Psychometric Properties of the Valued Living Questionnaire-Greek version (VLQ-G)

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INTRODUCTION

Psychological flexibility (PF) has been defined as the ability to engage in value-driven activities while also allowing distressing or unwanted internal experiences (Hayes et al., 2006). Acceptance and Commitment Therapy (ACT) aims to augment PF in individuals and to increase their quality of life (Harris, 2006). PF is comprised of six core processes: acceptance, self-as context, present moment awareness, cognitive defusion, values and committed action.

Values is a component of PF that encourages individuals to resume engagement in meaningful activities that they may have abandoned. The Valued Living Questionnaire (VLQ) is an instrument devised to evaluate valued living (Wilson, Sandoz, & Kitchens, 2010). The VLQ consists of 10 life domains (e.g., friendship, family relations). Individuals are required to rate the importance of each domain and how regularly they have lived in line with their values over the past week on a 10-point Likert-type scale (Wilson et al., 2010). A VLQ Composite score is calculated by multiplying the Importance rating by the Consistency rating for each domain and adding these products. A high score on the VLQ indicates that one lives in accordance with their values.

Overall, the VLQ has demonstrated acceptable content validity (Barrett, O'Connor, & McHugh, 2019). Additionally, it has been found to be negatively correlated with measures of problematic traits (e.g., depression) and positively correlated with measures of psychological strengths (e.g., mental health). Furthermore, the VLQ Importance showed high test-retest reliability (Wilson et al., 2010). Adequate discriminant validity was also demonstrated in previous studies (VanBuskirk et al., 2012). Convergent and incremental validity of the VLQ compared to other related constructs or instruments were not assessed by previous validation studies (Barrett et al., 2019).

Thus far, the VLQ has been adapted for alcohol use (VLQ-A; Miller et al., 2016) and for caregivers of individuals with dementia (VLQAC; Romero-Moreno et al., 2017).

Rationale: No previous studies have examined the clinical utility of the VLQ in chronic pain patients. Additionally, although it was created a decade ago, the VLQ has not been validated in a language other than English.

Hypotheses: Defusion, committed action, self-as context and acceptance are components of the PF model. Therefore, it was predicted that the VLQ would have a significant correlation with CFQ, CAQ, SACS and AAQ-II respectively. It was also predicted that the VLQ and AIS would have no correlation because values and insomnia do not measure the same construct. A significant relationship between the VLQ and HADS was also predicted.

AIMS → *To validate the VLQ in Greek and confirm its previous psychometric properties and factor structure.*
→ *To inform clinicians and researchers about a scale that can be used in clinical practice and research.*

METHOD

SAMPLE
- The total sample consisted of 214 (M_{age} = 54.37years, 80.30% female) Greek-speaking heterogenous group of chronic pain patients (e.g. with rheumatoid arthritis, lower back pain and fibromyalgia).
- Participants completed the VLQ in two large scale RCTs examining the efficacy of ACT for community chronic pain sufferers.

MEASURES
Participants completed several questionnaires as part of the studies. The following measures were used to investigate validity:
- Criterion validity: Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).
- Construct validity: Cognitive Fusion Questionnaire (CFQ; Gillanders et al., 2014).
- Convergent validity: Self-as-context scale (SACS; Gird & Zettle, 2013), Acceptance and Action Questionnaire II (AAQ-II; Bond et al., 2011), Committed Action Questionnaire (CAQ; McCracken, 2013).
- Divergent validity: Athens Insomnia Scale (AIS; Soldatos, Dikeos, & Paparrigopoulos, 2003).

DATA ANALYSES
- Reliability analyses were conducted, including item correlation and corrected item-total correlation analyses.
- Exploratory Factor Analysis (EFA) with Oblique Rotation (Direct Oblimin) and Parallel Analysis were conducted to verify the factor structure. EFA was deemed appropriate because it was assumed that an underlying construct, a latent factor existed behind the variables.
- Criterion, divergent, criterion and construct validity were investigated by calculating Pearson correlation coefficients (Cohen, 1988).

RESULTS

EXPLORATORY FACTOR ANALYSIS
- Corrected item-total correlations were all in the acceptable range (r = .40-.75).
- EFA (Principal Axis Factoring) without forcing factor extraction supported a single-factor solution based on Kaiser's criterion, explaining **34.78%** of the total variance, with an eigenvalue of 6.96, and corroborated by the scree plot.
- Similarly, Parallel Analysis recommended a single-factor solution (only one factor with a Raw Data Eigenvalue= 1.59)
- Total Cronbach's Alpha= **.88**

VALIDITY
- Criterion Validity: Significant moderate negative correlation between VLQ and HADS, r = -.37, p<.01. As value-driven behavior decreases, anxiety and depression increase.
- Construct Validity: Significant correlation between VLQ and CFQ, r = .23, p<.05. Although the correlation is small, this is an indication of construct validity.
- Convergent Validity: Significant moderate negative correlation between VLQ and CAQ, r = -.33, p<.01. However, no significant correlation found between VLQ, AAQ-II and SACS. This indicates that convergent validity could not be established.
- Divergent Validity: No significant correlation was found between VLQ and AIS. This is an indication of divergent validity, meaning that the two scales do not measure the same construct.

Scree Plot
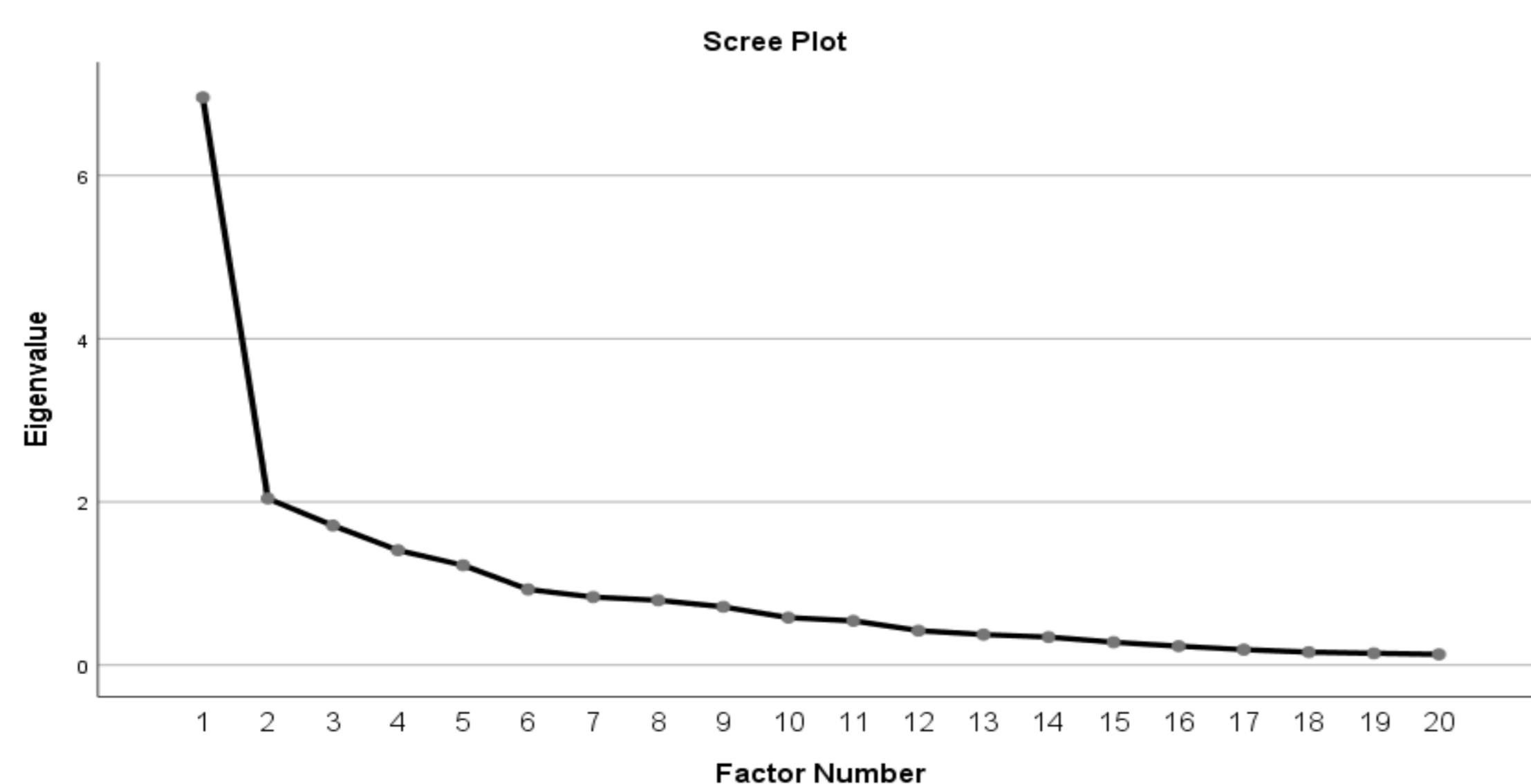
Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	VLQ Item	M (Sd)	Valued Living
1	.397	.876	1	9.06 (1.71)	.436
2	.334	.877	2	9.13 (1.65)	.361
3	.324	.877	3	9.34 (1.95)	.345
4	.503	.873	4	8.75 (1.69)	.535
5	.508	.872	5	8.29 (2.23)	.539
6	.492	.872	6	8.15 (2.39)	.521
7	.255	.899	7	7.99 (5.42)	.276
8	.485	.873	8	8.13 (2.12)	.508
9	.640	.868	9	7.53 (2.35)	.675
10	.460	.874	10	8.73 (2.35)	.490
11	.577	.870	11	8.28 (2.24)	.628
12	.555	.870	12	8.18 (2.50)	.594
13	.368	.876	13	8.65 (2.57)	.399
14	.688	.866	14	7.51 (2.43)	.741
15	.593	.869	15	7.05 (2.99)	.637
16	.607	.868	16	6.77 (2.85)	.646
17	.629	.867	17	6.01 (2.78)	.663
18	.584	.869	18	7.18 (2.69)	.626
19	.656	.866	19	6.14 (2.91)	.698
20	.600	.870	20	7.61 (2.14)	.640

DISCUSSION

- The study provides preliminary evidence of the reliability and validity of the Greek VLQ. These findings are in line with previous research (Barrett et al., 2019; VanBuskirk et al., 2012 ; Wilson et al., 2010).
- The reliability of the scale was considered good. The alpha in this study was higher than the original validation study (Wilson et al., 2010).
- EFA suggests that the Greek VLQ has a similar one-factor structure as found in the original study (Wilson et al., 2010) in comparison to findings by VanBuskirk and colleagues (2012).
- Conclusion: Firstly, the findings suggest that the VLQ is a scale that can assess values in chronic pain patients in a reliable manner which has important clinical implications. Secondly, the results indicate that the VLQ is suitable for Greek-speaking individuals.
- Limitations: Convergent validity was not established, and thus further investigation is warranted as suggested by previous research (Barrett et al., 2019).

Next steps:
➢ Confirmatory Factor Analysis (CFA) with a larger sample will be conducted for further validation of the VLQ-G in a Greek population as in previous validation studies (VanBuskirk et al., 2012).
➢ Incremental validity will be investigated using Regression analyses as this was not assessed previously and will fill a gap in the existing literature (Barrett et al., 2019) .
➢ Group-invariance testing will examine whether the VLQ appears equivalent among multiple groups of patients. This will provide additional support for the utility of the VLQ in clinical populations.
➢ Test-retest reliability will be evaluated to investigate the potential sensitivity of the VLQ in assessing values in treatment outcome studies. If confirmed, this could have significant implications for clinical practice.