CHARACTER STRENGTHS IN OLDER ADULTS: A CROSS-CULTURAL STUDY

FORTALEZAS DEL CARÁCTER EN PERSONAS MAYORES: UN ESTUDIO TRANSCULTURAL

Recibido: 5 de enero de 2024 | Aceptado: 13 de julio de 2024

DOI: https://doi.org/10.55611/reps.3503.03

Eduarda Rezende Freitas 1, Altemir José Gonçalves Barbosa 2, Margarida Pedroso de Lima 3

Universidade Católica de Brasília, Brasília, Brazil
 Universidade Federal de Juiz de Fora, Juiz de Fora, Brazil
 Universidade de Coimbra, Coimbra, Portugal

ABSTRACT

Since the introduction of the 24-character strengths (CS) in 2004, they have become the backbone of positive psychology. Despite this large impact, the CS has not been studied extensively in older adults. This paper fills this gap by conducting a cross-cultural study that analyzed CS of Brazilian and Portuguese older adults' samples. CS associations with participants' gender, age, schooling years and psychological well-being were also performed. Seventy-four participants from each country (M = 71.66 years in Brazil, SD = 7.34; M = 72.01 years, SD = 7.55 in Portugal) answered the Values in Action Inventory of Strengths-120 through an individual structured interview or auto fill form. CS profile had a considerable consistency between the samples. In both, Authenticity was a signature CS and Curiosity was positively correlated with psychological well-being. Although there were more similarities between genders, it was possible to identify some gender differences in the Portuguese sample's CS. Very few CS were correlated with age or schooling years. It is suggested to intensify and go deeper into cross-cultural research about CS of older adults.

KEYWORDS: Positive psychology, character strengths, older adults, psychological well-being.

RESUMEN

Desde la introducción de las fortalezas del carácter (FC) en 2004, se han convertido en la espina dorsal de la psicología positiva. A pesar de este importante impacto, las FC no han sido ampliamente estudiadas en personas ancianas. Este artículo llena ese vacío mediante la realización de un estudio transcultural que analizó las FC en muestras de personas adultas mayores brasileñas y portuguesas. También se realizaron asociaciones de las FC con el género, edad, escolarización y bienestar psicológico de las personas participantes. Setenta y cuatro participantes de cada país (*M*=71.66 años, *DE*=7.34 en Brazil; *M*=72.01 años, *DE*=7.55 en Portugal) respondieron el *Values in Action Inventory of Strengths-120* a través de una entrevista estructurada individual o un formulario autocompletado. El perfil de las FC tuvo una consistencia considerable entre las muestras, siendo notable que, en ambas muestras, la Autenticidad fue una FC característica y la Curiosidad se correlacionó positivamente con el bienestar psicológico. Aunque hubo más similitudes entre géneros, fue posible identificar algunas diferencias de género en las FC de la muestra portuguesa. Pocas FC se correlacionaron con la edad o los años de escolaridad. Sugerimos intensificar y profundizar en la investigación transcultural de las FC en personas adultas mayores.

PALABRAS CLAVE: Psicología positiva, fortalezas del carácter, personas adultas mayores, bienestar psicológico.

The study of character strengths (CS)-"backbone" of positive considered the psychology-is fundamental. Peterson and Seligman (2004) proposed 24 CS, which are positive personality traits morally valued across cultures, assigned to six virtues. Wisdom and knowledge are a class of virtues that is made up of the cognitive CS of creativity, curiosity, judgment, love of learning and perspective. These strengths entail the acquisition and use of knowledge. Another virtue is courage, which is made of authenticity, bravery, persistence and zest; emotional strengths that involve the exercise of will to accomplish objectives in the face of external or internal opposition. Humanity is composed of interpersonal CS that involve caring and being friendly with others, namely kindness, love and social intelligence. Justice, another virtue, comprises fairness, leadership and teamwork, which are civic strengths that support healthy community а Temperance is the virtue composed by forgiveness, humility/modesty, prudence and self-regulation, CS that protect against excesses. The last virtue, transcendence, is formed by CS that enable connections to the larger universe and provide meaning, namely appreciation of beauty and excellence, gratitude, hope, humor and spirituality.

According to Niemiec (2017), seven core concepts can be underlined for the CS: (a) common language; (b) dimensionality and context; (c) plurality; (d) all 24 CS matter; (e) different types of strengths; (f) CS can be developed; and (g) being and doing. As stated earlier, CS offer a common language (across cultures) that describes what is best in human beings (common language). Each one is dimensional, which means that it can be graded, and the degree of CS expression is based on the context the person is in [e.g., "Are they in a family context or at work?", "What are the expectations and demands of the situation?" (dimensionality and context)]. People have many CS, each one at a different level, and they are expressed in combinations, so that each person has a unique CS profile (plurality). Each CS is positive, used for the good, associated with positive outcomes, and can be improved (All 24 CS matter). Besides, some studies show that several CS matter more for specific outcomes (Freitas & Barbosa, 2022) and might matter more at a particular period in life (Martínez-Martí & Ruch, 2014). There are different types of strengths, like talents, skills and CS. Furthermore, when taking a deeper look at CS, it is possible to examine its subsets, such as signature strengths (different types of strengths). According to Peterson and Seligman (2004), signature strengths are a subset of strengths that are particularly central to a person's identity. They are characterized by, among other things, a yearning to and an excitement when expressing them and a sense of ownership. Normative changes based on genetics and social role, nonnormative changes, and deliberate interventions focused on enhancing a trait can shift personality traits (CS can be developed). CS can be understood as being and doing because they are related to the person's identity, who he or she is ("being"), and because CS need to be taken into action, it is about putting one's values into action ("doing").

Nowadays, the assessment of all CS can be done through some measuring tools, such as the Escala de Forças de Caráter (Character Strengths Scale in English) (Noronha & Barbosa, 2016) and the Values in Action Inventory of Strengths (VIA-IS) versions (McGrath & Wallace, 2019). The VIA-IS is the most used instrument, available in about 40 languages (Niemiec, 2017) and filled in by over six million people (McGrath & Wallace, 2019).

Since CS were theoretically proposed to be ubiquitously recognized and valued across cultures (Peterson & Seligman, 2004), some researchers have been asking empirically if all of them really are ubiquitous (Biswas-Diener, 2006; McGrath, 2014; Park et al., 2006; Shimai et al., 2006). Biswas-Diener (2006) evaluated CS across three widely different cultures: Kenyan Maasai (n = 123), Inughuit in

Northern Greenland (n = 71), and students at the University of Illinois (n = 519). Participants should indicate whether the strength existed as a concept in their society, and rate its importance; whether they would want their child to have the strength; the existence of institutions or established cultural practices that engender the strength; and whether children, older adults, men, and women could each exhibit each strength. A high rate of agreement about the existence, desirability, importance, and development of most of the CS in these three culturally distinct groups was found.

Shimai et al. (2006) also analyzed cultural influences on CS (e.g., distribution, gender differences, and relationship with happiness) of young adults (18-24 years) from the United States (US) (n = 1099) and Japan (n = 308), who completed the English or Japanese version of the VIA-IS. All participants showed similar distributions of CS, being love, humor, and kindness the higher strengths, and prudence, self-Regulation, and modesty the lesser. Similarities in gender differences across cultures and associations between subjective happiness and zest, hope, curiosity, and gratitude in both samples were found as well.

Another cross-cultural study, using an online version of the VIA-IS, analyzed CS in more than one million adults (M = 35.69, SD = 13.24) from 75 different nations (McGrath, 2014). This study was an update on Park et al. (2006), which analyzed self-reported CS across 54 nations and all states of the United States of America. Both studies suggested a substantial cross-cultural convergence in the endorsement of various strengths. The top five CS-also entitled as signature strengthswere honesty, fairness, kindness, judgment, and curiosity, and the five lowest scores were self-regulation. modestv. prudence. spirituality, and zest (McGrath, 2014). A slight difference was found between these results and those from Park et al. (2006), who reported gratitude as one of the five signature strengths rather than curiosity.

The wide recognition and endorsement of CS importance cross-culturally has several relevant implications. It suggests that CS are more than a western cultural phenomenon and that research and interventions based on the VIA could have widespread appeal and utility (Biswas-Diener, 2006), contributing to the healthiness of peoples and societies all over the world (Waters et al., 2022). CS are foundation of optimal life-lona development and thriving, contributing both to the person and to the community (Park & Peterson, 2009; Peterson & Seligman, 2004). CS can contribute to well-being (Hausler et al., 2017; Wagner et al., 2020), resilience, relationships, and to the collective good, creating strong and supportive "cultures" in families, neighborhoods, and organizations (Niemiec, 2017).

Empirical evidence has shown that the endorsement of CS is significantly related to a higher level of well-being (Martínez-Martí & Ruch, 2014). However, when researchers analyze the relation between CS and well-being, they normally use the concept of life satisfaction—which is an indicator of subjective well-being but is not the only one (Quinlan et al., 2012). More recently, a new framework of well-being suggesting five dimensions that encompass positive emotions, engagement, positive relationships, meaning, and accomplishment, forming the acronym PERMA (Wagner et al., 2020), but the concept of psychological well-being (PWB) is rarely studied.

There is not a consensual definition of what PWB means (Pinar & Oz, 2011). It may, however, be defined as the sense of satisfaction with oneself and that there is an emplacement in the environment for the person and a certain acceptance of what cannot be altered (Lawton, 1975). It is an assessment of life, including autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance (Ryff, 2014). Its associations with decreased mortality (e.g., in healthy and diseased populations) (Chida & Steptoe, 2008) and physical health benefits (e.g.,

reducing risk for disease and promoting length of life) (Ryff, 2014) make PWB a protective factor in positive aging (Bar-Tur, 2021).

Hausler et al. (2017) examined the different relations between various aspects of well-being (subjective well-being, PWB and the six theoretical based aspects of PWB, relationships. engagement, e.g., meaning) and CS in a sample of medical students (n=117) at two points in time. The authors found that CS were more strongly associated with PWB than with subjective well-being, and that hope, zest, gratitude, curiosity, and love-the so-called happiness strengths (Ramzan et al., 2022)-are central to subjective well-being and PWB. The results confirm the existence of a bigger picture to explore about the relation between well-being and CS and possible moderators of this relation (e.g., gender, age, and nationality).

Another study analyzed the relation between CS and PWB with 188 older adult Brazilians (60-92 years; M = 69.62, SD = 7.99) (Freitas & Barbosa, 2022). These participants answered the Brazilian 120-item version of the VIA-IS (VIA-120) (Institute on Character, 2014) and the Brazilian version of the Philadelphia Geriatric Center Morale Scale (Freitas et al., 2016). Teamwork, curiosity, forgiveness, hope, humor, and vitality were the six CS that were significantly and negatively correlated with depressive symptoms. Humor, curiosity, forgiveness, hope, persistence, leadership, modesty, perspective. self-Regulation, social Intelligence, and aest were the 11 CS that significantly correlated with PWB. Freitas (2019) also analyzed the CS among this group of Brazilians and, in addition to associating them with PWB and depressive symptoms, they were related to age and gender. The results showed that all 24 CS seemed to be participants' accentuated traits; the older adults' main CS were honesty, spirituality, gratitude, kindness, and fairness; the lesser CS were love of learning, creativity. perspective, self-regulation, and bravery. There was no gender-biased differences in CS, except with signature strengths (women had five signature strengths, and men, eight, the same five as the women plus three) and the lesser endorsed ones (men had five and women, fifteen, the same five as the men plus another ten). Only self-regulation was positive and significantly associated with age. Martínez-Martí and Ruch (2014) found that some CS are more important than others for well-being (specifically subjective well-being) across the lifespan. However, hope, zest, and humor consistently yielded the highest correlations to well-being in any cohort. Three age subgroups were created. The first comprised participants with ages ranging from 27 to 36, and additionally to hope, zest, and humor, kindness, and honesty were the first five CS. In the second group (37-46 years old), love and leadership were among the first five positions in the ranking, in addition to hope, zest, and humor. In the third group, in which age ranged from 47 to 57, the first five CS were gratitude, love of learning, hope, zest, and humor.

Despite the growing older adult population. there are few studies that analyzed all 24 CS with an exclusively older-adult sample. This type of study that focuses on a specific age group is essential because it helps psychologists and researchers comprehend how a variable, such as CS, behaves in a specific age-cohort. It seems possible to find similarities in CS across countries and ages, for example, but also particularities to each nation and each age-cohort. Thus, the main purpose of the present cross-cultural study was to analyze CS in Brazilian and Portuguese older adult samples. Specifically, we aimed to compare the CS most and least endorsed by older adults in these two countries, the possible differences between genders, and the correlations between the 24 CS with age, education, and PWB. It is important to emphasize that Portugal was Brazil's main colonizer and had a strong influence on Brazilian culture. Therefore. more similarities than differences among the two samples in the distribution of CS (the profile of the strengths, from most to least frequently endorsed), across genders, age,

numbers of schooling years, and PWB are expected to be found.

METHOD

Participants

The Brazilian (n = 74) and Portuguese (n = 74) samples were comprised of the same number of females and males after pairing. Among all respondents, there were more females (72.97%, n = 108) than males (27.03%, n = 40). The mean age of Brazilian sample (M = 71.66, SD = 7.34, ranging from 60 to 87 years) was equivalent [t (148,146) = 0.287, p = .775) to the Portuguese sample (M = 72.01, SD = 7.55, ranging from 60-89 years). However, seniors from Portugal (M = 11.17, SD = 4.95) had more years of schooling [t (144,142) = 2.502, p < .05] than the participants from Brazil (M = 9.14, SD = 4.81). Most Brazilian (58.11%, n = 43) and Portuguese (55.41%, n = 41) respondents were married. In Brazil, the remaining older adults were widowed (25.68%, n = 19), single (12.16%, n = 9) or divorced (4.05%, n = 3). In the Portugal sample, the marital status was widowed (28.38%, n = 21), divorced (12.16%, n = 9) or single (4.05%, n = 3). Thus, Brazilian and Portuguese samples had similar marital status $[\chi 2 (148,3) = 6.148, p = .105]$. Sample from Portugal was selected from educational centers for older adults by availability and snowball sampling. A sampling process paired was then carried out with data from Brazilian older adults who participated in the study of Freitas and Barbosa (2022). These authors used only snowball sampling.

Materials

Demographic Information Questionnaire

We selected demographic information to characterize the sample. Then, we designed a questionnaire with questions on gender, age, education, and marital status.

Character Strengths

To measure individual CS, either the Brazilian or Portuguese 120-item version of

the Values in Action Inventory of Strengths (VIA-120)-the main adult survey offered on the VIA website (Institute on Character. 2014)-as used. In both versions, all the 120 items are rated on a five-point scale, varying from one ("Very much unlike me") to five ("Very much like me"). There are five items for each of the 24 CS, thus the score for each one varies between five and 25 points. Littman-Ovadia (2015) found that VIA-120 shows substantial equivalence in internal reliability and validity compared to the original version with 240 items. She also found that Cronbach's alphas of VIA-120 (mean α = 0.79) are very similar to those obtained for the VIA-IS (mean $\alpha = 0.83$). The sample to estimate the validity (factorial and concurrent) and reliability of the VIA-IS-120 included approximately 5,000 people from around the planet (Littman-Ovadia, 2015), but no specific results are presented for Brazilian, Portuguese, and older adult samples. In this study, it was not possible to calculate the internal reliability of the VIA-IS-120 because we send the raw scores to the Values in Action Institute, complying with the VIA-IS-120 usage policy, and we were only informed on the 24 CS scores not on which items make up each CS.

Psychological Well-being

To analyze PWB, we used the Brazilian (PGCMS-Br; Freitas et al., 2016) or Portuguese (Paúl, 1992) version of the Philadelphia Geriatric Center Morale Scale (PGCMS) (Lawton, 1975). This scale is originally made of 17 items, divided into three factors: agitation, attitude toward own aging, and lonely dissatisfaction. In each item the answers are presented in a dichotomous way; high-morale responses receive a score of 1 and low-morale responses a score of 0. therefore that total score ranges from 0 to 17. Although the factors can be used separately for certain objectives, the overall score is preferable (Lawton, 1975). It is noteworthy that although the PGCMS is considered a measure of PWB (McDowell, 2006), it has also been used to assess subjective wellbeing, satisfaction with life or quality of life (Ma et al., 2010). The PGCMS-Br has evidence of validity based on internal structure and relationship with other variables, as well as a good reliability estimate (kr-21 = 0.991) (Freitas et al., 2016). The Portuguese version of the scale also presents good psychometric properties, with the internal consistency of the subscales varying from $\alpha = 0.71$ to $\alpha = 0.75$ (Paúl, 1992). It should be emphasized that it contains three fewer items compared to the original scale (Paúl, 1992). Thus, when comparing the Brazilian and Portuguese scales, the percentage of the PGCMS answers that denote high PWB was calculated and used instead of the total score. The internal consistency estimated with Kuder-Richardison (kr-21) of the PGCMS was satisfactory for the entire scale for both the Portuguese (0.75) and Brazilian (0.84) samples. It was also satisfactory for the lonely dissatisfaction factor (0.76) in the Portuguese sample. It was low for the factors attitude toward own aging (Portugal: 0.62, Brazil: 0.67), agitation (Portugal: 0.46, Brazil: 0.68) the Brazilian case. and. in Ionely dissatisfaction (0.68).

Procedure

The first author conducted the entire data collection process, both from Brazil and Portugal. Data from Portugal was collected in 2017 with participants aged 60 years or over from seven educational centers for older adults, in the centers themselves, during activity times, and by snowball sampling, a form of non-probability sampling, which uses reference chains (Vinuto, 2014). Initially, key informants, named seeds, were used to locate some people with the necessary profile for the research within the general population. Then, people indicated by the seeds were asked to suggest new contacts with the desired characteristics from their network, and so on. In those cases where participants were contacted through the snowball strategy, data collection occurred on the best day, time, and place agreed. Participants auto filled the instruments using a paper version in a group format.

A paired sample process was then carried out to compose the Brazilian sub-sample. The subject's gender was the first criterion. Subsequently, the approximate age, years of marital schooling, and status considered. Data from Brazil were drawn from the database previously collected and used by Freitas and Barbosa (2022). The sample in this study corresponds to 39% of the Freitas and Barbosa study. Potential participants were contacted by phone or in person (e.g., in community centers), received a general explanation about the research, and, upon agreeing to participate, were scheduled for a day, time, and place (residence, community center, etcetera) for data collection. The participants answered the instruments in an individual, structured interview form.

In both samples, age (60 years or older) and a preserved cognitive status were used as selection criteria. In the Brazilian sample, the Mini-Mental State Examination (MMSE) (Brucki et al., 2003) score was considered to assess cognitive status, and in the Portuguese sample, the absence of subjective memory complaints. MMSE is a screening instrument composed of 30 items that assess cognitive domains, like spatial and temporal orientation, and immediate and evocation memory. Each item is assigned 0 (error) or 1 (correct), with 30 being the maximum score. The cutoff points used were 20 for illiterates; 25 for one to four years of schooling: 26 for five to eight years; 28 for nine to 11 years, and 29 for higher levels of schooling (Brucki et al., 2003). Information regarding **MMSE** psychometric properties (internal reliability, evidence of criterion validity etc.) is available in Lourenço et al. (2008). After collection, all data were tabulated and analyzed, except for VIA which was sent for analysis to the Values in Action Institute. The results were sent by the Institute within a month.

Participants did not receive rewards for taking part in the study. We assured them that their data would remain anonymous and confidential and that they could receive feedback about their profile of CS if they

wanted. Those who agreed to participate in the study voluntarily signed the informed consent. This study fulfills the ethical research standards for Brazil and Portugal. It was approved by a research ethics committee of the Federal University of Juiz de Fora under the number CAAE 14978913.8.0000.5147.

Data Analysis

We used the Statistical Package for Social Sciences (version 21.0) for the statistical analysis, and compared the Brazilian and Portuguese scores of each CS, along with gender differences, through independent samples t-test. We used Pearson's correlation (r) to compare the 24 Brazilian and Portuguese CS and to look for correlations between CS and age, years of schooling, or PWB. The five CS with higher scores are commonly considered the signature CS (SCS) (Peterson & Seligman, 2004) but, in this study, we used a t-test for paired samples to identify them. Therefore, we considered those SCS with higher scores that did not significantly differ from each other but did so from the rest. We adopted similar criteria and analyses for the lesser-endorsed strengths (LES). That is, we considered those with lower scores that did not significantly differ from each other but differed significantly when compared to the rest. We set the level of significance to p = 0.05.

RESULTS

Table 1 provides mean scores for each CS ranked from highest to lowest based on Brazilian respondents. Both the SCS (underlined) and the LES (twice underlined) for older adults from each country are also presented. The correlation between the 24 CS mean scores of both countries was 0.632 (p<.001). The SCS of the Brazilians were spirituality. gratitude. authenticity. kindness, which did not significantly differ from each other [t (73) = 0.681, p = .498 for the spirituality-gratitude pair; t (73) = 1.157, p = .251 for the gratitude-authenticity pair; t(73) =0.522, p = .604 for the authenticity-kindness pair], but significantly differed from fairness [t (73) = 3.016, p < .001]. The LES was love of learning, as this CS significantly differed from perspective [t (73) = 2.413, p < .05].Regarding the Portuguese older adults, the SCS was authenticity, which significantly differed from kindness [t (73) = 3.304, p < .001]. And the LES was perspective, which significantly differed from self-regulation [t (73) = -2.382, p < .051.

TABLE 1. Means and Standard Deviations of Character Strengths and *t* Test for Brazilian and Portuguese Samples.

Character Strongths	Brazil		Port	Portugal	
Character Strengths	М	SD	М	SD	- T test
Spirituality	<u>4.61</u>	0.49	3.66	0.91	7.967*
Gratitude	<u>4.58</u>	0.53	4.10	0.55	5.445*
Authenticity	<u>4.54</u>	0.49	<u>4.55</u>	0.40	0.184
Kindness	4.53	0.49	4.39	0.46	1.732
Fairness	4.43	0.53	4.29	0.52	1.573
Love	4.37	0.54	4.14	0.62	2.418***
Appreciation of Beauty and Excellence	4.36	0.56	3.94	0.58	4.419*
Zest	4.36	0.57	3.87	0.60	5.175*
Hope	4.29	0.54	3.89	0.57	4.417*
Persistence	4.27	0.55	3.92	0.61	3.674*
Prudence	4.24	0.56	3.90	0.61	3.503**
Forgiveness	4.18	0.55	4.00	0.56	1.934
Leadership	4.18	0.59	3.97	0.65	2.069***
Teamwork	4.16	0.48	4.02	0.50	1.753
Social Intelligence	4.15	0.62	3.89	0.58	2.661**
Curiosity	4.15	0.57	3.84	0.57	3.255**
Judgment	4.08	0.62	3.95	0.58	1.349
Humor	4.05	0.78	3.82	0.74	1.840
Humility/ Modesty	4.05	0.61	3.72	0.60	3.257**
Bravery	3.99	0.52	3.82	0.61	1.793

Character Strengths	Br	Brazil		Portugal	
	М	SD	М	SD	– T test
Self-regulation	3.98	0.62	3.57	0.58	4.188*
Creativity	3.91	0.67	3.68	0.66	2.118***
Perspective	3.90	0.68	<u>3.36</u>	0.61	5.038*
Love of Learning	<u>3.66</u>	0.71	3.80	0.62	1.283

Note. Signature Character Strengths; Lesser-Endorsed Strengths; *p < 0.001; **p < 0.01; ***p < 0.05; df = 146.

When gender differences were considered, it was only identified that the Brazilian females had higher mean scores in hope [t (74, 72) =2.212, p <.05]. In Portugal, higher mean scores were observed for women in appreciation of beauty and excellence [t (74, 72) = 2.226, p < .05]. Portuguese males have more prudence [t (74, 72) = 2.392, p < .05], hope [t (74, 72) = 2.175, p < .05] and perspective [t (74, 72) = 2.772, p < .01] than females.

Age was weakly and positively correlated with self-regulation (p < .05) and weakly and negatively correlated with gratitude (p < .05) in

the Brazilian sample (Table 2). For Portuguese older adults, age was weakly and negatively correlated with appreciation of beauty and excellence (p < .05). Regarding the number of schooling years, love of learning (p < .05) was weakly and positively correlated with this variable in both samples. For the Brazilian older adults, schooling also correlated weakly and positively appreciation of beauty and excellence (p < p.05). In the Portuguese sample, weak negative correlations were observed between schooling and prudence (p < .05) and perspective (p < .05). The correlations were moderate negative for gratitude (p < .01) and spirituality (p < .01).

TABLE 2. Correlations Between Character Strengths and Age, Schooling, and Psychological Well-Being for Brazilian and Portuguese Samples.

Character Strengths -		Brazil			Portugal			
	Age	Schooling	PWB	Age	Schooling	PWB		
Appreciation of Beauty and Excellence	028	.231*	031	284*	.164	.009		
Bravery	.078	042	.092	109	065	.021		
Love	064	.034	.082	051	196	.041		
Prudence	002	053	.116	004	300*	115		
Teamwork	198	.154	.141	.108	167	072		
Creativity	029	.028	.110	038	196	.085		
Curiosity	018	016	.233*	061	.107	.260*		
Fairness	051	.044	.031	131	.116	.219		
Forgiveness	.004	137	.213	.004	011	.012		
Gratitude	233*	.119	.004	.043	313**	011		
Authenticity	145	.144	.043	057	046	031		
Hope	.016	153	.179	014	173	.224		
Humor	093	030	.220	050	117	.194		
Persistence	.008	134	.285*	.082	090	.127		
Judgment	013	.036	.159	093	.011	005		
Kindness	133	.088	.045	115	180	.039		
Leadership	.024	115	.096	.020	119	.075		
Love of Learning	.048	.260*	.037	016	.283*	.019		
Humility/ Modesty	.050	140	.271*	045	023	061		
Perspective	.201	173	.080	.206	287*	018		
Self-regulation	.242*	144	.122	.143	.099	.156		
Social Intelligence	049	.058	.255*	080	199	.034		
Spirituality	010	.023	.028	.171	413**	096		
Zest	090	104	.213	.020	185	.221		

Note. PWB: Psychological well-being; *p < 0.05; **p < 0.01

To compare the PWB of the Brazilian and Portuguese older adults, we used the percentage of the PGCMS answers denoting high PWB instead of the total score, since the scales have different amounts of items, as explained in the materials section. The Brazilian sample (M = 67.09, SD = 20.61) had a higher percentage of answers that denote high PWB than the Portuguese one (M =59.07, SD = 24.12) [t (148, 146) = 2.174, p < .05]. PWB did not correlate with age (r = -0.116, p = .327) or with schooling (r = -0.065, p = .585) for Brazilian seniors. In contrast, for the Portuguese sample, PWB was weakly and negatively correlated with age (r = -0.281, p <.05) and moderately positively with schooling (r = 0.328, p < .01). Brazilian [t(74, 72) = 0.615; p = .612 and Portuguese (t (74, 72) = 1.794, p = .077) females and males did not differ on the PWB. For the Brazilian older adults, we observed positive and weak correlations between PWB and four CS: curiosity (r = 0.233, p < .05), persistence (r = 0.285, p < .05) .05), humility/modesty (r = 0.271, p < .05) and social intelligence (r = 0.255, p < .05). Only curiosity (r = 0.260, p < .05) was weakly positively correlated with PWB for the Portuguese sample.

DISCUSSION

There were similarities found in CS across the two nations' samples, but there were differences as well. Regarding the similarities, all CS had mean scores above 3 points: specifically, above 3.66 and 3.36 for Brazil and Portugal, respectively. Generally, there was a considerable consistency in the profile of CS in both samples, and authenticity was a SCS for both. We hypothesize that the cultural similarities among these two countries could explain these results. The relationship between Brazil and Portugal began with the colonization of Brazil, just over five hundred years ago, and was maintained through language and migratory movements, among other things. Like other psychological processes, CS can be cultivated not only through parents, schools, and neighborhood, but also through socialization and culture (Peterson & Seligman, 2004). Therefore, if cultural characteristics are shared between the two countries, it is expected that their CS profiles will be somewhat similar. With samples made of young and middle-aged adults, similarities in distributions of CS, gender differences, and associations between CS and subjective happiness have been found even when comparisons between eastern and western countries are made (McGrath, 2014; Park et al., 2006; Shimai et al., 2006).

Nevertheless, we found particularities for each of the countries. Brazilians reported higher scores than the Portuguese in most of the CS. Besides, authenticity, spirituality, gratitude, and kindness were also SCS of older adult Brazilians. LES were also different for the two samples: love of learning for Brazil and perspective for Portugal. This result can be partially explained by the number of schooling years; participants from Brazil received less formal education than the Portuguese seniors. As we observed in this investigation, schooling years were positively correlated with love of learning. People who experience this strength appear to appreciate what they learn more than others (Peterson & Seligman, 2004). When analyzing lifelong education as a right for older adults, Barbosa-Fohrmann and Araujo (2019) recall the Madrid International Plan of Action on Ageing, drawn up in 2002, which stated that education is a crucial basis for an active life, with lifelong education and ongoing training being prerequisites for social and labor participation, good health and well-being of older adults.

A viable hypothesis for perspective considered the LES for the Portuguese older adults could be that they are more self-critical, not considering themselves wise enough. In addition, perspective was one of the four CS that negatively correlated with schooling. Perspective is the ability to accumulate knowledge and experience, coordinate information, and use it deliberately to improve well-being. A person with perspective can provide wise counsel to others. This CS can

be understood as wisdom itself (Peterson & Seligman, 2004).

The differences in most CS scores between countries are not uncommon. Shimai et al. (2006) noticed that the American sample scored higher than the Japanese. Hutz et al. (2014) found that Americans scored higher than Brazilians in hope, but the inverse was found for optimism. McGrath (2014) also obtained differences in CS in lots of countries. but Park et al. (2006) guestioned to what extent these variations between nations represent that they differ in their overall virtue instead of national idiosyncrasies in the interpretation of the items or sampling variation. The authors highlighted that this remains unclear. Brazilians are, on average. more open about themselves and their surrounding world and are part of a society that emphasizes sociability (Peltokorpi & Froese, 2014). Also, Brazilian sample data was collected in an individual structured interview form, which may have impacted the scores due to social desirability-which can already be considered a limitation of this study. This may have contributed to the endorsement of CS among Brazilian older adults, and perhaps this has influenced Brazilians to have more SCS. It is possible that using the same data collection process and representative samples rather than convenience may contribute to deeper analyses.

Although gender differences have been found when CS studies are carried out with adult samples (e.g., Linley et al., 2007; Littman-Ovadia & Lavy, 2012; Noronha & Barbosa, 2016), Heintz et al. (2017) meta-analysis with participants ranging in age from less than 13 to 54 years old supports the idea that males and females are mostly similar in their CS with the exception of love, kindness, appreciation of beauty and excellence, and gratitude, when females scored higher. But we have not identified studies that analyze these differences in older adults. Ruch et al. (2010) and Freitas (2019) are exceptions. The first study found that males scored higher than

females in humor in all age groups, except in the oldest group (>70 years old) where there is a possible change in this trend. This might imply that individuals handle CS in a different way during different stages of life (Heintz et al., 2017; Ruch et al., 2010). Freitas (2019) analyzed all groups of CS in older adults, and considering the average score of each CS, no differences between genders were found.

In this study, slight gender differences were found specifically in the Portuguese sample. Prudence, persistence, perspective and hope were scored higher for men, and appreciation of beauty and excellence was scored higher for women. The greater gender differences found in the Portuguese sample might be associated with the fact that Portuguese society has been changing its values from conservative to more democratic and open ones. Also, they are not open to new values and modernity (Lima, 2002), thus partially maintaining some expected cultural differences between women and men. That is, men scoring higher in CS related to courage persistence) and wisdom knowledge (e.g., perspective), and women scoring higher in transcendence, a virtue formed by CS that enable greater connection with the universe and meaning of life (e.g., appreciation of beauty and excellence). Hope results were apparently controversial. With the Portugal sample, men scored higher, and in the Brazilian sample, we found a higher score for women. Although hope belongs to the virtue of transcendence, it has components of goal directed determination (agency), planning of ways to meet these goals (pathways), and believing that the desired goal can be achieved (Wippold & Roncoroni, 2020). This confirm that CS that relate more to the establishment and achievement of goals, tend to be more endorsed by males. Establishing gender differences or similarities in CS is important for several reasons: (a) if they exist, future studies elucidate their causes, can development, changes, and consequences; (b) it would help researchers to evaluate whether gender should be controlled in

statistical analyses to avoid biases; and (c) help to tailor CS-based interventions to the individual's needs (Heintz et al., 2017).

Even if sex differences may arise because of biosocial interactions, whereby males and females are biologically predisposed to perform certain roles (Eagly & Wood, 2002), gender differences seem to have a special and relation with historically socially determined gender roles. In terms of CS, neither our study nor others (e.g., Linley et al., 2007) provided strong evidence to support the Eagly and Wood (1999) nurturing hypothesis. Moreover, it seems that there are more similarities than differences between genders (Heintz et al., 2017), so the CS's gender differences should not be exaggerated (Linley et al., 2007). This statement seems to be even more accurate when it comes to older adults. As age advances, differences between the genders, in terms of CS, tend to diminish or even extinguish (Heintz et al., 2017; Freitas, 2019). However, longitudinal studies are necessary to better understand gender differences and, as proposed by Heintz et al. (2017).

Regarding the relationship between CS and age, the results of other studies are also not in agreement (e.g., Park et al., 2006; Linley et al., 2007; Littman-Ovadia & Lavy, 2012; Ruch et al., 2010). However, selfregulation has been positively correlated with age in other studies (Freitas, 2019; Linley et al., 2007; Ruch et al., 2010), which was also observed in this Brazilian sample. The results showing negative correlations between gratitude and age in the Brazilian sample, and between appreciation of beauty and excellence, and age in the Portuguese sample, disagree from those obtained by Ruch et al. (2010). These authors found positive correlations between those two CS and age. When correlations between CS and age are obtained, they are frequently weak, which is also true in this study.

The correlation between some CS and age suggests a trend of the development of the

character through life (Linley et al., 2007) or that there is a lifelong stability of the CS, sustaining the theoretical proposition that the CS are similar to personality traits (Littman-Ovadia & Lavy, 2012). However, it is not known whether in older age they tend to remain stable, achieve stability, or continue to develop. Once again, we highlight the need for longitudinal studies to help researchers better understand this theme, especially since older age comprises a wide range of years that can include decline and loss, but also health, social activity, and engagement (Teater & Chonody, 2020).

Positive institutions, such as educational centers and schools, may help in and allow the development of CS (Peterson & Seligman. 2004). It has been assumed (e.g., Linley et al., 2007) and confirmed by empirical study (e.g., Ruch et al., 2010) that the CS related to the virtue wisdom and knowledge are more strongly correlated with schooling, particularly love of learning (Ruch et al., 2010). In the older adult samples analyzed in this study, we have not fully confirmed this assumption. In both, love of learning positively correlated with years of schooling. However, in the Brazilian sample, only appreciation of beauty and excellence (transcendence) were associated with schooling. And, surprisingly, in the Portuguese older adults, perspective knowledge), (wisdom and prudence (temperance), gratitude (transcendence). and (transcendence) spirituality were correlated to schooling, but negatively. Although these results should be analyzed with caution, they point to the fact that not all schooling processes can be beneficial for the development of CS or sustain their benefits until old age.

Regarding the correlations between CS and PWB, we observed lower degrees of correlation in this study, and in a smaller number of CS, when compared to other studies that analyze the relation between CS and life satisfaction (Linley et al., 2007; Ruch et al., 2010), subjective well-being (Linley et al., 2007) or PWB (Freitas & Barbosa, 2022).

Typically, the CS that have been more robustly associated with life satisfaction are hope, zest, gratitude, love and curiosity (Ramzan et al., 2022), even when controlling age and gender (Linley et al., 2007). However, by studying older adults and assessing an analogous construct, PWB, we found only curiosity to be positively correlated with PWB in both samples. We obtained other positive correlations between CS and PWB for the Brazilian older adults, specifically with persistence, humility/modesty, and social intelligence. Still, all the correlations were weak.

The relationship between CS and wellbeing-we add PWB-might be different for people at different periods in life (Martínez-Martí & Ruch, 2014). In this sense, the results of this study contribute to greater knowledge about this relation in older adults, which have important implications for the theory of CS but also for strengths-based interventions for this group. These interventions might focus especially on the CS most highly associated with PW-should it be its purpose-in older age, improving the older adult fit and increasing their efficacy (Freitas et al., 2021). We did not find gender differences in PWB in either sample in our study, nor was there a correlation with age or schooling for the Brazilian sample. But, for the Portuguese participants, PWB is inversely proportional to age and proportional to schooling, which could partially explain more responses that denote better PWB for the Brazilians than the Portuguese.

Conclusion

We found differences and similarities among the two samples regarding the distribution of CS, from most to least frequently endorsed, comparison by gender and age, and relationship between CS and PWB. The particularities of each country (e.g., the association of PWB with age and education in the Portuguese sample, but not in the Brazilian one) need to be considered. The results we present in this study differ from

other cross-cultural studies about CS. This can be partially expected because there is no other cross-cultural investigation to our knowledge, that analyzed all the 24 CS in a sample composed exclusively by older adults. This was the biggest contribution of this study. Despite the results yielded by our efforts, one limitation-which is shared by most studies about CS (Martínez-Martí & Ruch, 2014)-is the limited representativeness of the samples, are chosen bv convenience. Investigations with more representative older adult samples are necessary to advance the understanding of CS, especially longitudinal research. Notwithstanding this and other limitations presented in the article (e.g., low internal consistency of some factors of some scales or the impossibility of performing this calculation for the CS measurement), the results obtained in this study contribute to the theory of CS in older age and the planning of interventions that aim to promote well-being and/or CS of older adults.

Research Ethical Standards

Funding: This study received financial support from Coordination for the Improvement of Higher Education Personnel – Brazil (CAPES) – Financing Code 001 – and from Minas Gerais Research Foundation (FAPEMIG).

Declaration of Conflicting Interest: The authors declare that they have no conflict of interest.

Approval from the Institutional Review Board for Human Research: This study addresses the ethical research standards for Brazil and Portugal. In accordance with Brazilian legislation, the study with the Brazilian participants was approved by the Research Ethics Committee (CEP) of the Federal University of Juiz de Fora (CAAE 14978913.8.0000.514).

Informed Consent/Assent: We assured participants that their data would remain anonymous and confidential and that they could receive feedback about their profile of

CS if they wanted. Those who agreed to participate in the study voluntarily signed the informed consent.

REFERENCES

- Biswas-Diener, R. (2006). From the equator to the North Pole: A study of character strengths. *Journal of Happiness Studies*, 7(3), 293-310. https://doi.org/10.1007/s10902-005-3646-8
- Barbosa-Fohrmann, A. P., & Araújo, L. A. (2019). O direito à educação ao longo da vida no art. 25 do Estatuto do Idoso. *Revista Estudos Institucionais*, *5*(1), 147-170.
 - https://doi.org/10.21783/rei.v5i1.289
- Bar-Tur, L. (2021). Fostering well-neing in the elderly: Translating theories on positive aging to practical approaches. *Frontiers in Medicine*, *8*, 517226. https://doi.org/10.3389/fmed.2021.5172
- Brucki, S. M. D., Nitrini, R., Caramelli, P., Bertolucci, P. H. F., & Okamoto, I. H. (2003). Suggestions for utilization of the mini-mental state examination in Brazil. *Arquivos de Neuropsiquiatria*, 61(3B), 777-781. http://dx.doi.org/10.1590/S0004-
- 282X2003000500014
 Chida, Y., & Steptoe, A. (2008). Positive
- psychological well-being and mortality: A quantitative review of prospective observational studies. *Psychosomatic Medicine*, 70, 741-756. https://doi.org/10.1097/psy.0b013e3181
- Eagly, A. H., & Wood, W. (1999). The origins of sex differences in human behavior: Evolved dispositions versus social roles. *American Psychologist*, *54*(6), 408–423. http://dx.doi.org/10.1037/0003-066X.54.6.408
- Freitas, E. R. (2019). Forças do caráter de idosos: Conhecer e intervir [Doctoral thesis, Universidade Federal de Juiz de Fora]. https://repositorio.ufjf.br/jspui/handle/ufjf/10102

- Freitas, E. R., & Barbosa, A. J. G. (2022). Bem-estar psicológico, sintomas de depressão e forças do caráter em idosos da comunidade. *Psico*, *53*(1), e36703-e36703. https://doi.org/10.15448/1980-8623.2022.1.36703
- Freitas, E. R., Barbosa, A. J. G., & Neufeld, C. B. (2021). Educação para o caráter baseada em forças para idosos: Um estudo quase-experimental. *Psicologia: Teoria e Pesquisa, 37*, e372120. https://doi.org/10.1590/0102.3772e372120
- Freitas, E. R., Barbosa, A. J. G., Reis, G. A., & Gomes, L. B. (2016). Bem-estar psicológico na clínica com idosos: Avaliação e intervenção. In E. R. Freitas, A. J. G. Barbosa & C. B. Neufeld (Eds.), *Terapias Cognitivo-Comportamentais com Idosos* (pp. 119-135). Sinopsys.
- Hausler, M., Strecker, C., Huber, A., Brenner, M., Höge, T., & Höfer, S. (2017). Distinguishing relational aspects of character strengths with subjective and psychological well-being. *Frontiers in Psychology, 8*, 1-12. https://doi.org/10.3389/fpsyg.2017.0115
- Heintz, S., Kramm, C., & Ruch, W. (2017). A meta-analysis of gender differences in character strengths and age, nation, and measure as moderators. *The Journal of Positive Psychology*, 14(1), 103-112. https://doi.org/10.1080/17439760.2017. 1414297
- Hutz, C. S., Midgett, A., Pacico, J. C., Bastianello, M. R., & Zanon, C. (2014). The relationship of hope, optimism, self-esteem, subjective well-being, and personality in Brazilians and Americans. *Psychology*, *5*(6), 514-522. http://dx.doi.org/10.4236/psych.2014.56 061
- Institute on Character (2014). VIA Survey Psychometric Data. https://www.viacharacter.org
- Lawton, M. P. (1975). The Philadelphia Geriatric Center Morale Scale. *Journal of Gerontology*, *30*, 85-89. https://doi.org/10.1093/geronj/30.1.85

- Lima, M. P. (2002). Personality and culture: The Portuguese case. In R. R. McCrae, & J. Allik (Eds.), *The Five Factor Model of Personality Across Cultures*, (pp. 249-260). Kluwer Academic/Plenum Publishers. https://psycnet.apa.org/record/2003-06478-011
- Linley, A. P., Maltby, J., Wood, A. M., Joseph, S., Harrington, S., Peterson, C., Park, N., & Seligman, M. E. (2007). Character strengths in the United Kingdom: The VIA inventory of strengths. *Personality and Individual Differences*, 43(2), 341-351. https://doi.org/10.1016/j.paid.2006.12.00
- Littman-Ovadia, H. (2015). Brief report: Short form of the VIA inventory of strengths-construction and initial tests of reliability and validity. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 2(4), 229-237.
- Littman-Ovadia, H., & Lavy, S. (2012). Character strengths in Israel. *European Journal of Psychological Assessment*, 28(1), 41-50. https://doi.org/10.1027/1015-5759/a000089
- Lourenço, R. A., Veras, R. P., & Ribeiro, P. C. C. (2008). Confiabilidade teste-reteste do Mini-Exame do Estado Mental em uma população idosa assistida em uma unidade ambulatorial de saúde. *Revista Brasileira de Geriatria & Gerontologia, 11*(1), 7-16. http://www.redalyc.org/articulo.oa?id=40 3838777002
- Ma, L., Green, K. E., & Cox, E. O. (2010). Stability of the Philadelphia Geriatric Center Morale Scale: A multidimensional item response model and rasch analysis. *Journal of Applied Gerontology*, 29(4), 475–493. https://doi.org/10.1177/0733464809339 623
- Martínez-Martí, M. L., & Ruch, W. (2014). Character strengths and well-being across the life span: data from a representative sample of German-speaking adults living in Switzerland.

- Frontiers in psychology, 5, 1-10. https://doi.org/10.3389/fpsyg.2014.0125
- McDowell, I. (2006). *Measuring health: A guide to rating scales and questionnaires*. Oxford University Press.
- McGrath, R. E. (2014). Character strengths in 75 nations: An update. *The Journal of Positive Psychology,* 10(1), 41-52. https://doi.org/10.1080/17439760.2014. 888580
- McGrath, R. E., & Wallace, N. (2019). Cross-validation of the VIA inventory of strengths-revised and its short forms. Journal of personality assessment, 103(1), 120-131. https://doi.org/10.1080/00223891.2019. 1705465
- Niemiec, R. M. (2017). Character strengths interventions: A field guide for practitioners. Hogrefe.
- Noronha, A. P. P., & Barbosa, A. J. G. (2016). Forças e virtudes: Escala de forças de caráter. In C. S. Hutz (Eds.), *Avaliação em Psicologia Positiva: Técnicas e Medidas* (pp. 21-43). Hogrefre.
- Park, N., Peterson, C., & Seligman, M. E. P. (2006). Character strengths in fifty-four nations and the fifty US states. *The Journal of Positive Psychology*, 1(3), 118–129. https://doi.org/10.1080/1743976060061
- Paúl, M. C. (1992). Satisfação de vida em idosos. *Psychologica*, *8*, 61-80.
- Peltokorpi, V., & Froese, F. (2014). Expatriate personality and cultural fit: The moderating role of host country context on job satisfaction. *International Business Review*, 23(1), 293-302. https://doi.org/10.1016/j.ibusrev.2013.05.004
- Peterson, C., & Seligman, M. E. P. (2004).

 Character strengths and virtues: A handbook and classification. American Psychological Association. https://psycnet.apa.org/record/2004-13277-000
- Pinar, R., & Oz, H. (2011). Validity and reliability of the Philadelphia Geriatric

9567

- Center Morale Scale among Turkish elderly people. *Quality of Life Research*, 20(1), 9-18. https://doi.org/10.1007/s11136-010-9723-4
- Quinlan, D., Swain, N., & Vella-Brodrick, D. A. (2012). Character strengths interventions: Building on what we know for improved outcomes. *Journal of Happiness Studies*, 13, 1145–1163. https://doi.org/10.1007/s10902-011-9311-5
- Ramzan, M., Sattar, J., & Amjad, N. (2022). Character strengths and workplace happiness in university teachers. Competitive Social Science Research Journal, 3(1), 436-447. https://cssrjournal.com/index.php/cssrjournal/article/view/226
- Ruch, W., Proyer, R. T., & Weber, M. (2010). Humor as a character strength among the elderly: Empirical findings on agerelated changes and its contribution to satisfaction with life. *Zeitschrift für Gerontologie und Geriatrie*, 43(1), 13–18. https://doi.org/10.1007/s00391-009-0090-0
- Ryff, C. D. (2014). Psychological well-being revisited: advances in the science and practice of eudaimonia. *Psychother Psychosom 83*, 10-28. https://doi.org/10.1159/000353263
- Shimai, S., Otake, K., Park, N., Peterson, C., & Seligman, M. E. P. (2006). Convergence of character strengths in American and Japanese young adults. *Journal of Happiness Studies*, 7(3), 311-322. https://doi.org/10.1007/s10902-005-3647-7
- Teater, B., & Chonody, J. M. (2020). How do older adults define successful aging? A scoping review. *The International Journal of Aging and Human Development*, 91(4), 599-625. https://doi.org/10.1177/0091415019871 207
- Vinuto, J. (2014). A amostragem em bola de neve na pesquisa qualitativa: Um debate em aberto. *Temáticas*, 22(44), 203-220.

- https://doi.org/10.20396/tematicas.v22i4 4.10977
- Wagner, L., Gander, F., Proyer, R. T., & Ruch, W. (2020). Character strengths and PERMA: Investigating the relationships of character strengths with a multidimensional framework of well-being. *Applied Research in Quality of Life*, 15, 307-328. https://doi.org/10.1007/s11482-018-9695-z
- Waters, L., Algoe, S. B., Dutton, J., Emmons, R., Fredrickson, B. L., Heaphy, E., Moskowitzf, J. T., Neffg, K., Niemiech, R., Puryi, C., & Steger, M. (2022). Positive psychology in a pandemic: Buffering, bolstering, and building mental health. *The Journal of Positive Psychology*, 17(3), 303-323. https://doi.org/10.1080/17439760.2021. 1871945
- Wippold, G. M., & Roncoroni, J. (2020). Hope and health-related quality of life among chronically ill uninsured/underinsured adults. *Journal of Community Psychology*, 48(2), 576-589. https://doi.org/10.1002/jcop.22270
- Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: Implications for the origins of sex differences. *Psychological Bulletin*, 128(5), 699-727. https://doi.org/10.1037/0033-2909.128.5.699