ADAPTATION OF "THE RESILIENCE SCALE" FOR THE ADULT POPULATION OF PORTUGAL

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Abstract: This paper describes the adaptation of "The Resilience Scale" for Portuguese adults. This instrument was submitted to back-translation (linguistic and conceptual equivalence), to psychometric validation (n = 365), to pretest and retest. It was obtained conceptual and linguistic equivalence/psychometric validation with *alpha* Cronbach 0.868 for the 23 items, suggesting internal consistency. Factorial analysis grouped the 23 variables in 4 factors: I – Perseverance; II-Sense of life; III-Serenity; IV Self- reliance and self-confidence, with satisfactory *alpha* Cronbach values for each factor. The sensitivity of items was verified by the coefficient of asymmetry and flatness. It was proved temporal stability of the scale. The scale shows good psychometric characteristics checking levels of resilience in this population.

Keywords: Resilience. Test adaptation (Portugal). Adults.

Introduction

Resilience is a highly valued psychological construct due to its close relationship with the ability to adapt to the environment and be able to suitably overcome adverse situations. *Resilir* in Latin, means, literally and etymologically, *to bounce back, retract,* and the word is formed by the element re which indicates a backward movement, and the element *salire* or *jump, come bouncing back*, or *jump up* (Felgueiras, 2008). Resilience is a term that usually designates (in physics) the resistance

of a material to shock and the high capacity to absorb the kinetic energy of the environment and changing, but later returning to its original form, such as an elastic, which after an initial voltage returns to the same state. In metallurgy it is associated with the ability of a material to return to its initial state after a deforming pressure; and in computer science it refers to the ability of a system to continue operating despite failures in its elements. In medicine it refers to the ability to resist disease, however it does not correspond to the mere resistance capacity (the idea of rigidity), but rather encompassing flexibility and adaptability. In psychology it points to the ability to positively cope with adverse events in a perspective of health, well-being and quality of life promotion.

The study of this construct started with the identification of the psychological characteristics present in children that are able to endure and overcome adverse living conditions (Gonçalves, 2003). The studies (Pesce, Assisi, Avanci, Santos, Malachi, & Carvalhaes, 2005) with resilient children showed that there are 3 types of variables able to protect the individual in adversity: personality characteristics (such as self-esteem, flexibility, ability to solve conflicts), cohesion and good family relationships, and availability of external support, which strengthens children's coping strategies. Specialty literature focuses on numerous synonyms for resilience (Anaut, 2005; Assisi, Pesce, & Avanci, 2006; Cyrulnik, 2003; Felgueiras, 2008; Pinheiro, 2004; Poletti & Dobbs, 2007), describing it as the ability to transcend difficult circumstances of the childhood environment and become a successful and functional adult, based on the presence of significant figures and the establishment of bonds, where the set of the individual and the family's mechanisms keep the person in relative inner harmony, despite the traumas experienced.

The literature further refers to the ability to rebuild a continuum (which varies with situations and stages of development) revealing an extraordinarily good adaptation to severe and continuous stress, before the stressed person returns to an adaptive level. Thus, it is the ability to be the winner (do well and be socially accepted), of a test that could have been traumatic, and adapted to the adverse situation, by using both internal (intrapsíquiPSICOLOGIA USP, São Paulo, 2012, 23 (2), 00 - 00,181 cos) and external resources (social and emotional environment). In essence, it is the maintenance of a normal development process, despite the difficult conditions, it is something systematic, dynamic and complex, resulting from the interaction between the individual and the environment, and being able to assign meaning to experiences which are initially meaningless, to elaborate them and, thus, to overcome them.

It is this highly complex psychological construct that The Resilience Scale, (originally by Wagnild, & Young, 1993) aims at measuring (Wagnild & Young, 1987, 1990, 1993): a psychological variable considered, in the literature, as a potential which is present in each individual, and that is de-

veloped based on the life cycle, the stages of psychological development and environmental circumstances. We believe the adaptation of this instrument is of importance in Portugal, given that there are no resilience scales adapted for the Portuguese adult population.

Original version of the scale

The Resilience Scale, in its original version, aims at measuring levels of positive psychosocial adaptation in adverse situations and life events, through 25 items positively formulated, and using Likert-type responses, ranging from 1 (strongly disagree) to 7 (strongly agree). The total values are obtained by the sum of the responses' values, and may vary from 25 to 175, where higher values correspond to a greater resilience. This scale allows the identification of the individual's degree of resilience as a positive personality trait and that promotes adaptation.

Initially the authors found 5 constituents of resilience: serenity, perseverance, self-confidence, meaning of life and self-sufficiency. However the authors found ambiguities in the interpretation of the factors 5, 4 and 3, i.e., they observed associations between factors, decreasing the initial five factors to two factors (Kaiser's criteria). Thus, the 25 items were divided into two subscales: one subscale with 17 items "Personnel Competence" (Factor I), and another with 8 items "acceptance of Self and Life" (Factor II). Factor I suggests confidence, independence, determination, invincibility, mastery, sources of resources and perseverance (items 1, 2, 3, 4, 5, 6, 9, 10, 13, 14, 15, 17, 18, 19, 20, 23, and 24). The Factor II suggests adaptability, balance, flexibility and a balanced life perspective (items 7, 8, 11, 12, 16, 21, 22, 25). Both factors reflect the theoretical basis underlying resilience, contributing to construct validity.

From the psychometric perspective, the original scale can be characterized as follows: high fidelity (alpha coefficient.91)/a correlation between items ranged between 0.34 to 0.75, with a most between 0.50 and 0.70/all were significant with $p<0.001$/through principal component factor analysis a eigenvalue of 9.56 was found for factor I, explaining 38.3% of the variance/coefficient values ranged from 0.3 to 0.76, being 23 of the 25 items situated between 0.45 and 0.76/the original scale also presents validity in its internal consistency: its internal consistency is acceptable ($r = 0.91$, $p<0.01$ and several studies point to 0.76-0.91)/the test-retest presented acceptable correlations in 5 different moments, from 0.67 to 0.84 ($p<0.01$). Moreover, higher resilience scores were associated with high levels of morale ($r = 0.28$), life satisfaction ($r = 0.30$), better physical health ($r = 0.26$), and with lower levels of depression (0.37).

Three adaptations into Portuguese were made: a version for the Brazilian population (Pesce, Assisi, & Oliveira, 2004; Pesce et al 2005) with a sample of 997 adolescents, aged between 12 and 19 years, wich presented an internal consistency of alpha = .80; a preliminary study (Vara & Sani, 2006) with 380 Portuguese adolescents, aged between 12 and 18 years, and with a level of internal consistency of .86; and an adaptation and validation (Felgueiras, 2008) for Portuguese adolescents aged between 10 and 16 years, and with an alpha=.82. No version has, so far, been asserted for Portuguese adults.

Method

Regarding the type of study, we performed an observational research with a probabilistic sampling method. We started by contacting the authors of the preliminary study (Vara & Sani, 2006) and the author of the Portuguese validation for pre-adolescents/adolescents (Felgueiras, 2008) to request information. After this, the authors of the original scale were contacted in order to acquire authorization for the current validation.

After obtaining permission, we proceeded to the back translation of the scale to ensure that the adapted version was linguistic and conceptually equivalent, and concomitantly with the literature review. In order to obtain the linguistic and conceptual equivalence, the authors of the original scale suggested the back translation of the version obtained by Felgueiras (Felgueiras, 2008). Thus, the items in Portuguese as defined by Felgueiras were translated back into English by two Portuguese psychologists, proficient in English, aiming at achieving a consensual semantic equivalence. One of them had no knowledge of the original scale or of the scales in Portuguese. The fact that two psychologists performed the new translation allowed to take into consideration clinical/psychological inherent aspects, ensuring a greater validity of the concept inherent in each item, as well as a greater content validity. The items 2, 7, and 21 of the original scale were subjected to two back translations in order to meet the criteria, and linguistic and conceptual demands required by the authors, while the remaining items were subjected to only one back translation. During this process it was possible to systematically interact with one of the authors of the original scale (Dr. Gail Wagnild), who made some decisive comments. We assured that the translated items were equivalent to the original ones linguistic and semantically, and that the new expressions used were considered relevant to the Portuguese culture.

At this point we chose to keep the same 25 items, with seven possible responses, in a self-administration system, in order to ensure a greater operational equivalence. Regarding the existence of a 26th item "I am

resilient" the authors explain that this is not part of "The Resilience Scale", being only one extra item used to contribute to the validity of the scale: item 26 is correlated with the scale's total score to improve the validity, and its use is not mandatory.

After the back translation received a favorable feedback by the authors of the original scale, a pilot study was carried out. The pilot study (n = 20) allowed us to assess whether individuals understood the statements and the structure of the test. This pre-test showed that the statements (25 items) were understandable, being it only necessary to add to the response scale of items 2, 3, 4, 5, 6 the concrete denominations "I Agree Very Much" and "I Disagree Very Much": this because initially only levels 1 and 7 of the response scale were discriminated (Strongly Disagree/Strongly Agree). This entire linguistic and conceptual process originated the translation of the scale that was subsequently subjected to statistical analysis, in order to verify its psychometric equivalence and ensure that the new version measured adequately (validity, accuracy and sensitivity) the concept under study.

Following the translation of the instrument, and in order to assess the psychometric equivalence of the adapted version, we proceeded with the sample collection. Data were collected in two distinct study universes: the Higher Institute Dom Afonso III in Loulé (mostly) and the Evangelic Baptist Church of Faro. After explaining individually the study's objectives, how to fill in the questionnaire, as well as the guarantee of anonymity and voluntariness (informed consent) the participants, adults of both sexes, filled in the questionnaire, taking an average of 4 minutes.

The questionnaires were collected and further processed using SPSS - Statistical Package for Social Sciences (version 18.0). After performing the descriptive analysis of the sample and scale, Cronbach's alpha values (reliability estimate of the results obtained through an instrument, taking into account the decisions of the respondents and associated variances) were calculated, reducing the number of items from the original scale, and opening doors for the factor analysis. Regarding the orthogonal or varimax rotation (as in the original), the factors' production was ended when 5% variance was reached, as we intended to compare the results obtained with those from the original scale. Thus, 23 correlated items were grouped into factors that helped understand the structure of the correlation matrix and better interpret the results. We opted for an orthogonal rotation rather than an oblique one because the former is more general, providing a factor solution more adjusted to the original scale; moreover, it produces similar data to the oblique rotation (which is typically used in exploratory studies when aiming at the results best fit to the sample under study). To assess the adequacy of the data to the factor analysis, and to ensure that the principal components analysis could be performed, two conditions were ensured: adequacy and sphericity.

For this we used the KMO test (Kaiser-Meyer-Olkin) and the Bartlett test. The KMO indicated the proportion of the data's variance that could be attributed to a common factor for all the variables, and Bartlett's test assessed the sphericity (Table 2). We then analyzed the common aspects, i.e. the portion of the variable that could be attributed to common factors and is shared with all other variables. This analysis of commonalities oriented data aggregation (organization of the items into factors). After this data aggregation, the eigenvalues were analyzed (used to calculate the number of factors' axes or dimensions), taking into consideration the number of factors with an Initial Eigenvalue greater than 1. An analysis of the components' matrix with varimax rotation was performed (Table 3) in order to take to an extreme the values obtained for each variable, so that each variable is associated to only one of the four factors. This orthogonal rotation method, was performed so that for each major component, there were few significant weights and all others were close to zero, i.e., the objective was to maximize the variation between the weights of each major component, hence the name varimax.

Subsequently, and in order to name each factor, we resorted to names initially defended by Wagnild and Young (1987, 1990, 1993): Perseverance (persistence in adversity, will to continue to rebuild one's life even when dealing with problems); Self-confidence (belief in oneself and in one's own abilities, recognizing one's own limitations but being able to depend on oneself); Serenity (balanced perspective of life, considering a wide range of experiences and accepting the events, even the adverse ones, calmly and with ability to exercise self-discipline); Self-Reliance (sense of unity, awareness that each person's pathway is unique, and that certain moments are faced not in the group but in solitude); and Meaning of Life (notion that you have something to live for, that life has a meaning, a reason). Through the variables transformation and Visual Binning, the mean cut values for each subscale were calculated. Furthermore, a test retest in a sample of 32 individuals was elaborated, and the final conclusions were highlighted.

Participants

The sample consisted of 365 individuals (43.5% were male and 56.5% were female). One of the study's limitations, inherent to the original scale is that the original sample only included women. In this research we tried to overcome this limitation by including a favorable percentage of male individuals. With regard to age, the mean age was 33.92 years, the median was 31.00, and mode was 32.00, with a minimum of 18 and a maximum of 83 years. The standard deviation was 13.69. Given that about

2.7% of the sample is over 70 years old, we tried to ensure that these participants gathered the cognitive conditions that would allow them to answer to the questionnaire with a clear notion of reality. With regard to the levels of resilience, the mean was of 132.44, with a variance of 220.233 and a standard deviation of 14.840, for the 23 items under examination. The results show good resilience levels, taking into account that the original scale scores ranged from 25 to 175, and in this modified version they vary between 25 and 161.

Results

In order to obtain psychometric equivalence we calculated the means and standard deviations for the items defined in the scale, and we verified that the means were between 4.94 (Item 11) and 6.52 (Item 1), the mean error between 0.20 (Item 4 and Item 18) and 0.91 (Item 1). The variance was between 0.838 (Item 18) and 17.51 (Item 1). The standard deviation goes from 0.91 (Item 18) to 4.185 (Item 1). And the amplitude presented a minimum of 1.912 (Item 15) and a maximum 7.44 (Item 7).

In order to analyze the homogeneity we calculated the correlations between the overall value, the Cronbach's alpha and each item's values, estimating that the Cronbach's alpha for the 25 initial items was lower than for the 23 items; thus, we maintained the 23 items, excluding items 1 and 7. The Cronbach's alpha increased to 0.868, with scores varying between 25 and 161 (Table 1).

Table 1
Cronbach's alpha for 23 items

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.868	.880	23

Table 2
Kaiser-Meyer-Olkin (KMO) test and Bartlett test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,893
Bartlett's Test of Sphericity	Approx. Chi-Square	14104.255
	SD	253
	Sig.	.000

Table 3
Analysis of the components' matrix with varimax rotation

Rotated Component Matrix[a]

	Component			
	1	2	3	4
Resilience2	.425	.043	.179	.445
Resilience3	.213	.315	.006	.535
Resilience4	.292	.631	-.071	.261
Resilience5	.366	.198	.020	.439
Resilience6	.050	.725	.357	.083
Resilience8	.315	.329	.350	.259
Resilience9	.653	.120	.321	.011
Resilience10	.176	.572	.445	.011
Resilience11	-.016	.076	.403	.460
Resilience12	-.034	.083	.684	.204
Resilience13	.215	.046	.481	.137
Resilience14	.467	.418	.008	-.037
Resilience15	.129	.630	.502	-.209
Resilience16	.350	.452	-.033	.223
Resilience17	.649	.197	.201	.213
Resilience18	.475	.419	.064	.238
Resilience19	.573	.267	-.056	.155
Resilience20	.157	.117	-.049	.464
Resilience21	.075	.539	-.040	.351
Resilience22	.236	.047	.593	-.081
Resilience23	.721	-.009	.132	.169
Resilience24	.696	.174	.198	.212
Resilience25	.090	-.054	.312	.669

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 21 iterations.

The factorial analysis ensured construct validity, reducing the 23 variables to a smaller dimension, representing them through a single statistical variable (variate), which expresses a linear combination of the

original quantitative variables. In this study, the data points to a KMO (0.893)> 0.5 (the data is suitable for factor analysis, being very close to 1, thus, between good and very good), as for Bartlett (Sig. 0.000) <.05 (data presented sphericity and is suitable for application of factor analysis, in principal components). In this study the initial commonalities are equal to 1, and after the extraction they vary between 0.384 and 0.715, indicating that they can all be part of the analysis (as only variables with values lower than 0.3, after the extraction, were removed).

In this study we initially found six components, with an initial eigenvalue greater than one, suggesting that there are six factors and explaining 56.660% of the variance. However, following the procedure of the original scale, we decided to consider only the factors that explain the overall variance above 5%, leaving only 4 with 47.172% of the explained variance. According to the varimax method we observed, as initial results: Factor I (9, 17, 19, 23, and 24); Factor II (4, 6, 10, 15, and 21); Factor III (12, 22); Factor IV (3, 25). However, 7 items had loadings below 0.50%, suggesting a need to reassess their location. They were: 2, 5, 8, 11, 13, 14, 16, 18, and 20. These items with loadings below 0.50% were later distributed among the factors which had a higher weight (even if below 0.50) and based on the review of the theoretical construct (Table 4).

Thus, based on the literature review and on the psychometric data, the final 23 items were distributed by four factors, named as follows:

Factor I - Perseverance - refers to the enthusiastic persistence in finding solutions to problems by overcoming adversity. It is the will to continue rebuilding one's own life trusting oneself and in an attitude of self-discipline (items of the final scale 7, 12, 15, 16, 17, 21, 22).

Factor II - Meaning of Life - refers to the individual's awareness that he/she has something meaningful to live for. It refers to the notion that life has a meaning (a reason) in which the individual focuses avoiding being obsessed with issues that he/she cannot solve. It involves determination and satisfaction by achieving goals previously set (items of the final scale 3, 5, 8, 13, 14, 19).

Factor III - Serenity - refers to a balanced perspective and focused on the purpose of life itself, with the capacity of accepting the variety of experiences (even adverse) calm and enthusiastically, and to be able to have self-esteem (the final scale items 6, 9 , 10, 11, 20).

Factor IV - Self-reliance and self-confidence – it is the sense of oneness, the awareness that each person's way of life of is unique and that certain steps are not faced in the group but in solitude, i.e., the individual is able to be on his/her own and to depend essentially him/her. Also, it refers to belief in oneself, in one's own abilities and interest in life, recognizing the limitations and being able to depend on oneself (the items of the final scale 1, 2, 4, 18, 23).

Table 4
*Distribution of items by the 4 factors.**

Varimax	Final Version
Fator I	**Perseverança**
9 – Sinto que consigo lidar com várias coisas ao mesmo tempo. 17 – A confiança em mim próprio/a ajuda-me a lidar com tempos difíceis. 19 – Normalmente consigo olhar para uma situação de várias perspetivas. 23 – Quando estou numa situação difícil, normalmente consigo encontrar uma solução. 24 – Tenho energia suficiente para fazer o que deve ser feito.	9 – Sinto que consigo lidar com várias coisas ao mesmo tempo. 14 – Tenho autodisciplina 17 – A confiança em mim próprio/a ajuda-me a lidar com tempos difíceis. 19 – Normalmente consigo olhar para uma situação de várias perspetivas. 23 – Quando estou numa situação difícil, normalmente consigo encontrar uma solução. 24 – Tenho energia suficiente para fazer o que deve ser feito. 18 - Numa emergência, sou alguém com quem geralmente as pessoas podem contar.
Fator II	**Sentido de Vida**
4 – Manter-me interessado/a nas atividades do dia a dia é importante para mim. 6 – Sinto-me orgulhoso/a por ter alcançado objetivos na minha vida. 10 – Sou determinado/a. 15 – Mantenho-me interessado/a nas coisas. 21 - A minha vida tem um propósito.	4 – Manter-me interessado/a nas atividades do dia a dia é importante para mim. 6 – Sinto-me orgulhoso/a por ter alcançado objetivos na minha vida. 10 – Sou determinado/a. 15 – Mantenho-me interessado/a nas coisas. 21 - A minha vida tem um propósito. 16 – Geralmente consigo encontrar algo que me faça rir.
Fator III	**Serenidade**
12 – Vivo um dia de cada vez 22 - Eu não fico obcecado/a com coisas que não posso resolver	12 – Vivo um dia de cada vez 22 - Eu não fico obcecado/a com coisas que não posso resolver 8 – Sou amigo/a de mim próprio/a./. 11 – Raramente me questiono se a vida tem sentido. 13 – Posso passar por tempos difíceis porque enfrentei tempos difíceis antes.
Fator IV	**Autossuficiência e autoconfiança**
3 – Sou capaz de depender de mim próprio/a mais do que de qualquer outra pessoa. 25 - Não tenho problema com o facto de haver pessoas que não gostam de mim	3 – Sou capaz de depender de mim próprio/a mais do que de qualquer outra pessoa. 25 - Não tenho problema com o facto de haver pessoas que não gostam de mim 2 – Normalmente eu lido com os problemas de uma forma ou de outra 5 – Posso estar por conta própria se for preciso. 20 – Por vezes obrigo-me a fazer coisas quer queira quer não.
Itens sujeitos a revisão (posterior distribuição pelos fatores): 2 – Normalmente eu lido com os problemas de uma forma ou de outra./ 5 – Posso estar por conta própria se for preciso./ 8 – Sou amigo/a de mim próprio/a./. 11 – Raramente me questiono se a vida tem sentido./ 13 – Posso passar por tempos difíceis porque enfrentei tempos difíceis antes. /14 – Tenho autodisciplina./ 16 – Geralmente consigo encontrar algo que me faça rir./ 18 - Numa emergência, sou alguém com quem geralment	

* This table is presented in Portuguese, as it shows the final translation of the items, thus, in would not make sense to backtranslate them into English, given i tis the original langguage.

The values of Cronbach's alpha coefficient proved to be satisfactory for each factor: .839 (Factor I); .814 (Factor II); .604 (Factor III); and .672 (Factor IV). In each factor there are a small number of items which contribute to the decrease of Cronbach's alpha, and taking into account that this happens in this scale, we consider the obtained alpha values satisfactory.

In order to evaluate the sensitivity of the items the analysis of the asymmetry and flattening coefficients was performed. In this study, the skewness (Sk), for each item, did not exceeded 3 in absolute value, and the kurtosis (Ku), for each item, did not exceeded 10 in absolute value, indicating the sensitivity of the items.

We also aimed at verifying the adherence to normality of the items through the Kolmogov-Smirnov normality test. This test allowed analyzing the adjustment to normality of the distribution of each variable/item, by comparing the relative cumulative frequencies observed with the relative frequencies expected. The test's value remitted to the greatest difference between these frequencies (relative cumulative observed versus relative expected). For a significance level of 0.05 the Kolmogorov-Smirnov test indicated a non-normal distribution for each item, in this study, as each presented a significance level of lower than 0.05: H0 is rejected. However, when the data were subjected to nonparametric statistics, there was a normal distribution for each variable. As for the total score, the Kolmogorov-Smirnov test indicated the presence of a non-normal distribution (Sigd"0.05), which is further evidenced by the frequency histogram (in which the observations of the variable RTotal are organized into classes, and each class' frequency is shown). The mean value was of 5.76, with a standard deviation of 0.645, a minimum 1.70 and a maximum of 7.00. Considering the graphic representations, we observed in Normal Q-Q Plot of Total a tendency towards normality, even though it was incomplete; and in the graphic of Detrended Normal Q-Q Plot of Total we verified the presence of actual residues in the sample, responsible for the absence of a normal distribution. To correct this lack of normality in the distribution would have to resort to another sample or to increase this sample. However, when the variable was subjected to a nonparametric statistics we observed a normal distribution, as in the isolated items. The absence of a normal distribution led to the need of resorting to nonparametric tests (less powerful than parametric).

Regarding the test-retest method (evaluated the instrument's reliability index) we resorted to a sample of 32 subjects, in order to re-apply the instrument 4 weeks after the first application. In the test's first moment we observed a Cronbach's alpha = .913, a mean = 114.06, a variance = 457.673 and standard deviation = 21.810. For the second moment (retest) a Cronbach's alpha = .898, a mean = 120.41, a variance = 357.281 and standard deviation = 18.902. No significant differences in Cronbach's alpha values were found between the two moments (the difference be-

tween both was only 0.015). In the retest we found that in these two paired samples, most of the variables did not have a normal distribution (in the first moment distribution is not normal for the items 2, 4, 5, 6, 8, 9, 10, 12, 14, 15, 16, 20, 21, 23, 24, 25; and in the second moment it is not normal for the items 2, 4, 5, 6, 8, 10, 11, 12, 14, 15, 16, 17, 18 , 19, 20, 21, 22, 23, 24, 25). Therefore, when we tested the equality of means, we opted for the Wilcoxon test (nonparametric) for ordinal variables, being the initial hypothesis: H0: E (X) = E (Y). The null hypothesis was accepted, confirming that there are no statistical differences between the means of the first and second observation moments for the same sample. Still, according to the retest method, we used Spearman's test to verify, in a bivariate analysis, the correlation between the two moments. Spearman's test (nonparametric) evaluated the correlation of order (in ordinal variables), and in this study Correlation Coefficient is equal to 1.000, suggesting that there is a direct association between variables, i.e., H0 is rejected which proves the good temporal stability of the scale. Still considering this sample (via Visual Binning) we calculated mean cut values for each subscale, the results were as follows: Perseverance Sub-Scale (Low Perseverance 1.00 - 5.51; Medium Perseverance 5.72 - 6.14; High Perseverance 6.15+); Meaning of Life Sub--scale (Low Meaning of Life 1.00 - 5.83; Medium Meaning of Life 5.84 - 6.33; High Meaning of Life 6.34+); Serenity Sub-scale (low 1.00 - 5.00; Medium 5.01 - 5.80; High 5.81+); Self-Reliance and Self-Reliance Sub-scale (low 1.00 - 5.40; Medium 5.41 - 6.00; High 6.01 +). However, it should be noted that resilience is not stagnant or linear in each person: it can vary throughout life and according to the various situations to which the individual is subjected to. In the table below the final scale is presented (Table 5).

Conclusion

In a postmodern society in constant change and requiring constant adaptation of its stakeholders, it makes sense for psychology to continue investigating resilience. Through this work we sought to adapt "The Resilience Scale" for the Portuguese adult population, given that it constitutes a gap in psychological assessment in Portugal. We obtained linguistic and conceptual equivalence via back translation and guaranteed the validity of the concept inherent in each item, as well as content validity. The translated items are equivalent to the original version both linguistic and semantically, with a relevant expression in the Portuguese culture. Operational equivalence was also assured. As for the psychometric validation (n = 365) we would like to highlight the Cronbach's alpha of 0.868 for the 23 items (with removal of the initial items 1 and 7), suggesting good internal consistency, stable reliability and homogeneity. This value is close

Table 5

*Final version of the Resilience Scale adapted for Portuguese Adult Population.**

Por favor, leia as instruções. Encontrará sete números, variando de "1" (Discordo Totalmente) a "7" (Concordo Totalmente). Assinale com uma cruz (X) o número que melhor indica seus sentimentos sobre essa afirmação. Por exemplo, se você discordar totalmente com a afirmação, assinale "1". Se você é neutro, assinale "4" e se concordar totalmente, assinale "7". Identificação (facultativo):_____ _____Idade:____ Sexo: _____		Discordo Totalmente	Discordo Muito	Discordo Pouco	Não Discordo e nem Concordo	Concordo Pouco	Concordo Muito	Concordo Totalmente
		1	2	3	4	5	6	7
1	Normalmente eu lido com os problemas de uma forma ou de outra.							
2	Sou capaz de depender de mim próprio/a mais do que de qualquer outra pessoa.							
3	Manter-me interessado/a nas atividades do dia-a-dia é importante para mim.							
4	Posso estar por conta própria se for preciso.							
5	Sinto-me orgulhoso/a por ter alcançado objetivos na minha vida.							
6	Sou amigo/a de mim próprio/a.							
7	Sinto que consigo lidar com várias coisas ao mesmo tempo.							
8	Sou determinado/a.							
9	Raramente me questiono se a vida tem sentido.							
10	Vivo um dia de cada vez.							
11	Posso passar por tempos difíceis porque enfrentei tempos difíceis antes.							
12	Tenho autodisciplina.							
13	Mantenho-me interessado/a nas coisas.							
14	Geralmente consigo encontrar algo que me faça rir.							
15	A confiança em mim próprio/a ajuda-me a lidar com tempos difíceis.							
16	Numa emergência, sou alguém com quem geralmente as pessoas podem contar.							
17	Normalmente consigo olhar para uma situação de várias perspetivas.							
18	Por vezes obrigo-me a fazer coisas quer queira quer não.							
19	A minha vida tem um propósito.							
20	Eu não fico obcecado/a com coisas que não posso resolver.							
21	Quando estou numa situação difícil, normalmente consigo encontrar uma solução.							
22	Tenho energia suficiente para fazer o que deve ser feito.							
23	Não tenho problema com o facto de haver pessoas que não gostam de mim.							

to that presented in the original scale (0.91) and is higher than the alpha reported by the version validated for Portuguese adolescents (Felgueiras, 2008), which was of 0.82. The fact that this instrument generates high alpha values in different adaptations shows that the estimated reliability of the data is also high, since it informs about the accuracy of the instrument through repeated use, in different samples, and proves the validity of the inferential process.

As for scores, we observed a mean value of 132.44, showing good levels of resilience. Factor analysis ensured construct validity, reducing the 23 variables to a smaller dimension (verifying adequacy, sphericity and commonality). A total of 4 factors emerged explaining 47,172% of the variance, and by which the 23 variables were distributed through the varimax method, being the Cronbach's alpha values for each factor satisfactory. The items' sensitivity was assessed through the analysis of the asymmetry and flattening coefficients. The temporal stability of the scale was still guaranteed, even though resilience is not immutable and can vary throughout life.

The main limitation (as stated Wagnild & Young) is the fact that scale is sensitive to resilience as a positive aspect of adaptability, but it is not as sensitive to lower values of resilience: i.e. empirically it is not as sensitive as to assess theoretical aspects of low resilience and actual lower resilience levels, thus it would be interesting to further explore this in future studies.

Adaptação da "The Resilience Scale" para a população adulta portuguesa1

Resumo: Este artigo descreve a adaptação da "The Resilience Scale" para portugueses adultos. Procedeu-se à retradução e validação psicométrica. Fez-se pré-teste e reteste. Obteve-se equivalência linguística/conceptual e validação psicométrica com alpha de Cronbach 0,868 para 23 itens, sugerindo consistência interna. A análise fatorial agrupou 23 variáveis em 4 fatores: I – Perseverança; II – Sentido de vida; III – Serenidade; IV – Autossuficiência e autoconfiança, com valores alpha de Cronbach satisfatórios para cada fator. Verificou-se sensibilidade dos itens através do coeficiente de assimetria e achatamento e comprovou-se a estabilidade temporal. A escala revela boas características psicométricas aferindo níveis de resiliência nesta população.

Palavras-chave: Resiliência. Adaptação de testes (Portugal). Adultos.

Adaptation du "The Resilience Scale" pour la population adulte portugaise

Résumé: Cet article décrit l'adaptation du "The Resilience Scale" pour Portugais adultes. S'est procédée à la retraduction et à la validation psicométrique. Il s'est fait pré-teste et reteste. Il s'est obtenu équivalence linguistique/conceptuelle et validation psicométrique avec alpha de Cronbach 0.868 pour 23 items, en suggérant consistance interne. L'analyse factorielle a regroupé 23 variables dans 4 facteurs: I – Persévérance; II – Sens de vie; III – Sérénité; IV – Autosuffisance et autoconfiance, avec des valeurs alpha de Cronbach satisfaisante pour chaque facteur. Il s'est vérifié de la sensibilité des items à travers le coefficient d'asymétrie et de la platitude et s'est vérifié la stabilité séculière. L'échelle révèle de bonnes caractéristiques psicométriques en examinant les niveaux de résilience dans cette population.

Mots-clés: Résilience. Test de adaptation (Portugal). Adultes.

Adaptación de la "Escala de Resiliencia" para el adulto portugués

Resumen: Este artículo describe la adaptación de la "Escala de la Resiliencia" para el adulto portugués. La escala fue sometida a retradición (equivalencia lingüística y conceptual), a validación psicométrica (n= 365), a preprueba y reteste. no consiguió equivalencia lingüística/conceptual y validación psicométrica con alpha de Cronbach 0.868 para el 23 variables, sugiriendo consistencia interna. El análisis fatorial agrupó 23 variables en 4 fatores: I – Perseverencia; II – Sentido de vida; III – Serenidad; IV – Autosuficiencia y autoconfianza, con valores alpha de Cronbach satisfactorios. La sensibilidad (coeficiente del achatamiento y asimetría) fue verificada. La estabilidad secular de la escala es buena. La escala divulga buenas características psicométricas y examina niveles de resistencia en esta población.

Palabras-clave: Resiliencia. Adaptación de test (Portugal). Adultos.

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