

## Reasons for Retirement and Retirement Satisfaction

Silvia Miranda Amorim  & Lucia Helena França\* 

*Universidade Salgado de Oliveira – UNIVERSO, Niterói, RJ, Brasil*

**ABSTRACT** - This study aims to verify the validity of the retirement satisfaction inventory (RSI) for Brazilians and its invariance with regard to gender, age, education, marital status, income and region of the country, and to investigate whether the reasons for retirement influence a person's retirement satisfaction. A total of 1,002 retirees participated in the study, including both men and women ranging in age from 44 to 88. The analyses indicated RSI being subdivided into two scales: i) the scale of satisfaction with retirement, and (ii) the reasons for retirement with good psychometric characteristics. The latter was found to be a predictor of the former. The instruments were structured differently than in other countries, but they were shown to be applicable in the Brazilian context, especially with regard to assessing interventions such as retirement preparation programs.

**KEYWORDS:** retirement, satisfaction, aging, organizations

## Razões para Aposentar e Satisfação na Aposentadoria

**RESUMO** - O objetivo desse estudo foi verificar evidências de validade do inventário de satisfação na aposentadoria (RSI) para os brasileiros e sua invariância em função de sexo, idade, escolaridade, estado civil, renda e região do país, além de investigar se as razões para aposentar influenciariam a satisfação na aposentadoria. Participaram 1002 aposentados, 44 a 88 anos, homens e mulheres. As análises indicaram o RSI sendo subdividido em duas escalas: i) escala de satisfação na aposentadoria e ii) razões para aposentar com boas características psicométricas, sendo a última escala preditora da primeira. Os instrumentos apresentaram uma estrutura diferente da encontrada em outros países, porém demonstraram aplicabilidade no contexto brasileiro, principalmente, na avaliação de intervenções como programas de preparação para a aposentadoria.

**PALAVRAS-CHAVE:** aposentadoria, satisfação, envelhecimento, organizações

Population aging in various countries has led to a growing number of studies on this topic. This change is primarily due to declining mortality and birth rates and to improvements in populations' quality of life (World Health Organization [WHO], 2018).

Brazil is undergoing an accelerated process of aging, with life expectancy increasing from 54 to 75 years between 1960 and 2016, according to data from the Brazilian Institute of Geography and Statistics (IBGE, 2017). This is a cause for celebration, but also presents many challenges. In addition to the question of how to meet the basic care needs of the elderly, the fact that an ever larger number of people may retire and continue living for many years after retirement requires attention (WHO, 2018). Retirement is a complex and crucial period for those who experience it, and measures are needed to promote the well-being of this segment of the

population (France & Hershey, 2018; Yeung & Zhou, 2018; Yeung & Zhou, 2017).

Well-being has been linked to living conditions that are appropriate with respect to culture, values and individual expectations, with positive psychology serving as the most important theoretical contribution to focusing on human virtues and qualities as a counterpoint to illness and suffering (Silva & Boehs, 2017). Studies of well-being take two distinct approaches: subjective well-being and psychological well-being (Mendonça, Ferreira, Porto, & Zanini, 2012). The subjective well-being approach seeks to understand how people assess their own lives (Diener, Emmons, Larsen, & Griffin, 2000; Diener, Eunkook, Richard, & Heidi, 1999). These authors developed the idea of well-being as composed of emotions and overall judgments or important domains of life. This concept of well-being expresses one perspective

\* E-mail: [lucia.franca@gmail.com](mailto:lucia.franca@gmail.com)

■ Submetido: 02/07/2018; Aceito: 20/04/2019.

that considers a theory of positive or negative emotions, and another based on cognition implemented through satisfaction assessments.

Positive psychology's contributions to retirement studies are just beginning to gain attention. Satisfaction with retirement has been conceived as a subjective sense of well-being, indicating how the individual understands his or her quality of life at the moment. The concept of satisfaction with retirement therefore gives greater consideration to life experiences and the quality of retirement than to the retired person's living conditions (Dorfman, 1995; Quick & Moen, 1998). Unlike adjustment or adaptation to retirement, retirement satisfaction does not represent a process, but is rather an indicator of well-being and contentment with retired life (Price & Joo, 2005). Van Solinge and Henkens (2008) draw a distinction between these constructs, arguing that it would be possible, for example, for a person to adjust to the status of retirement without being satisfied or enjoying it.

Recent studies of well-being in retirement have considered aspects related to personal resources such as health (Amorim, França, & Valentini, 2017) financial resources (França & Hershey, 2018), social and family relationships (Price & Joo, 2005), psychological and motivational aspects (Van Solinge & Henkens, 2008), and leisure activities in which a person engages (Amorim et al., 2017; Earl, Gerrans, & Halim, 2015), among others. In addition, studies have emphasized how well-being is affected by differences in socio-demographic characteristics such as age, gender, education, marital status and family income (Cho & Lee, 2013; Noone, O'Loughlin, & Kendig, 2013; Pinquart & Schindler, 2007; Price & Joo, 2005; Quick & Moen, 1998; Van Solinge & Henkens, 2008). Dingemans and Henkens (2015) and Price and Joo (2005), for example, found differences between having or losing a partner during retirement, while Pinquart and Schindler (2007) observed a decline in satisfaction with advancing age. However, these authors emphasize the importance of studying these variables in the context of culture and the individual's specific resources.

The way in which retirement came about and the reasons for the individual's decision to retire also influence his or her perception of well-being. Some studies show, for example, that unplanned or involuntary retirement can have negative consequences (Dingemans & Henkens, 2015; Earl et al., 2015; Yeung & Zhou, 2017). It is emphasized that retirement decisions may be influenced by family and individual issues related to financial, health, educational or work circumstances or to the organization from which the person retires (Dal Bianco, Trevisan, & Weber, 2015; Guerson, França, & Amorim, 2018; Noone et al., 2013; Pinquart & Schindler, 2007; Ruzik-Sierdzińska, 2018; Yeung & Zhou, 2017).

Despite recent contributions to the progress of the literature on the topic, there are still many gaps in the instruments used to study retirement. In Brazil, the development of instruments seems to focus on the individual's background and planning for retirement (França, 2008; Leandro-França, Murta, & Iglesias, 2014; Rafalski & Andrade, 2017). With regard to satisfaction with life or well-being, most studies conducted to date in Brazil and internationally have reported on overall assessments of the construct (Amorim & França, 2019; Cho & Lee, 2013; Dingemans & Henkens, 2015; Earl et al., 2015; Noone et al., 2013).

Until the present, only two instruments for assessing satisfaction with retirement have been found, both of them developed internationally. The first instrument developed in this field was the Retirement Descriptive Index (RDI; Smith, Kendall, & Hulin, 1969), which assesses satisfaction with work and retirement through questions about activities, work, financial situation, health and interpersonal relations. Almost three decades after the creation of the RDI, Floyd et al. (1992) developed a specific inventory for satisfaction with retirement, the Retirement Satisfaction Inventory (RSI). This second instrument considers work functions prior to retirement, adaptation to changes, the reasons for retirement, satisfaction with life in retirement, sources of amusement and leisure and physical activities.

The RSI was developed through semi-structured interviews with 40 Americans, producing an inventory of 51 items (Floyd et al., 1992). The same study tested the inventory with 302 retired people, with factorial analysis identifying three internally consistent and reliable dimensions: reasons for retirement, satisfaction with life in retirement and leisure sources. In the 1990s, the RSI was adapted for use with French retirees (Fouquereau, Fernández, & Mullet, 1999), and, more recently, with Spanish retirees (Muñoz, Díaz, & la Hela, 2011), demonstrating good evidence of validity in both cases.

To minimize the existing gaps in knowledge, the general aim of this study was to translate the RSI to Portuguese and test its validity with a sample of retired Brazilians. The specific goals were: (i) to verify the validity of the RSI for use with Brazilian retirees; (ii) to verify how the reasons for retirement influence satisfaction with retirement; and (iii) to verify the invariance of the instruments with regard to gender, age, education, income and region of residence, given that an important statistical assumption is that the instruments are equally valid for all subjects in the sample (Valentini, Franco, & Iglesias, 2017).

This study seeks to contribute to the literature in three ways. First, it represents a step forward in developing assessments of life satisfaction for specific groups of people, taking into consideration their beliefs, values, goals and needs (Diener et al., 2000; Diener et al., 1999). Second, the translation of this instrument into Portuguese for use with

Brazilian retirees makes it possible to use and compare it in different contexts (Poortinga, 1989). Finally, it contributes to a deeper understanding of satisfaction with retirement,

the need for which has been emphasized in previous studies (Amorim & França, 2019; Sigauw, Sheng, & Simpson, 2016).

## METHODS

### Participants

The study included 1,002 retirees throughout Brazil. The sample included more women (54%) than men, ranging in age from 44 to 88 years old, with an average age of 62 (SD=6.59). Most of the participants were college-educated, and a third held graduate degrees. One-fourth of the respondents had a high school education, and a small minority (3%) had only elementary education. Most of the participants (73%) were married or lived with partners, and a minority (27%) described themselves as single, divorced or widowed.

When asked about family income, many of the participants (42.7%) reported a monthly income more than nine times the Brazilian minimum wage, followed by a group of almost the same size (43.6%) receiving between three and nine times the minimum wage; a small minority (13.7%) reported receiving less three times the minimum wage per month. This distribution of income does not reflect the country's population as a whole, as many retired Brazilians receive only one minimum wage.

In keeping with the population distribution of Brazilian retirees (IBGE, 2017), the largest group in the sample (43.5%) lives in the southeast region, followed by 25% in the northeast, 17.5% in the south, 9.4% in the center-west, and 5% in the north. At the time of data collection, most of the participants' (74%) were completely retired, and one fourth were still working.

In order to perform the exploratory and confirmatory analyses, two random sub-samples were created by a stratified randomization according to region of residence; the sub-samples included 401 and 601 retirees, respectively. The data from the general sample and sub-samples are shown in Table 1.

### Instruments

**Satisfaction with retirement.** Satisfaction with retirement was measured in this study by an adapted version of the Retirement Resources Inventory (RSI) developed by Floyd et al. (1992). The original version assesses 51 items grouped in three scales that are internally consistent and show a moderate rates of test-retest reliability within a 14-day period (0.56 – 0.77) [Reasons for retirement (0.61 – 0.80); Satisfaction with life in retirement (0.57 – 0.78) and Sources of enjoyment (0.65 – 0.83)].

For this study, the items on the sources of enjoyment scale were combined with the items on the reasons for retirement scale, generating an inventory composed of two scales: (i) reasons for retirement and (ii) satisfaction with life in retirement. Two items were inserted in the scale of reasons for retirement: "Due to the weak health of a father, mother, mother-in-law, father-in-law or close family member," and "Participation in other groups and associations." These items were included for the purpose of addressing the importance of social relationships for Brazilians, based on previous studies that demonstrate the importance of this aspect for Brazilian retirees (Amorim et al., 2017; França, 2008; Rafalski & Andrade, 2017). Thus, the scale grew from 29 to 31 items.

The following items were included in the scale of satisfaction with life in retirement: "The state of leisure services available," "Access to education," "Respect for the citizen's dignity," "Urban accessibility" and "Quality of the environment." These items were included with the aim of covering relevant social indicators, theoretically grounded in the construct of the collective quality of life, which holds that the individual needs to assess his or her life in light not just of his or her individual resources, but of the services and environment offered by the society in which the person lives (França, 2008). In addition, the items "Relationships with family (parents) and "Relationships with family (sons, daughters, grandchildren) were combined into a single item "Relationship with family (parents, brothers and sisters, in-laws, etc.)" to streamline the scale. The final scale included 15 items.

### Procedures

**Translation.** The RSI was translated using the back-translation method, in which the questions are translated into Brazilian Portuguese and then back into English (the original language) and the two versions are compared to verify the conceptual equivalence between the two English versions (Yu & Yang, 2015). The scale was first translated into Portuguese by two Brazilian psychologists who are fluent in English and have conducted research on the topic of retirement. The back-translation of the Portuguese version into English was done by a Brazilian psychologist living in Europe who is fluent in Portuguese and English. A group of four Brazilian psychologists who have conducted research on this topic compared the original version, the

Table 1  
Sociodemographic Characteristics of the Total Sample and Sub-Samples

Variables	Total sample (n = 1002)	Sub-sample 1 (n = 401)	Sub-sample 2 (n = 601)
<b>Gender</b>			
Male	46.2	39.7	50.5
Female	53.8	60.3	49.5
<b>Age</b>			
Average (Standard Deviation)	61.9 (6.6)	61.6 (6.3)	62.1 (6.8)
44 - 55 years	16.1	16.7	15.5
56 - 65 years	56.6	56.7	55.6
66 - 75 years	23.7	23.3	25.0
76 - 88 years	3.6	1.8	3.8
<b>Marital status</b>			
Married or stable partnership	73.0	69.8	75.1
Single, divorced or widowed	27.0	30.2	24.9
<b>Level of education</b>			
Early elementary	0.3	-	0.5
Elementary school	2.6	1.7	3.2
High school	25.2	24.7	25.5
College	42.2	40.1	43.5
Graduate study	29.8	33.4	27.3
<b>Income</b>			
Up to 1 minimum wage	1.8	1.7	1.8
1 - 3 minimum wages	11.9	12.0	11.8
3 - 6 minimum wages	23.5	22.4	24.2
6 - 9 minimum wages	20.1	24.7	17.0
9 - 12 minimum wages	16.4	14.5	17.7
12 - 15 minimum wages	10.2	10.0	10.3
More than 15 minimum wages	16.1	14.7	17.2
<b>Region</b>			
South	17.5	18.0	17.2
Southeast	43.5	43.4	43.5
Center-west	9.4	9.0	9.7
Northeast	24.9	24.9	24.8
North	4.8	4.7	4.8

translation, the back-translation and the adaptation to the Brazilian context.

**Data collection.** The research was submitted to the Research Ethics Committee of the authors' institution and approved on 12/16/2015 under the CAAE number 51932015.5.0000.5289. All participants were treated in accordance with the ethical procedures specified by the American Psychological Association (APA). After the project received approval, the data was collected online using a form on the GoogleDocs platform. The retirees were invited to participate by messages and e-mails, located after the dissemination of the research project through social networks in collaboration with companies and associations, through the use of the snowball method, in which the

participants themselves passed the form on to other retirees (Costa, 2018). Those who agreed to participate in the study were given access to and signed the Free and Informed Consent Terms containing all the required information about the study and guarantees that their responses would be treated with confidentiality and anonymity. The only criterion for inclusion was being retired.

### Data Analysis

The database was first cleaned and incomplete or extreme cases were verified; none of the questions were omitted. Because this was the first application of the RSI in the Brazilian context, it was decided to perform exploratory

factor analyses (EFA) with a sub-sample of 401 participants using the Factor program, version 10. This was followed by confirmatory factor analysis (CFA) with a sub-sample of 601 participants using the MPlus version 6 program, for the purpose of identifying with the best fit. In both the EFA and CFA, the comparative fit index (CFI), goodness-of-fit index (GFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), chi-square and weighted root mean square residual (WRMR) were assessed following Byrne's recommendations (2001) for well-adjusted models.

The difference between means and variance between groups was tested with multigroup factor analysis using the programs R version 3.1.2 and RStudio version 0.99.892. Evidence of internal validity was sought by performing correlations among the RSI factors and analyzing the resulting mean variance. As suggested by Miles and Shevlin, the following criteria were used: low correlation (between 0.10 and 0.29), moderate correlation (between 0.30 and 0.49) and high correlation (greater than 0.50).

## RESULTS

In order to confirm or refute the proposed structure of the instrument, exploratory and confirmatory factor analysis of the two scales (reasons for retirement and satisfaction with retirement) were carried out separately.

### Exploratory Factor Analysis

Exploratory factor analyses was performed on the results shown by parallel analysis, following the reasoning that the empirical eigenvalues should be greater than the random ones, indicating that the factors be extracted before random eigenvalues became greater than the empirical ones. Oblimin rotation was used, as recommended for correlated variables and considering commonalities greater than 0.20 (Damasio, 2012).

Of the 31 items originally on the scale of reasons for retirement, 13 were excluded on the criterion of commonalities; at the end, a structure of three factors and 19 items was found that explained 58% of the total variance, with acceptable adjustment rates ( $\chi^2(\text{gl})= 532.9(171)$ ; CFI= 0.89; RMSEA = 0.09) (see Table 2). The structure found made it possible to call the three factors: (i) time for relationships; (ii) reduction in stress; and (iii) time for other activities.

On the scale of satisfaction with retirement, 14 items remained in a structure of three factors that explained 65% of the total variance with good adjustment rates ( $\chi^2(\text{gl})= 244.1(52)$ ; CFI= 0.93; RMSEA = 0.06) (see Table 3). The structure found made it possible to call the three factors: (i) satisfaction with individual resources; (ii) satisfaction with relationships; and (iii) satisfaction with collective resources.

Table 2  
Factorial Loads and Commonalities of the Items in the Reasons for Retirement Scale (n=401)

Items	Factorial loads			h2
	F1	F2	F3	
1. To have time for my own interests	0.85			0.76
2. To have control over my life	0.75			0.67
3. To have time for family	0.75			0.57
4. To have time with friends	0.72			0.59
5. To make room for younger people	0.38			0.23
6. Because my retirement income is sufficient	0.37			0.24
11. Because of the excessive stress of work		0.56		0.31
20. To travel more		0.42		0.42
21. To take better care of myself		0.58		0.64
22. To have less stress		0.86		0.79
23. To relax more		0.82		0.85
24. To not have to work		0.47		0.23
25. To not have a boss to obey		0.49		0.27
26. To spend more time by myself		0.36		0.22
27. To do volunteer work			0.66	0.47
28. To have time for other activities			0.34	0.57
29. To participate in groups of retirees			0.70	0.51
30. To participate in other groups or associations			0.88	0.78
31. To have time to reflect			0.49	0.43



Table 3

*Factorial Loads and Commonalities of the Items in the Retirement Satisfaction Scale (n=401)*

Items	Factorial loads			h <sup>2</sup>
	F1	F2	F3	
1. Physical health	0.79			0.60
2. Personal safety	0.72			0.59
3. Engaging in physical activities	0.68			0.47
4. Financial circumstances	0.69			0.50
5. Quality of residence	0.66			0.90
6. Health of a spouse or partner		0.93		0.91
8. Marital status (married/partner)		0.93		0.43
9. Situation of education and health services			0.75	0.65
10. Situation of community services			0.67	0.63
11. Situation of leisure services			0.70	0.66
12. Quality of the environment			0.70	0.59
13. Urban accessibility			0.83	0.70
14. Access to education			0.83	0.74
15. Respect for the dignity of the citizen			0.80	0.66

## Confirmatory Factor Analysis

To confirm the exploratory factor analysis, confirmatory factor analysis was performed on a randomly selected sample of 601 respondents. All the models used the weighted least squares mean and variance adjusted estimator (WLSMV), a refinement of the weighted least squares estimator (WLS) which assumes that the ordinal variables observed are results from a set of underlying continuous variables with the lowest level of bias (Beauducel & Herzberg, 2006).

The adjustment rates were found to be acceptable for the scale of reasons for retirement ( $\chi^2(\text{gl})=1093.45(149)$ ; CFI=0.82; TLI=0.79; RMSEA=0.10) and good for the scale of satisfaction in retirement ( $\chi^2(\text{gl})=507.62(74)$ ; CFI=0.90; TLI=0.88; RMSEA=0.01). The model by which the reasons for retirement were a predictor of satisfaction in retirement showed good adjustment rates ( $\chi^2(\text{gl})=1952.17(488)$ ; CFI=0.94; TLI=0.93; RMSEA=0.07), as shown in Figure 1.

## Validity of the Model

After the model with the best fit had been identified by modeling structural equations, the average variance extracted (AVE) and the correlations among the latent variables were calculated (table 4). The AVE indicated that, on average, the factors explained more than 50% of the variance of the items. With regard to relations among the variables, one can see that the AVE values were greater than the determination coefficients ( $r^2$ ) among the latent variables (i.e.,  $\text{AVE} > r^2$ ).

These results indicate the absence of multicollinearity and provide evidence of the internal validity of the instruments and their factors.

## Analysis of Invariance

The analyses of invariance were performed for the purpose of testing differences in the means and variances among groups of variables: gender, education, household income and region of the country. According to Valentini et al. (2017), configural invariance involves a model with a fixed number of factors and items; metric invariance involves fixed factor loads; and scale invariance involves fixed intercepts.

With regard to the scale of reasons for retirement, the results of the chi-square test were significant for configural, metric and scale invariance with regard to the variables of gender, age, marital status, education and region of the country, which would indicate heterogeneity due to these variables. However, the model's indices of fit were not suitable for the data, supporting the model of invariance for this instrument.

With regard to the scale of satisfaction with retirement, the results of the chi-square test were not significant for configural, metric and scale invariance with regard to the variables of age, marital status, education and region of the country, which would indicate heterogeneity due to these variables. With regard to the variable of gender, both the chi-square test and the model's fit indices were reasonable, indicating possible variance, as shown in Table 5.

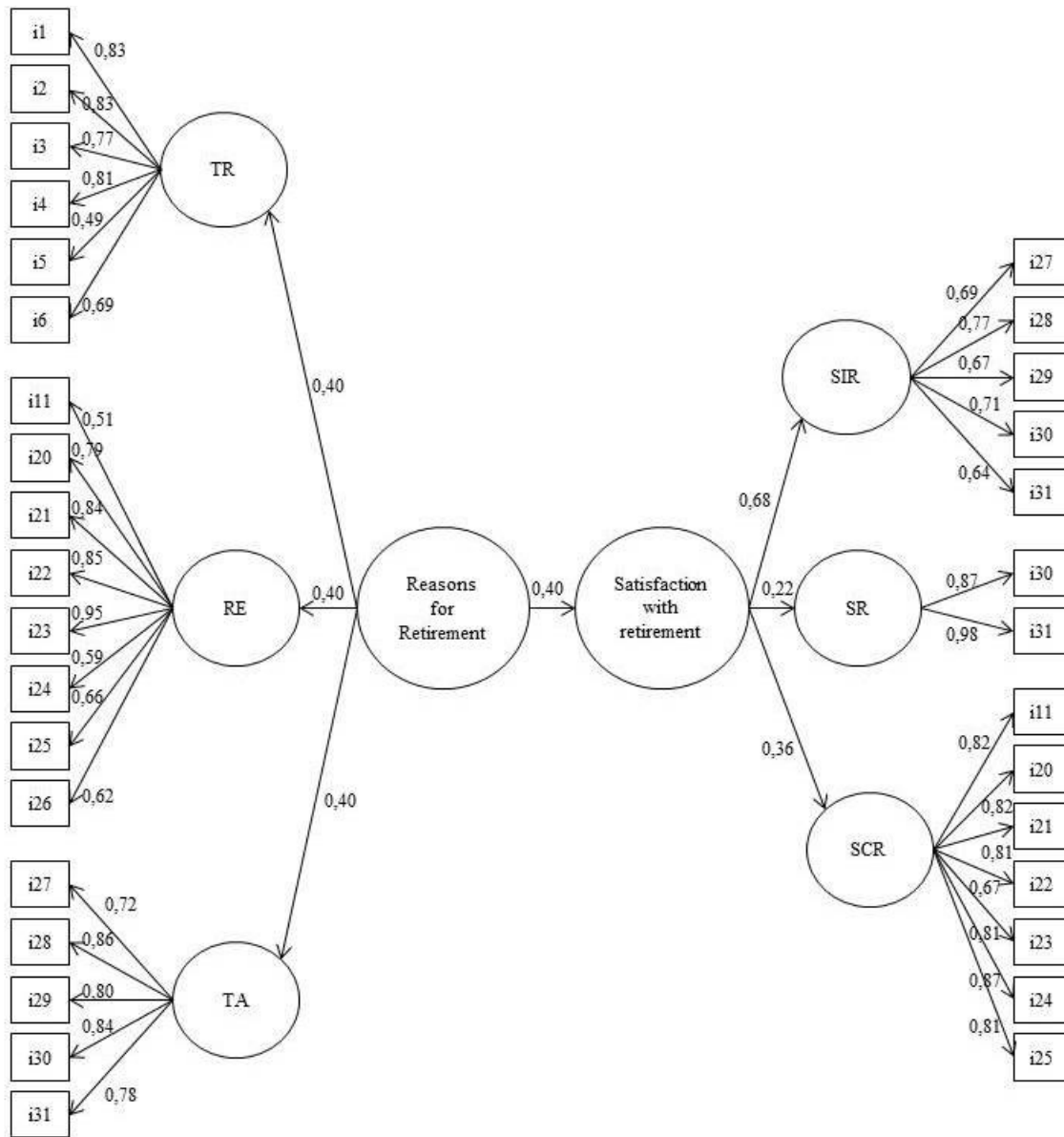


Figure 1. Model of Reasons for Retirement as a Predictor of Retirement Satisfaction (n=601)

Note: TR: Time for relationships; RE: Reduction of stress; TA: Time for other activities; SIR: Satisfaction with individual resources; SR: Satisfaction with relationships; SCR: Satisfaction with the collective resources

Table 4

Average Variance Extracted (AVE), Correlations among Factors in the Scale of Reasons for Retirement and Retirement Satisfaction (Below the Diagonal) and Determination Coefficients (Above the Diagonal) (n = 601)

	AVE	R1	R2	R3	S1	S2	S3
R1 - Time for relationships	0.56		0.06	0.11	0.09	0.01	0.01
R2 - Reduction of stress	0.55	0.25*		0.06	0.01	0.01	0.01
R3 - Time for other activities	0.64	0.37*	0.24*		0.02	0.01	0.01
S1 - Satisfaction with individual resources	0.49	0.28*	0.08*	0.16*		0.02	0.04
S2 - Satisfaction with relationships	0.86	0.05	0.01	0.01	0.15*		0.01
S3 - Satisfaction with the quality of collective life	0.64	0.09*	0.04*	0.05*	0.21*	0.11*	

Note: \*p<0.05

Table 5  
 Configural, Metric and Scalar Invariance for Gender, Education, Family Income and Region of Residence ( $n = 601$ )

Variables	Sale of Reasons for Retirement			Scale of Satisfaction with Retirement		
	$\chi^2$	CFI	RMSEA	$\chi^2$	CFI	RMSEA
<b>Gender</b>						
Configural	13345.8	0.81	0.11	619.4*	0.89	0.03
Metric	1360.7	0.81	0.10	640.6*	0.89	0.03
Scalar	13398.9*	0.80	0.10	657.9*	0.85	0.03
<b>Age</b>						
Configural	1649.7*	0.72	0.16	854.1	0.87	0.11
Metric	1828.1*	0.69	0.16	889.5	0.87	0.11
Scalar	1891.8*	0.69	0.15	929.3	0.87	0.10
<b>Marital status</b>						
Configural	921.8*	0.81	0.11	626.7	0.87	0.10
Metric	1018.9*	0.79	0.12	638.3	0.87	0.10
Scalar	3607.8*	0.15	0.24	654.3	0.87	0.09
<b>Level of education</b>						
Configural	2682.2*	0.67	0.17	2086.2	0.67	0.17
Metric	2203.0*	0.66	0.17	2203.0	0.66	0.17
Scalar	2310.3*	0.64	0.16	2310.3	0.64	0.16
<b>Family income</b>						
Configural	2558.8*	0.62	0.19	1522.6	0.79	0.15
Metric	2666.4*	0.61	0.18	1592.7	0.79	0.14
Scalar	2868.0*	0.59	0.18	1750.5	0.78	0.14
<b>Region of the country</b>						
Configural	1899.6*	0.69	0.16	1899.6	0.69	0.16
Metric	1979.1*	0.69	0.16	1979.1	0.69	0.16
Scalar	2075.5*	0.68	0.15	2075.5	0.68	0.15

Note: \* $p < 0.005$

## DISCUSSION

This study included more than a thousand Brazilian retirees living in all the regions of the country, with the aim of verifying evidence of the validity of the RSI for use with Brazilians and their invariance in terms of gender, age, marital status, education, income and region of the country, and to investigate whether the reasons for retirement influence an individual's satisfaction with retirement. The results indicated two scales with good psychometric characteristics and invariance for the socio-demographic variables described above, except for gender in the scale of satisfaction with retirement.

The exploratory and confirmatory analyses and the internal validity analyses provided support for meeting the first objective: the scale of reasons for retirement and the scale of satisfaction with retirement showed good fit separately, confirming the model in which the reasons for retirement, such as having more time for relationships, reducing stress and having more time for other activities like voluntary work, are predictors of satisfaction with

retirement. This result contradicts the structures presented by studies in other countries (Floyd et al., 1992; Fouquereau et al., 1999; Muñoz et al., 2011), but supports the literature that argues that the reasons for retirement are a determining factor for well-being during retirement (Dingemans & Henkens, 2015; Noone et al., 2013).

This confirms the importance given by the literature to family and social issues, time for leisure, and the characteristics of the individual's work as relevant to the retirement decision (Guerson, et al., 2018; Noone et al., 2013; Pinquart & Schindler, 2007; Yeung & Zhou, 2017). Dal Bianco et al. (2015) point out that the low quality of work is related to a desire to retire as soon as possible, Ruzik-Sierdzińska (2018) emphasize the impact that work can have on the worker's health, and Guerson et al. (2018) highlight how positive work-related feelings like productivity contribute to a decision to remain at work. These results show the need for company policies that allow workers to stay on the job if they wish.



França (2008) found that positive attitudes (or perceptions of gains) with regard to retirement include having more time for relationships, volunteer work and leisure activities, as well as freeing oneself from work-related responsibilities, commitments and pressure. Similarly, negative attitudes (perception of losses) with regard to retirement such as financial losses and the loss of one's work-related identity have been highlighted by França (2008) as negatively affecting well-being in retirement.

Furthermore, by developing the scale of perceptions of future retirement (EPFA), Rafalski and Andrade (2017) concluded that perceptions of factors such as health, leaving work, finances, personal relationship and losses associated with retirement are important in assessing the future transition. The findings of França (2008) and Rafalski and Andrade (2017) appear to support the conclusion that the aspects addressed by the scale of reasons for retirement do in fact contribute to well-being.

The scale that combines sources of enjoyment and reasons for retirement, called the scale of reasons for retirement in this study, yielded results that suggest this structure is not only theoretically useful (Earl et al., 2015; Amorim & França, 2019), but also statistically sound. In addition to the satisfactory fit indices in the exploratory and confirmatory factor analyses and the absence of multicollinearity, the results showed invariance for all the demographic variables analyzed.

With regard to the scale of satisfaction with retirement, the structure presented differs from other studies (Floyd et al., 1992; Fouquereau et al., 1999; Muñoz et al., 2011) that proposed factors related to satisfaction with available resources such as family, activities and services. In the Brazilian sample, the results found for three factors on this

scale (satisfaction with individual resources, satisfaction with relationships and satisfaction with the quality of collective life) were expected, due to the addition of items suggested in this study.

These results are in line with the structure found by the scale of changes in behavior of planning for retirement (EMCPA) developed by Leandro-França et al. (2014). This instrument found that planning was explained by occupational-social investment and investment in autonomy and well-being. This parallel demonstrates how important it is for individuals who are preparing for their own retirement to take into consideration the first two factors in the scale of satisfaction with retirement.

The inclusion of the quality of collective life as a theoretically grounded dimension (França, 2008) should be tested in other countries. Also, further refinement is needed to the dimension of satisfaction with relationships, made up of just two items that may not have given as much attention to the family and social activities of retirees as these seem to deserve, given their importance as pointed out by other authors (Amorim et al., 2017; França, 2008; Price & Joo, 2005).

The invariance of the scale of satisfaction with retirement was verified with regard to gender, age, education, income and region of residence, meeting the third objective and the statistical assumption that the instruments are equally valid for all subjects in the sample (Valentini et al., 2017). Gender was the only variable that showed variance in the scale of satisfaction with retirement, not being equally representative for men and women. The scale's invariance with regard to gender therefore merits further study, emphasizing the need to replicate the instrument in other contexts.

## CONCLUSION

Although the study included many participants from all regions of the country, the sample was not representative of Brazilian retirees, as the levels of education and income in the sample were higher than the national average (IBGE, 2017). We can also interpret the differences noted in the socioeconomic level of this sample, which is higher than that of Brazil as a whole. This limitation was due to the fact that the data were collected through the internet; future studies should collect data through a greater variety of methods to achieve more representative results.

We believe this study met the aims of translating and validating an instrument for assessing satisfaction with retirement among Brazilian retirees, with the reasons for retirement as a predictor. We are therefore making a theoretical contribution to the field of retirement studies and positive psychology, in which research on psychometric assessment is scarce, and providing an instrument for measuring a specific and important segment of the population.

In practical terms, an instrument that can deepen our understanding of Brazilians in retirement is now available at a crucial time and can be used throughout the country wherever assessments are useful, such as in programs that prepare people for retirement.

Future studies should use this instrument in designing more complex research projects. This means models of satisfaction should consider variables related not only to reasons for retirement but also to personal resources, demographic variables of the retirees, characteristics of the individual's work prior to retirement, the activities engaged in during retirement and characteristics of retirement (Amorim & França, 2019).

The comparisons that result from using this instrument in other countries are also essential to verifying whether the proposed structure is applicable to other contexts and discussing the components of satisfaction with retirement. Longitudinal studies are also needed to compare the satisfaction of workers before and after retirement and to include other predictors that

may influence satisfaction in different scenarios and at different times of the participants' lives.

Because retirement is determined by many factors, studies of it must be based on the diversity of variables related to this event. This can undoubtedly contribute to

a more comprehensive understanding the phenomenon in the Brazilian context. New studies may help prioritize both the relevance of the predictors and the urgency with with some aspects must be addressed in planning for retirement in order to ensure the retiree's well-being.

## REFERENCES

- Amorim, S. M., & França, L. H. F. P. (2019). Satisfação na Aposentadoria: Uma revisão sistemática de literatura [Retirement well-being: A systematic review of the literature]. *Temas em Psicologia*, 27(1), 155-172. Doi: 10.9788/tp2019.1-12
- Amorim, S. M., França, L. H. F. P., & Valentini, F. (2017). Predictors of happiness among retired from urban and rural areas in Brazil. *Psicologia: Reflexão e Crítica*, 30(2), 1-8. doi: 10.1186/s41155-016-0055-3
- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New Jersey: Lawrence Erlbaum Associates.
- Cho, J., & Lee, A. (2013). Life satisfaction of the aged in the retirement process: A comparative study of South Korea with Germany and Switzerland. *Applied Research in Quality of Life*, 9(2), 179-195. doi: 10.1007/s11482-013-9237-7
- Costa, B. R. L. (2018). Bola de neve virtual: O uso das redes sociais virtuais no processo de coleta de dados de uma pesquisa científica [Virtual snow ball: Use of social networks in the process of data collection for an academic research project]. *Revista Interdisciplinar de Gestão Social*, 7(1), 15-37.
- Damasio, B. F. (2012). Uso da análise fatorial exploratória em psicologia [The use of exploratory factor analysis in psychology]. *Avaliação Psicológica*, 11(2), 213-228.
- Dal Bianco, C., Trevisan, E., & Weber, G. (2015). "I want to break free". The role of working conditions on retirement expectations and decisions. *European Journal of Ageing*, 12(1), 17-28. doi: 10.1007/s10433-014-0326-8
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (2000). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49(1), 71-74. doi: 10.1207/s15327752jpa4901\_13.
- Diener, E., Eunkook, M. S., Richard E. L., & Heidi L. S. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276-302. doi: 10.1037/0033-2909.125.2.276
- Dingemans, E., & Henkens, K. (2015). How do retirement dynamics influence mental well-being in later life? A 10-year panel study. *Scandinavian Journal of Work, Environment & Health*, 41(1), 16-23. doi:10.5271/sjweh.3464
- Dorfman, L. T. (1995). Health conditions and perceived quality of life in retirement. *Health & Social Work*, 20(3), 192-199. doi: 10.1093/hsw/20.3.192
- Earl, J. K., Gerrans, P., & Halim, V. A. (2015). Active and adjusted: Investigating the contribution of leisure, health and psychosocial factors to retirement adjustment. *Leisure Sciences*, 37, 354-372. doi: 10.1080/01490400.2015.1021881
- Floyd, F. J., Haynes, S. N., Doll, E. R., Winemiller, D., Lemsky, C., Burgy, T. M., Werle, M., & Heilman, N. (1992). Assessing retirement satisfaction and perceptions of retirement experiences. *Psychology and Aging*, 4(2), 609-621. doi: 10.1037/0882-7974.7.4.609
- Fouquereau, E., Fernández, A., & Mullet, E. (1999). The Retirement Satisfaction Inventory: Factor structure in a French sample. *European Journal of Psychological Assessment*, 15(1), 49-56. doi: 10.027//1015-5759.15.1.49
- França, L. H. F. P. (2008). *O desafio da Aposentadoria: o exemplo dos executivos do Brasil e da Nova Zelândia [The challenge of Retirement: The example of executives in Brazil and New Zealand]*. Rio de Janeiro: Editora Rocco.
- França, L. H. F. P., & Hershey, D. (2018). Financial preparation for retirement in Brazil: a cross-cultural test for interdisciplinary financial planning model. *Journal of Cross-cultural Gerontology*, 33(2), 43-54. doi: 10.1007/s10823-018-9343-y
- Guerson, L. R. S. C., França, L. H. F. P., & Amorim, S. M. (2018). Life satisfaction in retirees who are still working. *Paideia*, 28(e2812), 1-8. doi: 10.1590/1982-4327e2812
- Instituto Brasileiro de Geografia e Estatística. (2017). *Síntese dos Indicadores Sociais: Uma análise das condições de vida da população brasileira [Summary of Social Indicators: An analysis of the living conditions of the Brazilian population]*. Brasília: IBGE.
- Leandro-França, C., Giardini Murta, S., & Iglesias, F. (2014). Planejamento da aposentadoria: Uma escala de mudança de comportamento [Planning for retirement: A scale of changes in behavior]. *Revista Brasileira de Orientação Profissional*, 15(1), 75-84.
- Mendonça, H., Ferreira, M. C., Porto, J., & Zanini, D. S. (2012). Saúde, qualidade de vida e bem-estar: Limites e interfaces [Health, quality of life and well-being: Limits and interfaces]. In Ferreira, M. C. & Mendonça, H. (Orgs.) *Saúde e bem-estar no Trabalho: Dimensões individuais e culturais [Health and well-being on the job: Individual and cultural aspects]* (pp 11-34). São Paulo: Casa do Psicólogo.
- Miles, J. N. V., & Shevlin, M. E. (2001). *Applying regression and correlation: A guide for students and researchers*. London: Sage Publications.
- Muñoz, J. J. F., Díaz, A. C., & la Hela, C. M. A. (2011). La transición hacia el retiro: Adaptación en una muestra de prejubilados españoles de la escala Retirement Satisfaction Inventory [The transition to retirement: Adaptation in a sample of Spanish workers approaching retirement in the Retirement Satisfaction Inventory Satisfaction]. *Revista Española de Geriatria y Gerontología*, 46(3), 139-146. doi: 10.1016/j.regg.2010.11.009
- Noone, J., O'Loughlin, K. & Kendig, H. (2013). Australian baby boomers retiring 'early': Understanding the benefits of retirement preparation for involuntary and voluntary retirees. *Journal of Aging Studies*, 27, 207-217. doi: 10.1016/j.jaging.2013.02.003
- Pinquart, M., & Schindler, I. (2007). Changes of life satisfaction in the transition to retirement: A latent-class approach. *Psychology and Aging*, 22(3), 442-455. doi: 10.1037/0882-7974.22.3.44
- Poortinga, Y. H. (1989). Equivalence of cross-cultural data: An overview of basic issues. *International Journal of Psychology*, 24(1), 737-756. doi: 10.1080/00207598908246809
- Price, C. A., & Joo, E. (2005). Exploring the relationship between marital status and women's retirement satisfaction. *The International Journal of Aging and Human Development*, 61(1), 37-55. doi: 10.2190/TXVY-HAEB-X0PW-00QF
- Quick, H. E., & Moen, P. (1998). Gender, employment, and retirement quality: A life course approach to the differential

- experiences of men and women. *Journal of Occupational Health Psychology*, 3(1), 44-64. doi: 10.1037/1076-8998.3.1.44
- Rafalski, J. C., & Andrade, A. L. (2017). Desenvolvimento da Escala de Percepção de Futuro da Aposentadoria (EPFA) e correlatos psicossociais [Development of the Scale of Perception of Future Retirement and psychosocial correlates]. *Psico-USF*, 22(1), 49-62. doi: 10.1590/1413-82712017220105
- Ruzik-Sierdzińska, A. (2018). An attempt to identify factors influencing retirement decisions in Poland. *Acta Universitatis Lodziensi*, 4(336), 43-59. doi: 10.18778/0208-6018.336.03
- Silva, N., & Boehs, S. T. M. (2017). Psicologia positiva: Historicidade, episteme, ontologia, natureza humana e método [Positive psychology: Historicity, episteme, ontology human nature and method]. In S. T. M. Boehs & N. Silva (Orgs.), *Psicologia positiva nas organizações e trabalho: Conceitos fundamentais e sentidos aplicados [Positive psychology in organizations and work: Basic concepts and applications]* (pp. 22-41). São Paulo: Vetor.
- Siguaw, J. A., Sheng, X., & Simpson, P. M. (2016). Biopsychosocial and retirement factors influencing satisfaction with life: New perspectives. *The International Journal of Aging and Human Development*, 0(0), 1-22. doi: 10.1177/0091415016685833
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *The measurement of satisfaction in work and retirement: A strategy for the study of attitudes*. Chicago, IL: Rand McNally.
- Van Solinge, H., & Henkens, K. (2008). Adjustment to and satisfaction with retirement: Two of a kind? *Psychology and Aging*, 23(2), 422-434. doi: 10.1037/0882-7974.23.2.422
- Valentini, F., Franco, V. R., & Iglesias, F. (2017). Introdução à análise de invariância: Influência de variáveis categóricas e intervalares na parametrização dos itens [Introduction to the analysis of invariance: the influence of categorical and interval variables in determining the parameters of items]. In B. F. Damásio & J. C. Borsa (Orgs.), *Instrumentos psicológicos: Manual de desenvolvimento [Psychological instruments: Manual of development]* (pp. 347-376). São Paulo: Vetor.
- Yeung, D. Y., & Zhou, X. (2017). Planning for retirement: Longitudinal effect on retirement resources and post retirement well-being. *Frontiers in Psychology*, 8, 1-14. doi: 10.3389/fpsyg.2017.01300
- Yu, D., & Yang, Y. (2015). Measurement equivalence of a concise customer engagement metric across country, language, and customer types. *Public Opinion Quarterly*, 79, 325-358. doi: 10.1093/poq/nfv009