the initially proposed dimensions. All validations showed a four-factor pattern and high correlations between psychological detachment and relaxation dimensions and low correlations between psychological detachment and mastery^{5,7,18,27}. Other instruments measuring recovery are found in the medical literature. However, these are instruments with items specific to the body parts that have undergone the surgical procedure¹¹. Some instruments aim to measure restoration processes, that is, to what extent the individual has recovered^{28,29}. The content of the sentences seeks to assess how recovered the individual is (intrapersonal dimension) and the recovery consequences (interpersonal dimension). But our scope involves comprehending what individuals experienced to recover and their resources. Because of this and considering the accumulation of factorial structure evidence of the Recovery Experience Questionnaire, for instance, the scale has already been applied in German, Japanese, Spanish, and Finnish^{5,7,18,27}; we consider translating the instrument to Brazilian-Portuguese. The first hypothesis (H1) is that the best-fitted model will be the four-factor model. To test its structure, we conducted confirmatory factor analysis as the best option for the case^{30,31}. Therefore, the four dimensions previously suggested in the original model, i.e., Psychological Detachment, Relaxation, Mastery and Control, will be confirmed in a factor model.

Recovery has the effect of being invigorating because they also function as an energy replenisher and benefit mental and physical health. Thus, even if there are high job demands, individuals who score high on the recovery scale may show better well-being when compared to individuals who score low on the scale^{5,7,18,27,32}. Moreover, high scores in recovery experience prevent negative work impacts, such as burnout and mediate misfit on the organisation³³.

To grow validity evidence of the Recovery Experience Questionnaire, we will replicate Son-

nentag and Fritz⁵ study and we have expectations to confirm a similar hypothesis (H2), it means stressors will be negatively related to recovery experiences. Moreover, adaptive coping strategies will be positively related to recovery experiences (H3a); maladaptive coping strategies will be negatively related to recovery experiences (H3b). In addition, we have expectations to confirm a similar hypothesis that ill-being will be negatively related to recovery experiences (H4) and well-being will be positively related to recovery experiences (H5).

According to the Organisation for Economic Co-operation and Development (OECD), Brazil is one of the countries where more hours are worked globally³⁴. Could it be that, in this population, the recovery experiences be organised differently from other cultures? Maybe we have a positive answer to this question because recovery experiences can vary culturally^{5,35}. Thus, this study aims to show validity evidence of the Brazilian-Portuguese Recovery Experience Questionnaire (REQ-PB) developed by Sonnentag and Fritz⁵, applying a procedure to decentering cross-cultural scales translation and adaptation in a sample of Brazilian employees from heterogeneous occupations. To achieve this goal, we will follow a carefully decentering procedure to improve the translation validity and reliability³⁶, as translation and back-translation procedure is limited.

Method

This psychometric and cross-sectional study aims to adapt and obtain evidence of the validity of the Brazilian version of the Recovery Experience Questionnaire. The schedule is disclosed in Figure 1.

The research started with the translation of the instrument. For that, six bilingual Brazilian Portuguese-English did the translation of the items, specialists in work and organisational subjects; predominantly men (N = 4), and their educational levels were PhD (N = 5) or PhD students with knowledge in psychometry (N = 1). Most items had six independent translations, but some obtained coinciding translations. In sequence, we invited 30 experts (Master's students of Nursery, Medicine, Psychology, and professors) to evaluate translations. They were aged between 18 and 51 years (mean = 28.4; SD = 9), 61.3% were female. We asked about English proficiency, and according to their self-report, on the whole, they were fluent or had good language proficiency.

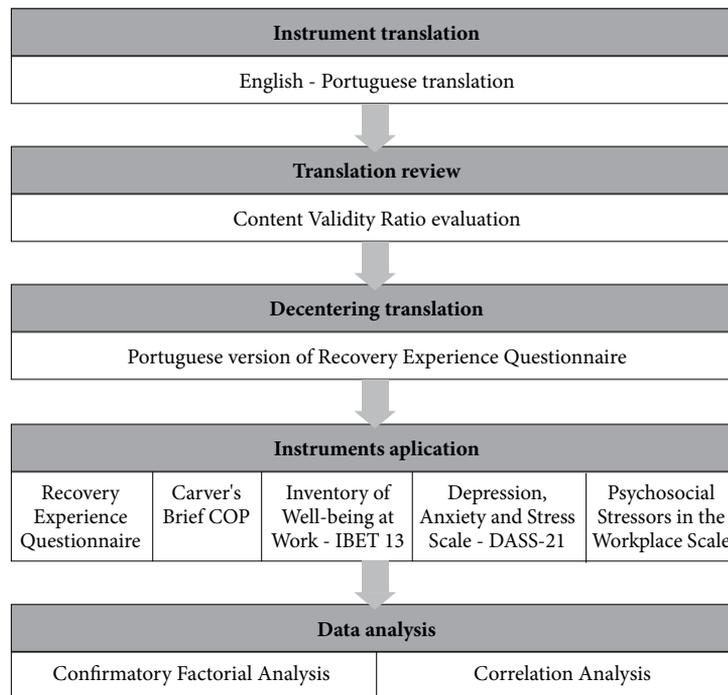


Figure 1. Design of the Recovery Experience Scale validation study.

Source: Authors.

Reviews about instrument translations have already shown no consensus on guidelines to better conduct this step³⁷. However, evidence is provided that back-translation is insufficient to encompass cultural elements and guarantee the instrument's equivalence when translated into another language^{38,39}. Because of this, the requested criteria adopted were inspired by Lawshe⁴⁰, who assesses the relevance of the item to the construct (Content Validity Ratio – CVR), and also by the quality aspects presented by Cassepp-Borges et al.⁴¹ and Smith et al.³⁶ The participants were asked to evaluate four criteria per item.

We calculated the CVR according to instructions suggested by Lawshe⁴⁰, taking into account the frequency of experts who indicated “essential” for the item's relevance to the construct. Follow the applied formula.

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}}$$

in which the n_e is the number of experts indicating “essential” and N is the total number of experts.

The experts also indicated the factor belonging to each item, the best translation comprehension, and which translation is the most reliable. CRV above .80 indicate a good item^{41,42}. In the case of non-coincidence between translation comprehension and translation reliability, we considered the average English proficiency of experts to determine the best translation option. For control and comparison between the translations, we asked the expert to evaluate his/her own level of English proficiency.

This methodology, that is an operationalisation of Smith's³⁶ proposition of *decentering translation*, proved its utility and showed a reliable translation of the Recovery Experience Questionnaire. Around 62% of the items coincided the cultural comprehension and the most reliable translation option. The expert proficiency and cultural comprehension were privileged with the decentering method and allowed us to proceed with the collection of psychometric indicators on validity evidence. To this end, the original study by Sonnentag and Fritz was replicated⁵.

Participants

After analysing the decentering translations, the survey was carried out by 164 respondents from different segments and professions, all of them engaged in some paid activity and residents of the Federal District. The criteria were: to be working and to be more than 18 years old. Most of the respondents (67.7%) were female, and the average age of the sample was 35 years (SD = 11.6).

Measures

Recovery Experience Questionnaire⁵. According to with was described it contains 16 items answered on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale aims to assess issues related to the worker's behaviour during his/her free time in the working day. At the original version, the items are divided into four types of recovery experiences, which consistency internal are: Psychological Detachment (4 items, Cronbach's $\alpha = .84$), Relaxation (4 items, $\alpha = .90$), Mastery (4 items, $\alpha = .92$), and Control (4 items, $\alpha = .90$).

Carver's Brief COPE. The measure used was adapted to Portuguese⁴³. It aims to find out how the individual usually manages stressful situations in everyday life. The questionnaire has 28 items answered from 1 (never affects me) to 6 (always affects me) and items are grouped into 14 factors, each one with two items, being: active coping ($\alpha = .71$), planning ($\alpha = .80$), using instrumental support ($\alpha = .90$), using emotional support ($\alpha = .80$), religion ($\alpha = .90$), positive reframing ($\alpha = .81$), self-blame ($\alpha = .62$), acceptance ($\alpha = .74$), venting ($\alpha = .91$), denial ($\alpha = .80$), self-distraction ($\alpha = .80$), behavioural disengagement ($\alpha = .90$), substance use ($\alpha = .92$) and finally, humour ($\alpha = .75$).

Inventory of Well-being at Work - IBET-13⁴⁴. It assesses how well bonded the individual is concerning his/her work. The inventory has a five-point Likert-type response scale (1 strongly disagree; 5 strongly agree). Its factor structure is divided into two dimensions, the first being about commitment and satisfaction (9 items, $\alpha = .93$) and the second about work engagement (4 items, $\alpha = .73$).

Depression, Anxiety and Stress Scale - DASS Scale⁴⁵. It was applied the reduced version (DASS-21). It is a self-report scale that assesses emotional states, and items are divided into three

groups that correspond to the factors of depression (7 items, $\alpha = .91$), anxiety (7 items, $\alpha = .93$), and stress (7 items, $\alpha = .91$).

Psychosocial Stressors in the Workplace Scale⁴⁶. It aims to describe the participant's impressions of their work environment to assess occupational stress levels. The answers should be evaluated on a scale of 1 (strongly disagree) to 5 (strongly agree). It has 35 items that are divided into seven factors, being them: conflict and role ambiguity (5 items, $\alpha = .85$), role overload (6 items, $\alpha = .81$), lack of social support (6 items, $\alpha = .90$), career insecurity (4 items, $\alpha = .80$), lack of autonomy (5 items, $\alpha = .90$), work-family conflict (5 items, $\alpha = .84$), and pressure of the degree of responsibility (4 items, $\alpha = .82$).

Procedure

The study was conducted online through the Googleforms platform, disseminated and shared on social networks in Facebook groups, Instagram and WhatsApp. Before being redirected to answer the instrument, the participants had to read and agree with the terms of the Informed Consent Form. The ethics committee approved the study (CAAE: 21231519.6.0000.0023).

Data analysis

We tested the required assumptions and did not detect violations. Confirmatory Factor Analyses (CFA) were performed using the R software to analyse the validity evidence of the instrument. To test the relevance indices, the following indicators were analysed: Chi-square (χ^2), Comparative Fit Index (CFI), Normed Fit Index (NFI), and Root Mean Square Error of Approximation (RMSEA).

The following index values were adopted as criteria of satisfactory fit of the model to the data: considering χ^2/df less than five as an acceptable model; according to the Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), Incremental Fit Index (IFI) indices, being considered a good fit when the indices are close to the value of 1 and the RMSEA presents reference values less than .05⁴⁷.

Pearson's correlation coefficient (r) was used to quantify the direction and intensity of the association between the four recovery factors and the other proposed factors. The analyses were performed with the aid of the Jamovi and R software, Lavaan package⁴⁸.

Results

Decentering translation process

Table 1 shows the results of the decentering translation procedure, offering the content validity of the items, the best translation comprehension, translation reliability, English levels of proficiency in case of non-coincidence of comprehension and reliability, and the Brazilian-Portuguese decision reached translation.

According to the experts, translations C and D were chosen for comprehension and reliability. Regarding these two criteria, only six items showed disagreement. The experts' average proficiency was considered in these cases to determine which translation would be adopted. The experts' proficiency indicated translation D was

higher for items 11, 13 and 16. In the case of item 2, the experts who chose translation E were more proficient, and for items 5 and 12 the most proficient experts indicated translations C and B, respectively. The last column in Table 1 presents which translation was chosen after experts' considerations.

Structural validity evidence

The CFA indicated the adequacy of the data. The theoretical model was proposed and tested initially as a single factor (i.e., recovery experience – Model 1), as two factors where psychological detachment and relaxation would combine, as mastery and control (Model 2). The third original proposition was to test relaxation combined with control as one factor and psycho-

Table 1. Translation indexes of psychological detachment (items 1 to 4), relaxation (5-8), mastery (9-12) and control (13-16).

Item	CVR*	Factor	Comprehension	Reliability	Proficiency	CRP**	Final translation
1. I forget about work	-.03	1	D	D			Eu esqueço do trabalho
2. I don't think about work at all	.31	1	F	E	3.45	E	Eu não penso no trabalho de modo algum
3. I distance myself from my work	.38	1	C	C			Eu me distancio do meu trabalho
4. I get a break from the demands of work	.68	4	C	C			Eu tiro um tempo das demandas do trabalho
5. I kick back and relax	.35	2	C	D	3.70	C	Eu deixo as coisas de lado e relaxo
6. I do relaxing things	.60	2	C	C			Eu faço coisas relaxantes
7. I use the time to relax	.86	2	B	B			Eu uso o tempo para relaxar
8. I take time for leisure	.50	2	C	C			Eu tiro tempo para o lazer
9. I learn new things	.41	3	B	B			Eu aprendo coisas novas
10. I seek out intellectual challenges	.23	3	C	C			Eu procuro desafios intelectuais
11. I do things that challenge me	.20	3	A	D	3.23	D	Eu faço coisas que me desafiam
12. I do something to broaden my horizons	.17	3	B	C	3.33	B	Eu faço coisas que ampliem os meus horizontes
13. I feel like I can decide for myself what to do	.39	4	D	A	3.40	D	Eu sinto que eu consigo decidir por mim mesmo o que fazer
14. I decide my own schedule	.27	4	C	C			Eu decido o meu próprio cronograma
15. I determine for myself how I will spend my time	.33	4	C	C			Eu determino para mim mesmo como vou passar meu tempo
16. I take care of things the way that I want them done	-.30	4	D	C	3.40	D	Cuido das coisas do jeito que quero que sejam feitas

Notes: * Content validity ratio; ** comprehension and reliability versus proficiency comparison.

Source: Authors.

logical detachment and mastery as the other two independent factors (Model 3). The fourth model combines relaxation and control, and psychological detachment and mastery (Model 4). Finally, four factors (Model 5) showed more adequate fit indices than one factor and three factors. Table 2 supports H1; the four-factor model shows the best-adjusted indices, following Sonnentag and Fritz⁵ proposition.

In general, the fit indexes improve as more factors are inserted. The four-factor model has the best CFI (.90) and RMSEA (.09). Figure 2 presents the loadings factor considering the four-factor structure.

Thus, the validation process results are consistent with those obtained in the original study by Sonnentag and Fritz (5). The fit indicators for the four-factor model (CFI = .90) and residual (RMSEA = .09; CI90% = [.08-.11]) were very close to those found in the original study (CFI = .96 and RMSEA = .08, respectively) (discussion of RMSEA cutoff⁴⁷). The same was true for the reliability indicators, ranging from .79 to .85 in both studies.

We must highlight that the Lawshe⁴⁰ Content Validity Ratio showed issues in items 1 and 16. The factor loading shows that item 4 belongs to another dimension, in this case, Control instead of Psychological Detachment. Item 1 does not show limitations in any of the validations conducted of the scale^{5,7,18,27}. However, item 4 does not load in the Spanish version²⁷, and the lower factor loading in the German⁵ and Japanese¹⁸ ones. Finally, item 16 shows the same pattern as item 4, showing a lower factor load in all versions than the other items.

Table 2. CFA analysis following Sonnentag and Fritz (2007) models.

Fatores	χ^2	CFI	TLI	RMSEA [CI 90%]	SRMR
Model 1 ^a	1017*	.44	.36	.23 [.22-.24]	.16
Model 2 ^b	765*	.60	.53	.20 [.19-.21]	.18
Model 3 ^c	474*	.77	.73	.15 [.14-.16]	.10
Model 4 ^d	944*	.49	.40	.22 [.21-.24]	.18
Model 5 ^e	233*	.92	.90	.09 [.08-.11]	.07

Notes: * $p < .01$ ^a single factor; ^b two factors: psychological detachment and relaxation; mastery and control; ^c three factors: relaxation and control; psychological detachment; mastery; ^d two factors: relaxation and control; psychological detachment and mastery; ^e four factors: psychological detachment; relaxation; mastery; control.

Source: Authors.

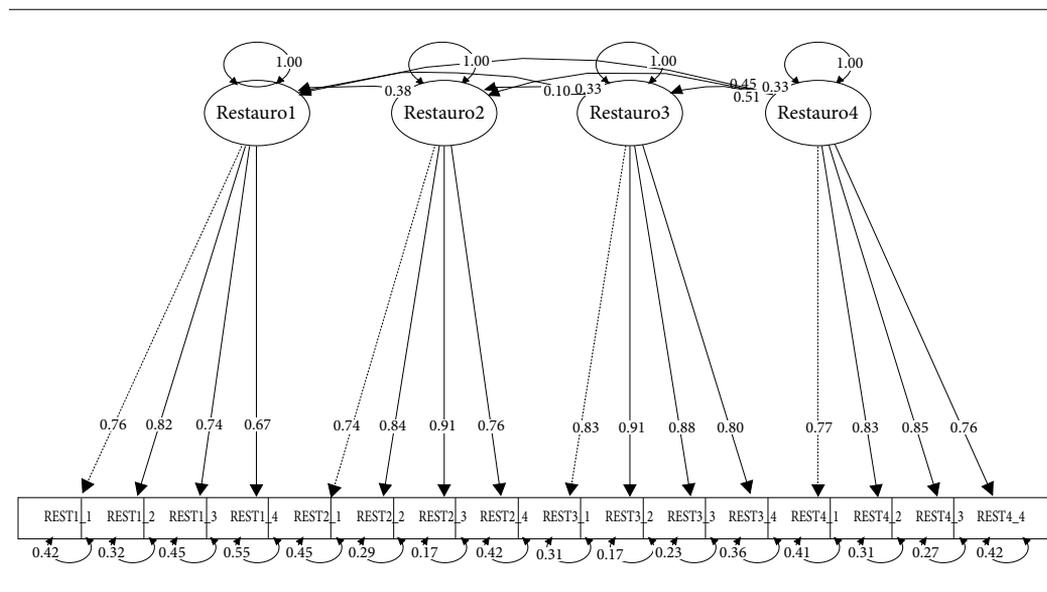


Figure 2. Four-factor structure and loadings of the Recovery Experience Scale.

Restauero 1 = Psychological detachment; Restauero 2 = Relaxation; Restauero 3 = Mastery; Restauero 4 = Control.

Source: Authors.

These points do not overshadow the positive aspects demonstrated. It can be assumed that the results presented are consistent with what was previously found by original authors⁵ and also legitimize the quality of the adaptation of the scale in Portuguese-Brazilian. Next, the practical implications of using this instrument are presented.

Convergent validity

The relationships between these measures and the variables of work stress, coping, ill-being, and well-being were analysed to study the concurrent validity of the recovery factors. Table 3 presents the correlation coefficients between the four recovery factors and the other scales.

In general, H2 was supported; stressors will be negatively related to recovery strategies, particularly Relaxation and Control. Moreover, H3a, which describes those adaptative coping strategies that would be positively related, also show more positive relations with Relaxation and Mastery. H3b proposes that maladaptive coping strategies would be negatively related to recovery strategies, and the results were less clear than the others; nevertheless, it supports, in general, the negative relation. H4 suggests that ill-being would be negatively related to recovery strategies, and it was the case, particularly for Control. Finally, H5 suggests that Well-being would be positively related to recovery experience, which was the case for Relaxation, Mastery and Control.

Table 3. Correlations between recovery experiences and work stress, coping, ill-being and well-being.

Factors	Psychological detachment	Relaxation	Mastery	Control
Stress				
Conflict and role ambiguity	.07	-.25**	-.06	-.13
Role overload	-.03	-.32**	-.14	-.30**
Lack of social support	-.01	-.20*	-.05	-.22**
Career insecurity	-.06	-.18*	.07	-.06
Lack of autonomy	.10	-.14	-.08	-.21**
Work-family conflict	-.06	-.34**	-.10	-.23**
Pressure of the degree of responsibility	.05	-.06	.08	.06
Adaptive coping				
Active coping	.25**	.23**	.30**	.36**
Planning	.22**	.21**	.30**	.26**
Using instrumental support	.14	.19*	.18*	.01
Using emotional support	.04	.17*	.14	-.04
Religion	.01	.09	.20**	.09
Positive reframing	.13	.33**	.41**	.23**
Acceptance	.09	.10	.12	.17*
Humour	.14	.01	.14	.22**
Maladaptive coping				
Self-blame	.01	-.24**	-.15*	-.25**
Denial	.03	-.04	.05	.01
Self- distraction	.13	.15	.12	.22**
Venting	.08	.10	.08	.02
Behaviour disengagement	.05	-.13	-.12	-.22**
Substance use	.02	-.05	-.18*	-.01
Ill-being				
Depression	-.05	-.26**	-.21**	-.34**
Anxiety	-.10	-.17*	-.15*	-.29**
Stress	-.07	-.19*	-.19*	-.33**
Well-being				
Commitment and job Satisfaction	.11	.22**	.29**	.34**
Work engagement	-.02	.10	.17*	.19*

Notes: * $p < .05$; ** $p < .01$.

Source: Authors.

It is essential to notice that Psychological Detachment generally does not present clear relation with any of the variables suggesting a mediation or moderation variable involved or another type or relation (i.e., U-shaped).

Convergent validity indicators obtained with correlation analyses showed results consistent with meta-analysis on the recovery dimensions scale⁴⁹, with the original study⁵ and with early research⁵⁰. Among the analysed constructs, ill-being showed inverse correlations with the dimensions of recovery except for Psychological Detachment. This dimension presented the least significant correlations; only active coping and planning, considered adaptive coping, correlated positively and significantly with Psychological Detachment. Next, the practical implications of using this instrument are presented.

Discussion

This paper offered a measure for assessing recovery experiences in Portuguese-Brazilian. To achieve psychometrics properties, we execute similar steps followed by original authors⁵. However, before starting the replication study, we adapted the scale with a careful translation procedure. To do that, we applied a methodology of decentering translation, a procedure that proved its utility and showed a reliable translation of the Recovery Experience Questionnaire. Given the literature that recommends increasing rigour when conducting cross-cultural adaptations in the medical field^{37,38}, we encourage future studies to adopt the recommendations of Lawshe⁴⁰ and Cassepp-Borges⁴¹ and consider working with different translations for expert evaluations.

The accuracy of the selected translations for each item could be legitimised with the subsequent analyses. Confirmatory Factor Analyses showed that four distinct recovery experiences could be differentiated (Psychological Detachment, Relaxation, Mastery, Control). The relationships with well-being reinforced the importance of analysing recovery experiences for a more systemic comprehension of a work context.

Despite the meticulous care taken in adapting the instrument to Brazilian-Portuguese, it is necessary to recognise the limitations of the sample that provided the psychometric indicators. It is a large sample in its demographic composition, but probably timid to represent the cultural nuances of the Brazilian context. Another limiting point concerns the variables used in the convergent validity study, which did not include physical health variables. Although similar to the original questionnaire⁵ and similar results to other validations^{18,27}, it requires more studies on the variability of the phenomenon.

Finally, the short and direct items and the good internal consistency indicators of the scales favour its application in combination with other constructs in future studies. Additionally, an even shorter version for assessing recovery experiences should not be discarded, considering it may be beneficial for clinical purposes. The relationships with ill-being factors observed in the convergent validity study indicated that the scale has the potential to support assessments in a clinical context that look for the causal nexus of poor recovery experiences. Future studies can concentrate on the dynamic role of recovery, the moderating relations of this phenomenon in the national context, as well as on understanding possible cultural differences regarding what is expected, accepted and desired about recovery experiences in Brazil.

Collaborations

Conceptualization: AR Pérez-Nebra and F Queiroga. Methodology: AR Pérez-Nebra, CML Rodrigues. F Queiroga: investigation: MM Pedersoli and A Rodrigues. Analysis: AR Pérez-Nebra, MM Pedersoli and CML Rodrigues. Writing – original draft preparation: AR Pérez-Nebra, MM Pedersoli and A Rodrigues. Writing – review and editing: AR Pérez-Nebra, CML Rodrigues and F Queiroga. All authors have read and agreed to the published version of the manuscript.

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