ASSOCIAÇÕES ENTRE FORÇAS DE CARÁTER E SATISFAÇÃO COM A VIDA:
ESTUDO COM UNIVERSITÁRIOS

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Resumo

O objetivo do estudo foi verificar as relações entre forças de caráter e a satisfação com a vida, bem como investigar as diferenças de média entre os sexos e as idades dos participantes. A amostra contou com 186 universitários, 62,9% do sexo feminino, com idades entre 17 e 45 anos (M=21,55; DP=4,79), de dois estados brasileiros. Os instrumentos utilizados foram a Escala de Forças de Caráter e a Escala de Satisfação com a Vida. Os resultados apontaram diferenças significativas em relação ao sexo, sendo que as mulheres tiveram pontuações mais altas em quatro forças de caráter. Em relação à idade, não foram encontrados resultados significativos. No que diz respeito à correlação entre os construtos estudados, verificou-se que vitalidade, gratidão, esperança, perseverança e amor foram as forças mais relacionadas à satisfação com a vida, apresentando magnitudes moderadas. Os achados mostraram que os indivíduos com pontuações mais altas nas forças esperança, vitalidade, gratidão, amor, curiosidade, perseverança e inteligência social, tendem a vivenciar uma vida mais satisfeita. 

Palavras-chave: psicologia positiva; avaliação psicológica; testes psicológicos.

ASSOCIATIONS BETWEEN CHARACTER STRENGTHS AND LIFE SATISFACTION:
A STUDY WITH COLLEGE STUDENTS

Abstract

The aim of the study was to identify the relationship between character strengths and life satisfaction and the mean differences between participants’ gender and age. The sample consisted of 186 college students, 62.9% women, aged 17 to 45 years (M=21.55; SD=4.79), from two Brazilian states. The instruments used were the Character Strengths Scale and the Life Satisfaction Scale. Results showed significant differences for gender, and women obtained the highest scores in four character strengths. The age of participants did not show significant differences. Regarding the correlations among the constructs studied results showed that vitality, gratitude, hope, perseverance and love were the strengths presenting the highest correlation with life satisfaction, in moderate magnitudes. Findings indicated that individuals with higher scores in hope, vitality, gratitude, love, curiosity, perseverance and social intelligence strengths, tend to live a more satisfying life.

Key words: positive psychology; psychological assessment; psychological tests.

ASOCIACIONES ENTRE FORTALEZAS DEL CARÁCTER Y SATISFACCIÓN CON LA VIDA: UN ESTUDIO CON UNIVERSITARIOS

Resumen

El objetivo del estudio fue identificar las asociaciones entre fortalezas del carácter y satisfacción con la vida y las diferencias de medias entre el sexo y la edad de los participantes. La muestra estuvo conformada por 186 estudiantes universitarios, 62,9% de sexo femenino, con edades entre los 17 y 45 años (M=21,55; DP=4,79), provenientes de dos estados brasileños. Los instrumentos utilizados fueron la Escala del Fortalezas del Carácter y la Escala del Satisfacción con la Vida. Los resultados
Positive Psychology is a Psychology movement that reached its peak by the end of the Twentieth Century, whose purpose is the scientific study of emotions and positive individual traits, as well as those related to positive institutions (family, school, and communities) that can afford both prevention and promotion of mental health. The results of the researches performed in this field are meant to aid our understanding of the human forces and personal experiences focused on happiness and well-being. Their intention is to understand individuals’ experiences more broadly and more scientifically (Seligman, Steen, Park & Peterson, 2005). Among the themes studied in Positive Psychology, authors such as Park, Peterson and Sun (2013) mention character strength and life satisfaction, which are the focus of this research.

Character strengths are positive characteristics reflected on thoughts, feelings and behaviors, which can contribute to the satisfactory development of individuals (Park, Peterson & Seligman, 2004). Park et al. (2013) consider character strengths as a multidimensional concept, more specifically, as a set of positive dispositions, since each person is able to express any of them. Peterson and Seligman (2004) have classified the 24 character strengths as: appreciation of beauty, bravery, citizenship, creativity, curiosity, fairness, forgiveness, gratitude, hope, humor, integrity, kindness, leadership, love, love for learning, modesty, open-mindedness, persistence, perspective, prudence, self-regulation, social intelligence, spirituality and vitality.

According to Harzer and Ruch (2015), those strengths are seen as inner determiners of a satisfying, happy, and successful life, which can reflect on external factors, such as the conquest of good education, a stable social environment, or financial security. In this regard, according to Littman-Ovadia and Steger (2010), character strengths have been associated with subjective well-being (SWB). Proctor, Maltby and Linley (2011) state that within the scope of Positive Psychology, a study on happiness is often related to research on SWB – frequently used as synonyms.

SWB is comprised of positive and negative affects (affective factor) as well as life satisfaction, which relates to the cognitive factor of the construct, and then, in turn, is defined as a global assessment of the quality of life an individual experiences regarding their work, leisure, love, health, finances – all according to their own criteria – that is, not due to external imposition (Diener, Emmons, Larsen & Griffin, 1985; Diener, Suh, Lucas & Smith, 1999; Park, Peterson & Seligman, 2004; Peterson, Ruch, Beerman, Park & Seligman, 2007; Peterson & Seligman, 2004). Studies have indicated that certain character strengths such as hope, vitality, gratitude, love, and curiosity are closely related to life satisfaction (Brdar & Kashdan, 2010; Littman-Ovadia & Lavy, 2012; Park et al., 2004; Peterson et al., 2007).

In this regard, aiming at researching on the relationship between character strengths and life satisfaction, Park et al. (2004) assessed 5,299 adults through the Internet, aged 35 to 40, of which 70% were females and 80% were Americans. The instruments used were the VIA Inventory of Strengths, to assess character strengths, and the Satisfaction with Life Scale (SWLS) to assess life satisfaction. Results indicated that the character strengths more related to life satisfaction were hope (r=0.53; p<0.002), vitality (r=0.52; p=0.002), gratitude (r=0.43; p=0.002), curiosity (r=0.39; p=0.002), and love (r=0.35; p=0.002). According to the authors, the vitality strength represents the most expected result, since a person having this characteristic can be deemed as energetic, with mental and physical vigor. An individual with more vitality normally feels physically well, apart from being coherent in body and mind, which causes him/her to be satisfied about life. Gratitude represents a person being thankful for the good things happening in his/her life, and hope conveys the idea that something pleasant is going to take place in the future. Curiosity makes an individual to take interest in his own experience, whereas love is associated with one giving more value to close relationships, which leads an individual to have more life satisfaction.

In another research on the same topic, Peterson et al. (2007) assessed 12,439 Americans via the Internet, and 445 Swiss people, who responded to the German version of the instruments in pencil and paper. The total sample was comprised of 70% females aged 40 to 50. The instruments used were VIA and SWLS. The authors noticed that the character strengths more correlated to life satisfaction on the American sample were vitality (r=0.54; p<0.001), hope (r=0.54; p<0.001), love (r=0.47; p<0.001), gratitude
The authors state that the aforementioned character strength persistence ($r=0.42; p<0.001$) and curiosity ($r=0.39; p<0.001$). The Swiss sample indicated correlations with greater magnitudes, such as hope ($r=0.49; p<0.001$), vitality ($r=0.44; p<0.001$), persistence ($r=0.42; p<0.001$), and love ($r=0.47; p<0.001$). The authors state that the aforementioned character strengths can contribute, somehow, to being happy through the experiencing of pleasure, engagement, and life meaning.

Other international studies, such as those conducted by Brdar and Kashdan (2010), assessing 881 Croats aged 18 to 28; and Martínez-Martí and Ruch (2014), evaluating 945 Swiss people aged 27 to 57, had the same intention as Park’s et al. (2004) and Peterson’s et al. (2007) when they analyzed character strengths and life satisfaction. It is important to highlight that regarding Martínez-Martí and Ruch’s studies (2014), the social intelligence strength was related to life satisfaction, unlike what other studies have demonstrated. Thus, it is possible to state that character strengths can be considered as universal characteristics; however, cultural differences can contribute to certain character strengths as well as to subjective well-being (Littman-Ovadia & Lavy, 2012).

In Brazil, research involving constructs related to Positive Psychology has been expanding in the last few years (Hutz, 2014). However, in 2015, a search on databases on portals such as CAPES and BVS-PSI’s periodicals, regarding the descriptors character strengths and well-being, showed that no study had investigated the relationship between character strengths and life satisfaction, and more specifically in relation to university students. Therefore, the present research has great relevance because according to Park et al. (2004), higher levels of life satisfaction are related to lower indexes of psychological and social problems, such as depression and dysfunctional relationships. Apart from that, individuals who are satisfied with their lives tend to solve their problems more easily, and also have better performance at work as well as good academic achievement, which can make them more resistant to stress and more able to enjoy better physical health.

The aim of this study was to verify whether strengths such as hope, vitality, gratitude, love, curiosity, persistence, and social intelligence are related to life satisfaction on a Brazilian sample of university students. Also the differences between gender and ages of the participants were analyzed in relation to the 24 character strengths.

**METHOD**

**Design and Participants**

This is a quantitative cross-sectional study in which 186 university students participated, of which 62.9% were females aged 17 to 45 ($M=21.55; DP=4.79$). In order to select participants, the convenience sample method was adopted for two Brazilian States, Sao Paulo and Minas Gerais. The students were doing major courses in Architecture (42.5%), Engineering (37.1%), and Biomedicine (19.9%).

**Instruments**

Character Strengths Scale (Noronha & Barbosa, 2013).

The Character Strengths Scale is a Brazilian instrument based on the Values in Action (VIA) Classification of Strengths, which is a classifying model proposed by Peterson and Seligman (2004) for the assessment of the 24 character strengths. This scale consists of 71 items whose responses are presented on a Likert scale, ranging from 0 = “nothing to do with me” up to 4 = “there is everything to do with me”; an example of an item is: “I know things will work out well”, in relation to the hope strength. For assessing the character strengths that are most often present in the individuals, it is necessary to add up the scores of the items of each one of the 24 strengths, considering that each one of them has a total of 3 items, except for the appreciation of beauty strength, which only has 2 items. The bigger the result of the sum of each strength item, the more evident is the presence of certain character strength in an individual’s life.

In order to assess the scale’s internal structure, Noronha, Dellazzana-Zanon and Zanon (2015) carried out a second order factorial analysis by using the 24 strengths to investigate the number of factors of the scale. First, a parallel factorial analysis of the main components was performed, indicating three factors. After, the parallel factorial analysis of the Maximum Likelihood extraction method indicated only one factor. Based on other factorial retention analysis, the authors chose one-dimensional solution. Bartlett test of sphericity was significant, and the Kaiser-Meyer-Olkin (KMO) obtained a result of 0.93, which is considered quite adequate. The first six eigenvalues were 7.99, 1.19, 1.05, 0.70, 0.36, and 0.33 respectively. The first factor explains 33% of the variance, and has shown loads greater than 0.40 for all indicators related to the one-dimension solution, with Alpha coefficient of 0.93, which indicates high reliability.

Life Satisfaction Scale (Zanon, Bardagi, Layous & Hutz, 2014).

This scale refers to the adaptation of the Satisfaction with Life Scale–SWLS (Diener et al. 1985) for the Brazilian population. The instrument comprises five items on a Likert scale of 7 points (1 = totally disagree up to 7 = totally agree), and assesses the level of satisfaction of an individual about his life conditions. When marking the scale, it is necessary...
to add up all responses to the items, thus obtaining the raw score. Next, it is necessary to search the percentile on the adequate statistical norms chart, considering that the higher the score, the higher the satisfaction with life. An example of an item is “My life is very close to my ideal.”

In order to search for validity evidences, Zanon et al. (2014) made a confirmatory factorial analysis by using the Maximum Likelihood extraction method for the Brazilian and the American sample. The scale exhibited the same one-dimension structure in the groups. The adjustment indexes were adequate, thus supplying evidences of validity to both the Brazilian and the American samples ($X^2$ (df) = 18.22, $p$ <0.01, CFI = 0.99, RMSEA (90 % CI) = 0.04 (0.02–0.07), ($X^2$ (df) = 13.62 (5), $p$ <0.01, CFI = 1, RMSEA (90 % CI) = 0.01 (0.00–0.09). The alpha coefficient (0.87 and 0.86 respectively) indicated good accuracy of the scale.

Procedure

The data collection started once the Research Ethics Committee gave its approval for the study and after having obtained the Informed Consent Documents signed by the participants and/or by their legal representatives. The individuals were at a classroom where they filled out a questionnaire collectively, starting with the Character Strengths Scale, and then they answered the Life Satisfaction Scale in groups of maximum 40 people. Before responding to the questionnaires, they were given instructions about the need to read the questions carefully and answer them according to their personal feelings. The application time for the completion of the tests was around 20 minutes.

Data Analysis Procedures

Normal distribution analysis allowed inference by acceptance, thus the decision was made to use parametric tests. In order to reach the goals of the present study, both the scores of the Character Strengths Scale and the Life Satisfaction Scale were analyzed by means of Pearson’s correlation. Then, the average differences between gender were checked (Student’s t test), and the magnitude was certified by means of Cohen’s $d$. The mean differences in the ages of the participants were examined through variance analysis (ANOVA).

RESULTS

At first, the associations between the instruments’ scores were verified. Table 1 shows Pearson’s correlation coefficients between the seven character strengths indicated as the goal of the present research, and the Life Satisfaction Scale.

### Table 1.
Correlation between the Character Strengths Scale and Life Satisfaction Scale

<table>
<thead>
<tr>
<th>Character Strengths</th>
<th>Life Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
</tr>
<tr>
<td>Vitality</td>
<td>0.49</td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.48</td>
</tr>
<tr>
<td>Hope</td>
<td>0.40</td>
</tr>
<tr>
<td>Persistence</td>
<td>0.38</td>
</tr>
<tr>
<td>Love</td>
<td>0.37</td>
</tr>
<tr>
<td>Social Intelligence</td>
<td>0.23</td>
</tr>
<tr>
<td>Curiosity</td>
<td>0.23</td>
</tr>
</tbody>
</table>

According to Table 1, the associations between the two instruments can be observed. It can be noticed that five strengths exhibited moderate magnitudes over 0.30. In order to check if there were differences in average between genders in relation to the 24 character strengths and to life satisfaction, the Student’s t test was performed, in addition to Cohen’s $d$, considering Cohen’s assumptions (1992) regarding magnitude values, namely, low up to 0.29, moderate from 0.30 to 0.49, and strong from 0.50. On Table 2 only the results representing statistical significance are exhibited.

### Table 2.
Mean, standard deviation, and mean difference (Student’s t test) between genders

<table>
<thead>
<tr>
<th>Character strengths</th>
<th>Gender</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Cohen’s $d$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrity</td>
<td>Male</td>
<td>8.19</td>
<td>2.48</td>
<td>-2.67</td>
<td>0.46</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>9.25</td>
<td>2.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kindness</td>
<td>Male</td>
<td>8.60</td>
<td>2.26</td>
<td>-2.09</td>
<td>0.37</td>
<td>0.038</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>9.41</td>
<td>2.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gratitude</td>
<td>Male</td>
<td>9.36</td>
<td>2.67</td>
<td>-2.00</td>
<td>0.35</td>
<td>0.047</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>10.22</td>
<td>2.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence</td>
<td>Male</td>
<td>8.78</td>
<td>2.30</td>
<td>-2.83</td>
<td>0.49</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>9.82</td>
<td>1.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it can be noticed on Table 2, four out of 24 character strengths showed significant differences in relation to gender, and on strengths such as integrity, kindness, gratitude, and persistence, women got higher averages when compared to men. It is important to highlight that the magnitudes varied from 0.35 to 0.49, therefore they were considered moderate. Then, a variance analysis (ANOVA) was performed.
to explore the statistically significant differences between ages. However, no significant results were found. Next, in an attempt to replicate Martínez-Martí and Ruch’s study data (2014), groups by ages were formed, namely, from 17 to 26, 27 to 36, and 37 to 45 years (respectively, 90.3%, 5.9%, and 3.2% of the participants in the sample). Considering the frequency of individuals per group, the performance of an ANOVA was proven to be impossible, since the groups substantially differed in relation to the number of participants.

DISCUSSION

According to Brdar, Anic and Rijavec (2011), studies on character strengths are important, since they refer to strengths that can contribute to an individual’s well-being and happiness. Regarding the relationship between hope, vitality, gratitude, love, curiosity, persistence, and social intelligence strengths, and life satisfaction, indexes of correlation of low and moderate magnitude have been identified in this study. In the research conducted by Park et al. (2004), Brdar, Kashdan (2010), and Proctor’s et al. (2011), the strengths more related to life satisfaction were hope, vitality, gratitude, love, and curiosity; they are called heart strengths. Thus, it is possible to state that there is consistency between the present research data and the findings of the above mentioned authors, since vitality, gratitude, hope, and love have exhibited correlations of moderate magnitude with life satisfaction.

According to Park et al. (2004), among the strengths that best indicate life satisfaction, vitality is the most coherent one, for a person enjoying vitality is someone whose vivacity can be manifested not only in terms of productivity related to personal activities, but also as the contagious capacity of energizing the people around them. Likewise, there is an association between life satisfaction and the gratitude strength, defined by Lambert, Fincham, Stillman and Dean (2009) as the recognition and valorization of an altruistic attitude, which favors the strengthening of social bonds and friendships, thus contributing to the happiness and satisfaction of an individual. Also, gratitude can be positively related to humor, which offers a useful perspective about life, and also helps restore positive aspects of a situation after a stressful event.

The hope strength also deserves to be highlighted, for it has shown its relationship with life satisfaction. On this regard, Bailey and Snyder (2007) point out that people who hope for something good about their future, by doing their best to achieve it, tend to be more satisfied. As to the love strength, Diener and Seliman (2002) suggest that individuals with good social relationships are happier, which leads them to experience a more accomplished life. The above mentioned authors highlight that social relationships can provide a necessary but insufficient condition for achieving happiness, that is to say, they do not guarantee a high level of joy, despite the fact that they influence this aspect considerably.

In relation to persistence, which in this research is one of the strengths most highly correlated to life satisfaction, Peterson et al. (2007) report that this finding may be related to the singularity of each nation. However, it has been verified that both the Swiss and the Brazilian samples share similarities in relation to persistence, for they are people used to persisting, notwithstanding the obstacles. It is important to point out that the social intelligence strength has shown a significant correlation of low magnitude with life satisfaction, and also that this finding is similar to Martínez-Martí and Ruch’s (2014). Therefore, it seems that both the Brazilian and the Swiss samples are aware of their own motivations and feelings, but also of others, and also that they know how to suit themselves to different social situations, which makes it easy for them to get a better feeling of life satisfaction.

The curiosity strength has also indicated significant correlation of low magnitude with life satisfaction, thus corroborating Park et al. (2004) and Peterson’s et al. (2007) results; however, these authors have found moderate magnitudes of that correlation. Kashdan and Steger (2007) report on curious people having an exploratory behavior, by seeking activities that facilitate learning, competence and self-determination, which in turn favors life satisfaction.

Subsequently, it has been observed that there is a difference between genders in relation to integrity, kindness, gratitude, and persistence strengths, and that for these four strengths women showed higher scores. Data are consistent with Brdar’s et al. study (2011), which also found higher averages related to women regarding integrity, kindness, and gratitude strengths. Unlike Brdar’s et al. research (2011), women showed a higher average than men regarding the love strength. The authors also report that there are few studies assessing the differences between genders; nevertheless, they consider as coherent the fact that women had higher scores regarding the strengths related to care and affection, such as vitality, gratitude, hope, and love. Although the results related to men differ from study to study, and they also tend to obtain higher scores on intellectual strengths, namely, appreciation of beauty, creativity, broadmindedness, love for learning, wisdom, and bravery.

In terms of age, no significant differences were observed among the results of the participants in the sample. From the age group formation, that is, from 17 to 26, 27 to 36 and 37...
to 45, it was noticed that the highest frequency occurred in the first group, that is, 90.3%. Thus, it was not possible to establish an approximate number of people for each group, which did not allow to replicate Martínez-Martí and Ruch’s (2014) data. It must be pointed out that regarding those authors’ study, a population aged 27 to 57 was assessed, unlike the sample of this research that comprised people from 17 to 45 years of age.

Summing up, the findings of the present study indicate that individuals who express their character strengths tend to enjoy a more satisfying life. This is an important contribution from this research, whose aim was to collaborate for furthering knowledge on this theme. Yet, it is important to highlight that there were some limitations to the study, among them, the size of the sample, for it comprised only two Brazilian States, which does not allow generalization to the Brazilian university population.

It would be worth taking into consideration a reflection about the sample of the present study, formed by university students. Dela Coleta, Lopes and Dela Coleta (2012), postulate the fact that experiencing positive happy feelings, life satisfaction and gratitude, can be favorable to the students’ educational process. More specifically, such strengths can lead to self-assessment, thus guiding them to manifest more appropriate behaviors, better academic performance, and also higher expectations about the future in terms of personal and professional perspectives.

Finally, it is suggested to carry out new studies involving a larger and more diversified sample, aiming at verifying how the referred strengths are distributed in the Brazilian culture, apart from inquiring if the relation between characteristic strengths and life satisfaction tends to slightly increase with the passage of years, as pointed out by Martínez-Martí and Ruch (2014). Also, more research is needed to achieve a better understanding of how character strengths are associated with affective components of subjective well-being, personality and optimism, among other constructs of Positive Psychology.

REFERENCES


