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**Clarity of personal values and committed action:
Development of a shorter Engaged Living Scale**

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Abstract

The Engaged Living Scale (ELS) is a measure of the process of engaged living, defined by Acceptance and Commitment Therapy as the evaluation and performance of valued life activities. This 16-item measure was recently created and has been validated in middle-aged and chronic pain samples. The aim of the present study was to validate the ELS- 16 in a young-adult sample and additionally to develop a shorter ELS.

This study was conducted using different samples of Portuguese young-adult college students. The dimensionality of the ELS-16 (which was translated to Portuguese from the original Dutch) was tested through a CFA. The adequacy of the shorter ELS (ELS-9) was also tested through a CFA. The scales' internal reliability and other psychometric qualities were additionally analysed.

Results from the CFA suggested that the model benefits from the establishment of correlations between pairs of error terms of items with similar contents. These results led to the decision to shorten the measure by excluding the item of each pair with the lowest communalities. The ELS-9 was then created and its CFA results revealed good to excellent adjustment values and goodness-of-fit indices. Results also showed that the ELS-16 and the ELS-9 present adequate to good psychometric properties.

The present study thus shows that these instruments seem to be reliable measures of engaged living and to perform adequately in young-adult college students, with the ELS-9 being a new contribution to health research and allowing faster administrations.

Keywords: Engaged living scale, Engaged living, Values, Committed action, Assessment, Confirmatory factor analysis.

Introduction

Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 2012) is a model of psychological intervention with strong and growing empirical evidence for its effectiveness in several health conditions (see Hayes, Luoma, Bond, Masuda, & Lillis, 2006 for a review), including depression (e.g., Zhao, Zhou, Liu, & Ran, 2013), psychosis (e.g., Gaudiano & Hebert, 2006), diabetes (e.g., Gregg, Callaghan, Hayes, & Glenn-Lawson, 2007), and chronic pain (e.g., McCracken, Vowles, & Eccleston, 2005).

ACT's model proposes that human suffering mainly results from attempts to control or avoid unwanted private events, such as sensations, thoughts, memories, or emotions, to the extent that healthy functioning becomes restricted (Hayes et al., 2012). This intervention thus aims at diminishing experiential avoidance (i.e., attempts at suppressing or controlling internal events) by developing one's availability to experience and accept private experiences. Indeed, rather than aiming to modify the frequency or content of private events, ACT's key therapeutic methods involve increasing psychological flexibility, that is, the ability to openly and fully get in contact with the present moment and to engage in actions that lead to valued ends (Hayes et al., 2006). In fact, ACT conceptualises that the ability to accept internal events promotes the engagement in behaviours consistent with one's values and goals, leading consequently to a more meaningful life.

From this perspective, values can be regarded as an intrinsic motivation framework for living a complete, whole life. They are conceptualized as freely chosen patterns of activity that define an evolving life path (Hayes et al., 2012). Values cannot be permanently achieved or completed in an absolute sense; they are pertinent during long periods of time and less subject to change and satiation (e.g., the value of good parenting is long-lasting and never completely achieved). Valuing thus focus more on

the directions and journeys one pursues rather than the destination at which one arrives. It portrays an on-going path that motivates the individual to behave in order to continuously live a full life (Wilson, Sandoz, Kitchens, & Roberts, 2010).

In fact, ACT assumes that every person is capable of defining a valued direction and to live accordingly to it (Hayes et al., 2012). However, since the practise of values often involves the triggering of uncomfortable experiences, one may choose to deal with them through avoidance strategies that impair the ability to keep on a valued path (Hayes et al., 2012). When this happens, values sit in the background while one chooses to respond to faster achieving goals such as being right, looking good, or defending oneself from anxiety (Luoma, Hayes, & Walser, 2007). These patterns of behaviour become less sensitive to the opportunities of valued action given by the context and prevent the individual to pursue an actual valued and complete life. In this sense, commitment is necessary to follow the valued direction in the context of psychological or even physical discomfort (Hayes et al., 2006).

Committed action is usually linked to goal setting, translating one's values to concrete and small behaviours that incorporate a valued path. Being sensitive to contextual cues, this process is able to change and stop behaviour when it is inconsistent with chosen values (McCracken, 2005). Committed action is also persistent, even when the engagement in valued behaviours might trigger or increase uncomfortable experiences. In accordance with the theoretical model, engaged living (defined as the evaluation and performance of valued life activities) has been empirically associated with decreased psychological distress, higher levels of life fulfilment, and improvements in psychological quality of life (Trompetter et al., 2013; Wilson & Murrell, 2004). Literature has indeed suggested that engaged living is likely to enhance one's physical and psychological health and well-being, which supports the relevance of

developing instruments that allow the further analysis of these relationships (Trompetter et al., 2013; Wilson et al., 2010). Additionally, promising empirical data shows that identifying and clarifying personal values tend to maintain neuroendocrine and psychological responses to stress at low levels (Cresswell et al., 2005). Altogether, these findings seem to reflect that clinical work on valuing and engaged living may buffer the physiological and psychological impact of stressful internal and external events.

Research on the assessment of engaged living has recently increased in the last years, and a few measures regarding this subject from ACT's perspective were developed. The Bull's-Eye Instrument for Valued Life (Lundgren, Dahl, & Melin, 2005), for example, is an idiographic instrument that was developed initially as a clinical intervention. This instrument asks the individual to describe specific personal values and to identify in a dartboard how he or she is living accordingly to those values. Then, the individual is asked to describe the obstacles that may arise in the pursuit of each value and to estimate the persistence of valued living when in the presence of those obstacles. This measure has been very helpful in clinical practise but its application to empirical research may be limited due to its long administrations.

Another related measure, the Valued Living Questionnaire (VLQ; Wilson et al., 2010), assesses the extent to which the individual contacts with chosen values in everyday life. It consists of two parts in which one rates the importance of given life domains and the consistency with which one has lived in accordance to those domains. While this is a valuable measure, Wilson and colleagues (2010) indicated that it may present a few limitations. Indeed, as the valued living score is the product of the averages of the two parts, similar scores may reflect distinct patterns on the domains and scales of the VLQ. Furthermore, in the original study, different domains presented low inter-total correlations which may translate that individuals relate distinctively to

different life domains and compromise the VLQ's construct. In addition to these measures, there is the Chronic Pain Values Inventory (McCracken & Yang, 2006), which presents a similar structure to the VLQ but has been developed and validated specifically for chronic patients.

In the context of the importance of developing instrumentation regarding values and committed action (Wilson et al., 2010) and to address the presented limitations and lack of measures that assess the specific process of engaged living, the Engaged Living Scale (ELS; Trompetter et al., 2013) was recently created. This instrument allows researchers to assess (in clinical or non-clinical populations) the role of committed action in mental health or quality of life, rather than focusing on the content of domain specific values as previous measures of valued living do. The ELS is composed of 16 items and comprises two subscales - Valued Living (defined as one's clarity of personal values and acting accordingly to them; e.g., "I make choices based on my values, even if it is stressful") and Life Fulfilment (defined as a sense of fulfillment in life as a result of acting accordingly with personal values; "I believe that I am living life to the full right now").

The original study (Trompetter et al., 2013) indicated that the ELS is a valid and reliable measure in middle-aged and chronic pain samples and a promising instrument; nevertheless the authors suggested that it might be advantageous to shorten the 16-item ELS to allow faster administrations in test batteries, saving resources and time. The use of a shorter measure also increases participants' engagement and facilitates the assessment of several different processes simultaneously. In addition, Trompetter and colleagues (2013) have also emphasised the importance of testing ELS's validity in younger populations. Trompetter and colleagues (2013) indicated that this may be an important contribution due to the possibility that individuals might interpret engaged

living distinctively by different age groups. Furthermore, young adulthood is considered a critical period for the development of values and behaving consistently with those values (Salmera-Aro, 2009; Williams, Ciarrochi, & Heaven, 2014), which are associated with life satisfaction in later life stages (e.g., Sheldon, 2008). Therefore, the validation of engaged living scales and the study of this topic in young-adult populations seems to be of particular importance for future research and clinical practise.

For these reasons, the first study of this paper tests the adequacy of ELS's structure in a sample of young-adult college students through a Confirmatory Factor Analysis (CFA). In the second study, a proposal of a shorter ELS is presented, along with its psychometric qualities and CFA results. Overall, we hypothesise that, similarly to the original study, the ELS will present adequate psychometric properties and validity. We also hypothesize that this measure will show moderate to high positive associations with health measures, positive albeit low correlations with the VLQ, and moderate to high negative associations with psychopathological indices and maladaptive psychological processes.

Material and Methods

Participants

Sample 1: This sample was composed of 893 college students (371 males and 522 females) with ages between 18 and 25 years old ($M = 20.51$; $SD = 2.08$) and a mean of 12.85 ($SD = 1.35$) years of education. No significant differences regarding age or years of education were found between genders (age: $t_{(891)} = .84$; $p = .404$; years of education: $t_{(869.728)} = -1.76$; $p = .078$).

Sample 2: Fifty-two college students (13 males and 39 females) with a mean age of 20.0 years old ($SD = 1.61$) were additionally asked to complete the ELS twice within an interval of 3 weeks in order to test ELS's temporal validity. No significant differences concerning age or years of education were found between genders (age: $t_{(13.367)} = 1.25$; $p = .233$; years of education: $t_{(50)} = 1.03$; $p = .307$).

Procedures

Participants were recruited in Portuguese colleges and superior institutes from the Coimbra region. The ethical committees of the enrolled institutions approved the conduction of the study. Students were approached at the end of lectures and informed about the study, the voluntary character of their participation, and the confidentiality and purpose of data. The individuals that accepted to participate in the study then provided their written informed consent and completed the test battery during approximately 20 minutes in the presence of one of the authors. Students received extra credit for their participation.

Regarding the translation of the ELS to Portuguese from the original Dutch version, after the authorization from the original authors, one of the authors of the current study (L.N.), native speaker of Dutch and Portuguese and familiar with the respective cultures, individually translated the items to Portuguese (forward translation; World Health Organization, 2015). The other authors (native speakers of Portuguese and fluent in English) translated back the items to English and confirmed the correspondence of each item's content (back translation; Erkut, 2010). After these steps, the translated items were applied to several adults from the Portuguese general population (monolingual and bilingual) that reported whether the instructions and the items were clear and easy to understand, and, in the case of the bilingual individuals,

whether the items reflected their English versions (pre-testing and interview; Erkut, 2010; World Health Organization, 2015). The final Portuguese version of the scale was then constructed taking into account the proposed modifications. Additionally, one of the authors (J.P.G.), an expert on ACT, reviewed the items' content to assure their representation of the measured constructs.

Measures

Engaged Living Scale (ELS; Trompetter et al., 2013). The ELS was developed to be a process measure of engaged living, as conceptualized in Acceptance and Commitment Therapy. Engaged living, as well as the construct of “valuing” and the term “values” (Strosahl, Hayes, & Wilson, 2004), are defined in an introduction section to clarify the items' content. The 16 items are rated on a 5-point Likert Scale (1: completely disagree; 5: completely agree) and comprise two subscales (Valued Living and Life Fulfilment). Higher scores express increased clarity and engagement with personal values, and greater life fulfilment. The ELS showed very good psychometric properties in its original Dutch study ($\alpha_{\text{total}} = .90$; $\alpha_{\text{VL}} = .86$; $\alpha_{\text{LF}} = .86$).

Acceptance and Action Questionnaire-II (AAQ-II; Bond, et al., 2011; Pinto-Gouveia, Gregório, Dinis, & Xavier, 2012). The AAQ-II is a 7-item measure of experiential avoidance - the unavailability to contact and accept one's private events. The items are evaluated by the participant on a 7-point Likert scale, with higher scores revealing increased levels of experiential avoidance. The AAQ-II holds good psychometric characteristics in the original and Portuguese versions.

Cognitive Fusion Questionnaire-7 (CFQ-7; Gillanders et al., 2014; Pinto-Gouveia, Dinis, Gregório, & Pinto, 2015). The CFQ-7 is a measure of general cognitive fusion. It evaluates the degree to which the participant gets entangled with the content

of his or her private events, such as thoughts. This instrument presents 7 items that are rated between 1 (Never true) and 7 (Always true), and has shown very good psychometric properties in its original and Portuguese validation studies.

Valued Living Questionnaire (VLQ; Wilson, Sandoz, Kitchens, & Roberts, 2010; Fernandes, Castilho, & Pinto-Gouveia, 2012). The VLQ assesses the individual's level of contact with his or her values. In the first part of the scale (Importance) participants are asked to evaluate on a 10-point Likert scale the personal importance of 10 domains (e.g., Family relations, Education, Recreation). Then, in the second part (Consistency) they are asked to rate on a 10-point Likert Scale how much their actions during the previous week were consistent with each domain. The mean of the products of the corresponding items from the Importance and Consistency subscales offers the Valued Living Composite. The VLQ has shown adequate psychometric characteristics in the original and Portuguese studies.

World Health Organization Brief Quality of Life Assessment Scale (WHOQOL-BREF; WHOQOL Group, 1998; Canavarro et al., 2007). The WHOQOL-BREF assesses the participant's perception of their quality of life. It comprises 24 items spread over four domains (physical health, psychological health, social relationships, and environment), and 2 additional items that evaluate general quality of life and general health. The items are rated on a 5-point Likert scale; higher scores demonstrate a perception of increased quality of life or health. This instrument has presented adequate internal consistencies in its original and Portuguese versions.

Depression Anxiety Stress Scales (DASS-21; Lovibond & Lovibond, 1995; Pais-Ribeiro, Honrado, & Leal, 2004). The DASS-21 is composed of 21 items portraying depression (DEP), anxiety (ANX) or stress (STR) symptoms and referring to the participant's previous week. One is asked to rate the occurrence of those symptoms on a

4-point Likert scale (0: Did not apply to me at all; 3: Applied to me very much, or most of the time). The original and Portuguese validation studies revealed adequate Cronbach's alpha coefficients for each domain.

All the measures used in this study (except ELS) were previously validated in Portuguese samples with similar characteristics to the present ones. Their Cronbach's alphas for this study are reported in Table 2.

Statistical analyses

The ELS-16's structure adequacy was analysed by conducting a Confirmatory Factor Analysis (CFA), with Maximum Likelihood as the estimation method (Sample 1). A CFA was also performed for our proposition of a shorter ELS. Internal reliability analyses of both scales were conducted by examining Cronbach's alpha values, which reveal a good internal consistency when superior to .70 and an excellent internal consistency when superior to .90 (Kline, 2000). The temporal stability of the measures was examined through Pearson correlation coefficients and paired samples t-test between the first and second assessment moments (Sample 2) (Cohen, Cohen, West, & Aiken, 2003). Pearson correlation coefficients were performed to explore associations with other measures; these coefficients can have the following effect sizes: small ($r = .10$ to $.29$), moderate ($r = .30$ to $.49$), large ($r = .50$ to $.69$), very large ($r = .70$ to $.89$), nearly perfect ($r \geq .90$), and perfect ($r = 1$; Cohen et al., 2003).

Regarding the interpretation of the CFA's results, a series of well-known good-of-fit indices were selected. Namely, the chi-square goodness-of-fit which indicates that data is inconsistent with the given model when its p value is significant. Nonetheless, it is consensual that this indicator is particularly vulnerable to sample size and therefore other goodness-of-fit were used to test the model's adequacy: the Comparative Fit index

(CFI), the Normed Fit Index (NFI), and the Goodness of Fit Index (GFI) which show that the model presents adequate fit to the data when values are comprised between .90 and .95 (Hooper, Coughlan, & Mullen, 2008). We also used the Tucker and Lewis Index (TLI) which has recommended values of .90 or superior, and the Root-Mean Square Error of Approximation (RMSEA) with 95% confidence interval, which has acceptable values when inferior to .10 (Hair et al., 1998). The quality of the model was also assessed by the local adjustment indices, which are adequate when present values equal or superior to .40 (Tabachnick & Fidell, 2007).

Psychometric analyses were conducted using IBM SPSS Statistics 20 (IBM Corp, 2011). The confirmatory factorial structure of the ELS was analysed with the software AMOS (Arbuckle, 2006).

Results

Preliminary Analysis

Skewness and Kurtosis' values showed that the items do not present a significant bias to normal distribution, with Skewness values ranging from -1.18 to -.17 and Kurtosis values ranging from -.52 to 2.81. The visual inspection of the distributions confirmed the assumption of normality (Kline, 2005).

STUDY 1 – Validation of the ELS-16 in a sample of young-adult college students

Confirmatory Factor Analysis of the ELS-16

A CFA was performed to confirm the adequacy of the ELS-16, with Maximum Likelihood as the estimation method. This method was used due to the large sample

size, the confirmed univariate and multivariate normality, and the sample's variability (the outliers were maintained; their removal would not improve the model fit).

Given that the bifactor model (where each item loads on the general factor and its specific group factor) was the model that demonstrated the best fit in the original study (Trompetter et al., 2013), we chose to test the same model in the present sample. Results revealed a significant chi-squared goodness-of-fit and therefore other indices were used, which indicated that the model presented a poor fit to the empirical data (CFI = .82; GFI = .79; NFI = .81; TLI = .79). Moreover, the RMSEA value was .13 ($p < .001$; .12 to .13). The local adjustment was acceptable, with standardized regression weights varying between .49 (item 1) and .87 (item 14), and squared multiple correlations comprised between .24 (item 1) and .74 (item 14).

The modification indices were analysed and results suggested the progressive correlation of the error terms (1-3, 4-7, 6-7, 11-15, and 14-16), with each pair belonging to the same factor and portraying a similar content. The correlation of these error terms resulted in an improvement of the global adjustment indices, with good goodness-of-fit indices (see Table 1). The local adjustment was also adequate, with standardised regression weights ranging from .51 (item 1) to .85 (item 12), and squared multiple correlations varying between .26 (item 1) and .73 (item 12). It is also important to note that, in relation to the previous model, the ECVI value was lower (changed from 1.88 to 1.09).

Internal Reliability of the ELS-16

The ELS-16 showed a good internal reliability in our sample, with Cronbach's alphas values of .92 on the total scale, and .88 and .90 on the Valued Living (VL) and Life Fulfilment (LF) subscales, respectively. Furthermore, the inter-correlation between

factors was high. Results indicated that the deletion of any items would not increase the scales' internal consistency.

Temporal Reliability of the ELS-16

In order to test the temporal reliability of the ELS-16, 52 college students (13 males and 39 females) completed the questionnaire twice within a 3 weeks interval. Pearson correlation coefficients between the two moments of assessment demonstrated a very good temporal reliability (ranging between .84 and .88), with no statistically significant differences being found between the test and retest moments (total scale: $t_{(51)} = -.92$; $p = .363$; VL subscale: $t_{(51)} = -.55$; $p = .588$; LF subscale: $t_{(51)} = -.88$; $p = .385$).

ELS-16's relationship with other measures

The ELS-16's total factor correlated positively with the VL ($r^2 = .93$; $p < .001$) and LF dimensions ($r^2 = .89$; $p < .001$). In turn, these dimensions presented a significant association with a magnitude of .65 ($p < .001$).

ELS-16's dimensions were also positively linked to the VLQ's (Importance, Consistency, and Valued Living), with low to moderate magnitudes. Furthermore, the ELS-16's dimensions presented positive, moderate to high, associations with psychological quality of life.

Results also demonstrated that the ELS-16's dimensions were negatively linked to experiential avoidance (AAQ-II) and cognitive fusion (CFQ-7), with moderate (total scale and LF) and low (VL) magnitudes. Moreover, it was also shown that the total scale and the LF subscale of the ELS-16 presented negative, moderate to high, associations with self-reported symptoms of depression, anxiety and stress (DASS-21).

The VL subscale also correlated negatively with those symptoms, with moderate (depression) and low (anxiety and stress) magnitudes (Table 2).

STUDY 2 - Proposal of a shorter ELS

Since there were pairs of items that presented high correlations between each other and overlapped and doubled contents, study 2 aimed to reach a shorter reliable measure. Of each pair with a high correlation magnitude and the same content, we decided to exclude the item with the lowest communality. The new proposed measure (ELS-9) thus includes the following items from the ELS-16: 2, 5, 7, 8, 10 (Valued Living subscale), 11, 12, 13, and 14 (Life Fulfilment subscale).

Confirmatory Factor Analysis of the ELS-9

A bi-factor model with 9 items was tested without correlations between error terms. Results revealed good to excellent goodness-of-fit indices (see Table 2) and local adjustments, with standardized regression weights varying between .52 (item 5) and .84 (item 11), and squared multiple correlations comprised between .27 (item 5) and .71 (item 11).

Internal Reliability of the ELS-9

The ELS-9 showed an adequate internal reliability, with Cronbach's alphas values of .88 on the total scale, and .76 and .89 on the Valued Living (VL) and Life Fulfilment (LF) subscales, respectively. The inter-correlation between factors was high. Results also showed that the deletion of any of these items would not increase the scale's internal consistency.

Temporal Reliability of the ELS-9

The temporal reliability of the ELS-9 was tested through independent samples t-tests. Results showed no statistically significant differences between test and retest moments (total scale: $t_{(51)} = -1.45$; $p = .155$; VL subscale: $t_{(51)} = -1.46$; $p = .150$; LF subscale: $t_{(51)} = -.74$; $p = .461$). Also, Pearson correlation coefficients between the two moments of assessment demonstrated very good temporal reliability, with high inter-correlation values ($r = .86$ for the total scale, $r = .78$ for the VL subscale, and $r = .81$ for the LF subscale).

ELS-9's relationship with other measures

ELS-9 presented a nearly perfect correlation magnitude ($r = .98$; $p < .001$) with the total score of ELS-16.

Furthermore, the ELS-9's dimensions presented significant and positive correlations between each other. Indeed, ELS-9's total dimension presented a correlation magnitude of .90 ($p < .001$) with the VL dimension, and of .92 ($p < .001$) with the LF dimension. The VL and LF factors showed a correlation magnitude of .65 ($p < .001$).

The strength and direction of the correlations between the ELS-9 and the VLQ, psychological QoL, AAQ-II, CFQ-7, and DASS-21 were similar to the ones displayed by the ELS-16 (see Table 2).

Discussion

To our present knowledge, the ELS (Trompetter et al., 2013) is the only existing measure of the process of engaged living defined as the evaluation and performance of

valued life activities. This measure was created recently and has only been validated in middle-aged and chronic pain samples. Moreover, it comprises 16 items and, as the original authors suggested, it would benefit from being shortened to facilitate assessment methods. For these reasons, the aim of the present study was to validate the ELS-16 in a young-adult sample and additionally to develop a shorter ELS.

Firstly, in order to test the ELS's structure (Trompetter et al., 2013) in a sample of young-adults, a CFA was conducted (893 participants, aged between 18 and 25 years old). The bi-factor model of the ELS was then tested (as this was the model that demonstrated the best fit in the original study; Trompetter et al., 2013) and results revealed that the model presented a poor fit to the empirical data. Nevertheless, the modification indices were analysed and suggested the progressive correlation of several error terms, with each pair belonging to the same factor and portraying a similar content. The correlation of these error terms resulted in an improvement of the global adjustment indices, and the model was confirmed as adequate (Hair et al., 1998; Hooper et al., 2008; Tabachnick & Fidell, 2007).

Given these results, i.e. since there were pairs of items that presented high correlations between each other and overlapped contents, and to reach a shorter reliable measure, the item with the lowest communalities of each pair was removed. A shorter measure with 9 items (5 items of the ELS-16's Valued Living subscale and 4 items of the Life Fulfilment subscale) was formed and the corresponding bi-factor model was tested. Results revealed good goodness-of-fit indices and local adjustment indices (Hair et al., 1998; Hooper et al., 2008; Tabachnick & Fidell, 2007).

The analyses of the present study also indicated that the ELS-16 and the ELS-9 both reveal adequate internal consistency. The measures demonstrated high values of item-total correlations, confirming the preserved items adequacy to the scale's

construct. Furthermore, temporal reliability analyses revealed that the ELS-16 and the ELS-9 are stable over time.

It is also important to note that ELS-16 and ELS-9 presented a nearly perfect association, which seems to reflect that the shorter measure is capable to assess the complexity of the theoretical construct of engaged living. In fact, the ELS-9 seems to be a robust and reliable measure that assesses the same content of the original instrument, and that additionally presents the usual benefits of shorter measures.

Results also showed that both measures' dimensions (total, Valued Living and Life Fulfillment) were related and presented similar associations with other instruments in the expected directions. Indeed, both scales were positively linked to the VLQ, which translates that engaged living is related to the extent to which one is living particular values in everyday life. Nonetheless, the magnitudes presented by these associations were only small or moderate, probably due to the methodological problems associated with the VLQ (Wilson et al., 2010). Also, the VLQ seems to be a more adequate measure in clinical contexts given that it allows the assessment of the importance one gives to specific domains of living (e.g., friendship/social relations; spirituality; citizenship/community life) and how consistent one's actions are in these domains. In contrast, the ELS seems to be a more suitable instrument for research, since it provides a global assessment of values clarification (without the specification of their content) and the sense of living a full life in accordance with one's values.

Furthermore, the ELS-16 and the ELS-9 were negatively associated to other ACT's maladaptive processes, such as experiential avoidance (AAQ-II) and cognitive fusion (CFQ-7), confirming the theoretical model (Hayes et al., 2006) and previous studies (e.g., Trompetter et al., 2013). Indeed, the presence of high levels of experiential avoidance and cognitive fusion may be linked to the insensibility to the opportunities of

valued action given by the context, which disables the individual from engaging in valued behaviours and living a fulfilled life (e.g., Luoma et al., 2007). Accordingly, engaged living (both ELS-16 and ELS-9) was moderately to highly related to self-reported symptoms of depression, anxiety and stress (DASS-21). Furthermore, also expected was the high association between the ELS-16 and the ELS-9 with psychological health. Indeed, the ELS' scales and the QoL measure presented high correlation magnitudes which seem to indicate that engaging in committed and meaningful behaviours is linked to a higher subjective perception of psychological wellness. In fact, this link corroborates previous findings (Cresswell et al., 2005; Trompetter et al., 2013; Wilson & Murrell, 2004; Wilson et al., 2010) and further reflects the pertinence of clinical work focused on valuing and engaged living to develop more adaptive responses to stressful internal and external events, promoting one's quality of life and well-being.

Some limitations should be considered in the light of these results. Firstly, since the structure of the ELS-16 was tested with a sample of Portuguese young-adults in the current study, and in the original study in Dutch middle-aged and chronic pain samples, the measure's factorial structure should be analysed in other languages (e.g., English) and populations. Besides, given that the participants of the present study were highly educated college students, future studies should also validate this measure in populations with different education levels. The same would apply to the ELS-9 which was developed in the present study and thereby only validated in this sample of Portuguese young-adult college students. Furthermore, the incremental validity of the ELS-9 regarding related ACT measures should also be tested in future studies, as well as the scale's sensitiveness to changes resulting from interventions focused on the promotion of values clarity and committed action. Additionally, given the high

correlation magnitude found between the ELS and the QoL measure (yet theoretically expectable and lower than .70, and therefore indicating the absence of overlapping contents), future research should focus on clarifying differences between these constructs.

In conclusion, the ELS-16 and the ELS-9 seem to perform adequately in young-adult college students, in addition to the ELS-16's already demonstrated adequacy in middle-aged and chronic pain samples (Trompeter et al., 2013). These instruments indeed seem to be reliable measures of the process of engaged living as described by ACT (Hayes et al., 2012), with the ELS-9 being a new contribution to research and allowing faster administrations in test batteries, therefore facilitating the assessment of several different processes simultaneously, and increasing participants' engagement. We indeed hope that the present study represents a helpful contribution for the promotion of research regarding values and committed action's role in psychological functioning and quality of life.

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Conflict of Interest Inês A. Trindade, Cláudia Ferreira, José Pinto-Gouveia and Loes Nooren declare that they have no conflicts of interest.

Experiment Participants All procedures performed were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable

ethical standards.

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Table 1

Goodness-of-fit indices of the ELS-16 (with associations between error terms) and the ELS-9 (N = 893)

	RMSEA	CFI	GFI	NFI	TLI
ELS-16	.10	.91	.89	.90	.89
ELS-9	.09	.94	.94	.94	.92

Note: RMSEA = Root-Mean Square Error of Approximation; CFI = Comparative Fit index; GFI = Goodness of Fit Index; NFI = Normed Fit Index; TLI = Tucker and Lewis Index.

Table 2*ELS-short's factor correlations with other measures and their respective Cronbach's Alphas (N = 893)*

	VLQ_I	VLQ_C	VLQ_VL	AAQ-II	CFQ-7	Psy. QoL	DEP	ANX	STR
α	.84	.86	.87	.91	.95	.80	.91	.80	.89
ELS-16	.27***	.37***	.40***	-.35***	-.40***	.61***	-.53***	-.37***	-.40***
ELS-9	.25***	.35***	.37***	-.34***	-.52***	.59***	-.53***	-.36***	-.42***

Note. ELS-16_total = total score of the 16-item version of the ELS; ELS-9_total = total score of the 9-item version of the ELS; VLQ_I = Importance domain of the Valued Living Questionnaire; VLQ_C = Consistency domain of the Valued Living Questionnaire; VLQ_VL = Valued Living Composite of the Valued Living Questionnaire; AAQ-II = Acceptance and Action Questionnaire; CFQ-7 = Cognitive Fusion Questionnaire; Psy. QoL = Psychological Health dimension of the World Health Organization Brief Quality of Life Assessment Scale (WHOQOL-BREF); DEP, ANX, STR = Depression, Anxiety and Stress scales of DASS-21.

* $p < .05$; ** $p < .01$; *** $p < .001$