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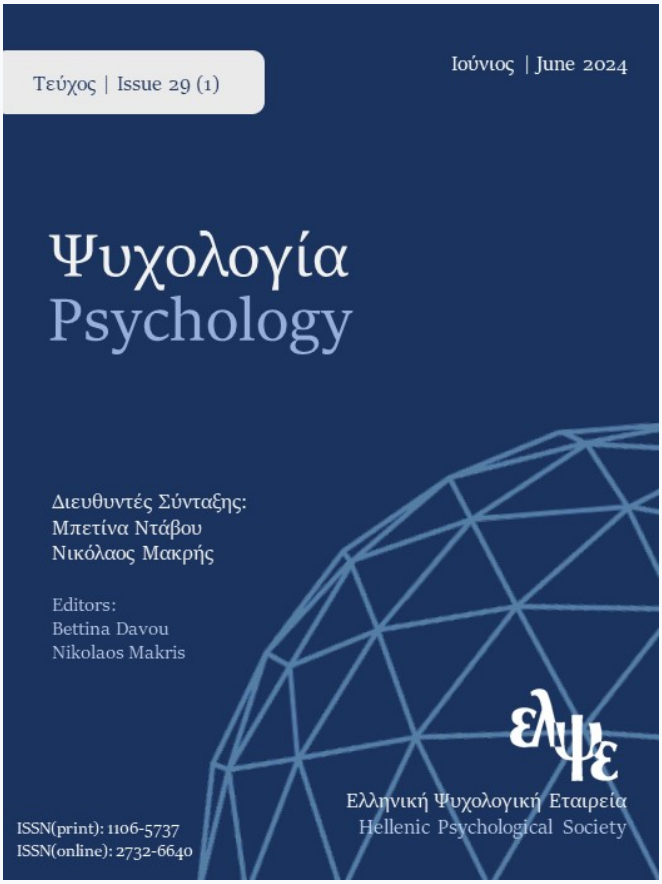

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ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

Reliability and validity of the Greek version of the Short Gratitude Resentment and Appreciation Test (S-GRAT-GR)

Aikaterini KARGAKOU[1], Konstantinos KAFETSIOS[2,3], Maria STAMATOPOULOU[1], Panagiotis PREZERAKOS[1], Andrea Paola ROJAS GIL[1]

[1] Faculty of Health Sciences, Department of Nursing, University of Peloponnese
[2] School of Psychology, Department of Social and Clinical Psychology, Aristotle University of Thessaloniki,
[3] Psychologie, Univerzita Palackého v Olomouci

KEYWORDS

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CORRESPONDENCE

Andrea Paola Rojas Gil,
Panarcadian Hospital,
Administrative services,
Tripoli, 22100, Greece
arojas@uop.gr,
apaola71@yahoo.com.mx

ABSTRACT

Gratitude is a psychological notion that has been associated with numerous beneficial outcomes for individuals and communities. The Short Gratitude Resentment and Appreciation Test (S-GRAT), one of the most widely used measure to detect trait gratitude, comprises three subscales that assess lack of a sense of deprivation, appreciation for simple pleasures, and appreciation of others. The present study tested the psychometric properties of the Greek version of the S-GRAT scale. Using a sample of 681 adults from the general population and a smaller separate sample of fifty individuals we found that the scale demonstrated good internal consistency and high test-retest reliability. Explanatory and confirmatory factor analyses confirmed the original three-dimensional scale structure. Convergent and discriminant validity tests found S-GRAT-Gr total score was significantly correlated with Agreeableness, Intellect, Extraversion, Emotional Stability and Conscientiousness. S-GRAT-Gr also had positive correlations with the Gratitude Questionnaire (GQ-6), the Subjective Happiness Scale and the Satisfaction With Life Scale. S-GRAT-Gr score was found to have a unique impact on Life Satisfaction and Happiness beyond the basic taxonomies of personality and also beyond the GQ-6. Results indicate that the Greek version of the Revised Short Gratitude, Resentment, and Appreciation Test (S-GRAT-Gr) is a reliable and valid instrument for assessing dispositional gratitude in the Greek context.

Introduction

Gratitude is no longer '*one of the neglected virtues in psychology*' (Solomon, 2004, p.vii; Watkins et al., 2003, p.431). In recent years, gratitude has attracted considerable attention in several psychology sub-fields. Yet, there has been a lack of agreement about the nature of the construct (Wood et al., 2010) and gratitude has been described in a variety of ways both as a trait and as a state (Rosenberg, 1998). Although the number of studies on gratitude has increased in the last twenty years, there is still a need for research on aspects of gratitude worldwide. In Greece, research on gratitude is still scarce. This is problematic given the increasing evidence that positive psychological intervention, in gratitude particular, varies in different cultural contexts (Ng & Lim, 2019; Titova et al., 2017). Reliable and valid measurement tools of gratitude are essential to conduct comparable and repeatable studies. To date, there is a lack of standardized measures of gratitude in the Greek context. Therefore,

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the present work adapted and validated in Greek the Short Gratitude, Resentment, and Appreciation Test (S-GRAT).

Conceptualization and benefits of gratitude

There is limited consensus regarding the theoretical structure of the concept of gratitude (Hammer & Brenner, 2019). Some consider gratitude as a unitary concept, while others disagree in that respect (Diessner & Lewis, 2007; McCullough et al., 2002; Watkins et al., 2003). Moreover, there is a conceptual distinction between gratitude and appreciation and there is a polyphony about whether gratitude "must" include a distinct benefactor (Adler & Fagley, 2005; Lambert et al., 2009; Steindl-Rast, 2004). At the trait level, gratitude is known as a grateful disposition (Emmons & McCullough, 2004), referring to "a generalized tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes one has and to respond with grateful feelings" (McCullough et al., 2002, p. 112). It is also defined as "a life orientation towards noticing and appreciating the positive in life" (Wood et al., 2010, p. 892).

Gratitude is positively associated with psychological well-being and happiness (Emmons et al., 2019; Hemarajarajeswari & Gupta, 2021), life satisfaction (Toepfer et al., 2012), empathy (Lasota et al., 2022), social relationships (Algoe et al., 2008; Lambert et al., 2010), optimism (Froh et al., 2009), religiosity/spirituality (McCullough et al, 2002), teamwork and altruism (Dik et al., 2015) among other positive outcomes. People who feel grateful have lower levels of depression (Lodice et al., 2021), stress (Manita et al., 2020), antisocial thinking/acting (Froh et al., 2009), envy (Mao et al., 2021), anger when hurt by others (McCullough et al., 2002). There is also a relationship between dispositional gratitude and personality, as measured by personality tests such as the Big Five Mini-Markers scale and the Revised NEO Personality Inventory (NEO PI-R) (McCullough et al., 2002; Wood et al., 2008). Higher levels of gratitude have been found to be positively associated with the personality traits of Agreeableness (McCullough et al., 2002; Wood et al., 2008; Wood et al., 2010), Extraversion and Conscientiousness, (Szcześniak et al., 2020), Openness (Alvi et al., 2022; Wood et al., 2008) and negatively related to Neuroticism (Szcześniak et al., 2020).

Measuring gratitude

Acknowledging the benefits of gratitude, several instruments have been developed to measure it. The Gratitude Questionnaire-Six Item Form (GQ-6) is a 6-item scale, which has shown good reliability and validity (Wood et al., 2009) and it assesses grateful emotions (McCullough et al., 2002). It measures span, frequency, intensity and density of gratitude and primarily focuses on the unidimensional emotional component of gratitude. Authors consider gratitude as an affective trait, named as a disposition toward gratitude (McCullough et al., 2002). Adler and Fagley (2005) conceptualized gratitude as a subordinate facet of appreciation and limited gratitude to instances where a third person is inferred. Hence, they developed the Appreciation Scale, a multidimensional 57-item questionnaire, which measures eight dimensions of gratitude: appreciation of people, possessions, the present moment, rituals, feeling of awe, social comparisons, existential concerns, and behavior that expresses gratitude.

In addition to the instruments already mentioned, Morgan et al. (2017) introduced the Multi-Component Gratitude Measure (MCGM), which consists of 43 items and measures trait gratitude and four components: conceptions of gratitude, grateful emotions, attitudes toward gratitude, and gratitude related behaviors. Hlava, Elfers, and Offringa (2014) developed the Transpersonal Gratitude Scale (TGS) adding a transpersonal and spiritual dimension to the construct. The scale is comprised of 16 items and four subscales: expression of gratitude, value of gratitude, transcendent gratitude, and spiritual connection.

Another measure is the Gratitude Questionnaire – 20 items (Bernabé-Valero et al., 2014), which includes various types of gratitude, takes into consideration the different basic processes of gratitude, and assesses the cognitive, evaluative, emotional, and interpersonal processes of the construct. A self-report scale that measures gratitude as an emotion, mood, or disposition depending on the timeframe specified in the instructions is the Gratitude Adjective Checklist (GAC). It consists of 3 items that express favorable, neutral, and unfavorable affirmations toward gratitude. The GAC (McCullough et al., 2002) is the sum of three adjectives: gratefulness, thankfulness, and appreciativeness (McCullough et al., 2002; Froh et al., 2007).

Martini et al. (2016) developed the Perceived Gratitude Scale (9 items), which measures the perception of gratitude of users to socio-sanitary operators. Youssef-Morgan et al. (2022) evaluated a 10-item multidimensional measure, which was based on the approach employed by Luthans et al. (2007), namely the Work Gratitude Scale (WGS). It encompasses recognized conative (intentional), cognitive, affective, and social aspects of gratitude and measures overall work-related gratitude. The State Gratitude Scale (Spence et al., 2014) is a 5-item unidimensional scale, that assesses the actual experience of gratitude, conceptualized as a transitory state that is discrete and episodic in nature. The Functionality Appreciation Scale (Alleva et al., 2017) and the Body Appreciation Scale-2 (Tylka, 2013) assess the appreciation for one's body, while the 6-item Christian Gratitude Scale (CGS) is developed to assess gratitude to God among Christian populations, operationalized from within the Christian tradition (Knabb et al., 2021).

The Gratitude, Appreciation, and Resentment Test (Watkins et al., 2003) is a 44-item self-report measure of dispositional gratitude and the S-GRAT (or GRAT-16) is its short-form (Thomas & Watkins, 2003). As proposed by Watkins et al. (2003), gratitude reflects distinct dimensions and it does not manifest itself as a singular construct, but as independent yet related forms of gratitude (Diessner & Lewis, 2007; Watkins et al., 2003). They also suggested that there are three characteristics within a grateful person: the lack of a sense of deprivation, the tendency to appreciate simple pleasures, and the tendency to recognize the role of others in their well-being and express that gratitude. The GRAT was developed based on this framework (Locklear et al., 2022; Watkins et al., 2003). The S-GRAT consists of 16 items, and according to Thomas and Watkins' exploratory factor analysis (EFA), is a multidimensional measure that assesses 3 factors: (a) Lack of a Sense of Deprivation (LOSD; 6 items), (b) Simple Appreciation (SA; 6 items), and (c) Appreciation for Others (AO; 4 items).

The present study

The present study aimed to provide a comprehensive assessment of trait gratitude in the Greek population by adapting one of the most widespread scales in the field and testing its validity. Research on gratitude in the Greek population is surprisingly limited. Best of our knowledge, only three studies have been conducted in Greece (Michailidis, 2021; Michailidis & Maridaki-Kassotaki, 2020; Papadopoulou et al., 2017). Two of them concern students and the other one concerns retired people. In all cases, dispositional gratitude was measured using the Gratitude Questionnaire (GQ-6) (McCullough et al., 2002). While feelings of gratitude are crucial elements of the concept of gratitude, they are not the only dimension. Another suggested component is behavior, e.g., expressing gratitude for the benevolence of others (Watkins et al., 2003). Behavior is an element that is absent from the GQ-6 (Morgan et al., 2017) construct, but it is present in the Short Gratitude, Resentment and Appreciation Test (S-GRAT).

The S-GRAT is a short and well-cited measure to assess gratitude. It has been used by previous researchers in both Western and non-Western contexts and has generated important insights into the positive effects of gratitude experiences (Oğuz-Duran, 2017; Fabio, 2016; Garg et al., 2021; Jans-Beken et al., 2015; Tomaszek & Lasota, 2018; Palazzeschi et al., 2022; Tran et al., 2022). The GRAT and its short form have been used in related research with various samples worldwide, such as adults (Fabio, 2016), workers (Palazzeschi et al., 2022), college

students (Garg et al., 2021; Lin & Huang, 2016; Oğuz-Duran, 2017) and adolescents (Tran et al., 2022), and have proved to have very good psychometric results.

Regarding reliability, results indicate that internal consistency of the GRAT and the S-GRAT is at good levels (α= >.82) (Jans-Beken et al., 2015; Lin & Huang, 2016; Oğuz-Duran, 2017; Tomaszek & Lasota, 2018). Validity results showed that both the GRAT and the S-GRAT are associated in the expected direction with the Satisfaction With Life Scale (Jans-Beken et al., 2015; Tomaszek & Lasota, 2018 ; Oğuz-Duran, 2017; Tran et al., 2022), the Flourishing Scale (Fabio, 2016), the Positive and Negative Affect Scale (Palazzeschi et al., 2022; Jans-Beken et al., 2015; Oğuz-Duran, 2017), the Meaningful Life Measure *(*Fabio, 2016; Tomaszek & Lasota, 2018) the Authenticity Scale (Fabio, 2016), the Transpersonal Gratitude Scale, the Spiritual well-being scale and the Kessler Psychological Distress Scale (Garg et al., 2021), the Gratitude Questionnaire (Jans-Beken et al., 2015; Oğuz-Duran, 2017; Tran et al., 2022), the Resilience Measurement Scale - SPP-25 and the Questionnaire of Cognitive and Affective Empathy (Lasota et al., 2022; Tomaszek & Lasota, 2018), the General Self-Esteem Scale (GSE) and the Altruism Scale (Tomaszek & Lasota, 2018), the Ko Depression Inventory and the Measure of subjective well-being (Lin & Huang, 2016). These findings seem to suggest that gratitude is a universal feeling, in which noticing and receiving something valuable causes feelings of appreciation for the positive in the world. Furthermore, these findings also suggest that the benefits of gratitude may have an impact both on Western individualistic societies but also on Eastern collectivistic societies (Tran et al., 2022).

Aims and hypothesis

Given the lack of instruments of gratitude in the Greek context, which is a key impediment in the endeavor to conduct studies, the adaptation and validation of such instruments will enrich the discussion on the grateful disposition and help researchers to choose the most appropriate scale, according to the purpose of the study.

The aim of the present study was twofold. Firstly, it aimed to examine the reliability and factor structure of the Greek version of the Short Gratitude, Resentment and Appreciation Test (S-GRAT) and test the convergent and incremental validity through a psychometric evaluation of the S-GRAT. Secondly, the study aimed to examine the relationship between the S-GRAT score and demographic variables.

According to the existing studies internationally, first, it was hypothesized that the S-GRAT would demonstrate satisfactory internal consistency and that the three-factor model would be confirmed consistently with the original structure. Second, it was predicted that the S-GRAT would correlate significantly with the Big Five dimensions of personality, and would be positively and significantly correlated to life satisfaction, happiness and gratitude (using the Gratitude Questionnaire GQ-6). Thirdly, it was predicted that the S-GRAT score would show significant correlations with demographic variables such as gender and age.

Methods

Participants

Fifty individuals (N=50) from the general population, as a convenience-independent sample, participated in a test-retest study. Subsequently, a convenience sample of six hundred eighty-one (N=681) adults from the general population participated in the main study. Participants of the latter sample were 44.6% male and 55.4 % female, and their mean age was 31.4 years (*SD* = 10.5). Most participants were single (57.3%). Undergraduate students were 35.2% and 34.2% were university graduates. Regarding work status, 54.4% of participants were private employees and state servants, while 25% were unemployed (Table 1).

Translation process

The Greek version of the Short Gratitude, Resentment, and Appreciation Test (S-GRAT-Gr) was translated based on the suggestion of Gudmundsson (2009) and the WHO guidelines for translation.

Forward Translation. First, two bilingual translators (T1 and T2), who were familiar with English-speaking culture, had a different profile and background, and whose mother tongue was Greek language, translated the questionnaire into Greek. Translator 1 was a psychologist. She had experience in research and tests, had excellent English skills, was familiar with both cultures and was aware of the concepts explored in the questionnaire being translated. Translator 2 was a professional English translator. Each translated the questionnaire independently of the other and they provided two translations. A reconciliation meeting was then held to reconcile the two independent forward versions. After comparing the two versions and evaluating them in terms of conceptual equivalence, comprehensibility, and linguistic clarity compared to the English questionnaire, a common version was produced.

Expert Panel. A committee of six bilingual members (the translators T1 and T2, a psychologist, a social worker, a sociologist, and a university professor) reviewed the translated version and the original questionnaire. The aim was to ensure idiomatic, semantic, and conceptual equivalence between the versions, and to eliminate any discrepancies between the translated and original versions.

Back Translation. The next step was a backward translation of the initial Greek version by an independent translator whose native language was English and who did not know the original English version. Subsequently, the translated form was sent to the developer of the S-GRAT-Gr for his recommendations.

Pre-Testing Version. the prefinal version was used and tested on a general adult population (N = 15) that differed in sociodemographic characteristics. Cognitive interviewing (CI) was used as a key qualitative method for pretesting and evaluating the questions to determine if the true meaning of the question, as intended by the researchers, was conveyed to the respondents and if questions were understandable (Peterson et al., 2017). Cognitive interviewing was conducted using the think-aloud method to uncover participant difficulties and offer suggestions for clarity, understanding, and relevance of the prefinal version (Dietrich & Ehrlenspiel, 2010; Willis, 2005). All participants were asked to report on their experiences and impressions during the completion process.

Final Version. All evidence, assessments, and recommendations from the above phases were used to refine the prefinal Greek version, and necessary modifications were made. The final version of the Greek S-GRAT (S-GRAT-Gr) is presented in the Appendix A.

Research instruments

The Short Gratitude, Resentment, and Appreciation Test (S-GRAT-Gr). The S-GRAT is a 9-point Likert scale, which ranges from strongly disagree (1) to strongly agree (9). Five negatively worded items are reverse coded (3, 6, 10, 11 & 15). The total score ranges from 16 to 144, with high scores indicating higher levels of grateful disposition. Cronbach's alpha of reliability has been calculated as .92 for the original scale (Thomas & Watkins, 2003) and .88 for the present study. An example item of the LOSD factor is "Life has been good to me", of the SP factor "Every Fall I really enjoy watching the leaves change colors", and of the SA factor "I feel deeply appreciative for the things others have done for me in my life" (Watkins et al., 2003).

Gratitude Questionnaire (GQ-6). The Gratitude Questionnaire (GQ-6), developed by McCullough et al. (2002), is a brief self-report measure of the tendency to recognize, respond, and experience gratitude in daily life. The scale consists of six items, two of which are reverse-coded. Participants respond on a 7-point Likert scale (1= "*strongly disagree*", 7= "*strongly agree*"), that can be completed in less than five minutes. Scores range from 6-42, with high scores indicating higher level of dispositional gratitude. The GQ-6 has good internal consistency, with

alphas ranging from .76 to .84 (McCullough et al., 2002). In the present study, Cronbach's alpha was .73. The GQ-6 was adapted and validated for use in the Greek population by Michailidis and Maridaki-Kassotaki (2020).

Satisfaction with life scale. The Satisfaction with Life Scale is a short 5-item instrument developed by Diener et al. (1985) designed to measure global cognitive assessments of satisfaction with one's life. The scale does not assess satisfaction with specific life domains but allows individuals to integrate and weigh these domains in whatever way they choose. Responses are classified on a 7-point Likert scale, with 1 representing "*strongly disagree*" and 7 representing "*strongly agree*". This results in a total score between 5 and 35 units. Higher scores indicate greater life satisfaction. The Satisfaction with Life was adapted and validated for use in the Greek population by Lyrakos et al. (2013a). The reliability indicator established for the Greek adaptation of the scale and in the present study was high enough (α=.83 and .85, respectively).

The Subjective Happiness Scale. The SHS is a 4-item scale of global subjective happiness (Lyubomirsky & Lepper, 1999). It consists of 4 items, two of which ask respondents to characterize themselves using both absolute ratings and ratings relative to peers, while the other two items offer brief descriptions of happy and unhappy people and ask respondents to what extent each characterization describes them. These items can be answered on a 7-point scale, ranging from 1 (*not very happy*) to 7 (*very happy*). Items 1, 2, and 3 are positive items and item 4 is reverse scored. A higher score on the SHS indicates higher subjective happiness. It was adapted and validated for use in the Greek population by Lyrakos et al. (2013). According to the results of the validation study and the present study, coefficient alpha was .75 and .77, respectively.

International Personality Item Pool (IPIP). The IPIP-Big 5 (Goldberg et al., 2006), which replaced the NEO PI-R, is a 50-item self-report personality test measuring the Big Five personality traits, consisting of 10 items for each of the Big-Five personality factors: Extraversion (E), Agreeableness (A), Conscientiousness (C), Emotional Stability (ES) and Intellect (I). Participants rate themselves on a 5-point Likert scale from 1 (*very inaccurate*) to 5 (*very accurate*), depending on how accurately each statement describes them. It was adapted and validated for the Greek population by Ypofanti et al. (2015). Cronbach's alpha coefficient for the total score of the IPIP questionnaire in the validation study was .88 and in the present study was .89.

Procedure

Both studies were conducted in 2019 in the Peloponnese Region, which is situated in the southern part of mainland Greece. The data of the test-retest study (N=50) were collected in person. The data of the main study (N=681) were collected in person and online through social media and e-mails (using Google Forms). Researchers informed participants of the general purposes and benefits of the study and asked them to complete an informed consent form. Participation was voluntary, and confidentiality and anonymity were ensured. The study was approved by the Research Ethics Committee of the Health Science School, University of Peloponnese, and was in accordance with the Helsinki Declaration of 1975, as revised in 1983.

Data analysis plan

Internal consistency was evaluated through Cronbach's alpha and McDonald Omega coefficient (ω) as a measure of reliability. Test-retest reliability coefficient was calculated through Spearman's correlation coefficient and Intraclass correlation coefficient (ICC, Portney & Watkins, 2009), while the Kolmogorov test showed that the variables were not normally distributed ($p<.0001$). Wilcoxon test was used to calculate effect size.

Since the purpose of this study was to validate and investigate the structural validity and reliability of the instrument, an EFA was conducted to determine the components of the scale using principal axis factoring analysis (FCA) with varimax rotation on the 16-item scale. A Parallel Analysis (PA) was conducted on the items. The simulation was executed with 100 parallel datasets based on permutations of the original raw data set, with

the criterion set at the 95th percentile (Hair et al., 2019; Lim & Jahng, 2019; Watkins, 2018). According to the suggestions of researchers and test developers, Varimax rotation is the method of choice in the field of personality assessment (Cheung et al., 2008; Henson & Roberts, 2006). Bartlett's Test of Sphericity (significant at $p < .001$) and Kaiser-Meyer-Olkin (KMO) (>.50) were applied to determine sample adequacy for factor analysis, and eigenvalues >1, communalities and factor loadings >.4 were examined to interpret factors (Child, 2006; Hair et al., 2019; Watkins, 2018).

Statistical methods of Skewness and Kurtosis to check normality of the data were applied. Confirmatory Factor Analysis (CFA) was applied through the maximum likehood estimation method to confirm the goodness fit, the validity and the reliability of the measurement model. As part of the analysis, factor loadings for each item were assessed. Model-fit measures used to assess the model's overall goodness of fit were Chi-Square (x^2), x^2/degrees of freedom (x^2/df), (Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Goodness of fit index (GFI), Standardized Root Mean Squared Residual (SRMR), Parsimonius Normed Fit Index and Parsimony Comparative Fix Index (PNFI) (Harrington, 2009; Tabachnick & Fidell, 2013). Regarding reliability, Cronbach's α was calculated as a measure of the internal consistency of scale and factors (Nunnally & Bernstein, 1994). Hu and Bentler (1999), Brown (2015), and Tabachnick and Fidell (2013) suggest: $x^2/df < 2$, RMSEA ≤ .06, SRMR ≤ .08, CFI ≥ .95 και GFI ≥ .95, while others disagree. Kline (2010) recommends CFI >.90 and Bentler (1990) suggests CFI> .90 - .95 as a perfect level. Marsh & Hocevar (1985) suggests the ratio $x^2/df <$ 5 and Meyers et al. (2006) recommend GFI ≥ .90, RMSEA ≤.08, PNFI >.50 and PCFI >.50. The SRMR cutoff value recommended by Hu and Bentler (1999) for a good fit model is equal to or less than .08.

Correlation analyses were examined using Pearson coefficient r and regression analysis was performed for convergent and divergent validity. In order to estimate effect size further from R^2, Cohen's f was calculated. It has been suggested by Cohen (1988) that f =.01 can be considered a small size effect, .25 a medium, and > .40 a large size effect. The first regression was performed with the Satisfaction with Life as the criterion. The Big Five personality dimensions were entered as Block 1, the GQ-6 score was added to the equation (Block 2) and the Global S-GRAT-Gr score was entered as the third block. To further investigate incremental validity, the analyses were rerun with the three S-GRAT-Gr factors entered as the last block instead of the global S-GRAT-Gr. The second regression was performed following the same procedure with the Subjective Happiness Scale as the criterion. Statistical analyses were performed using SPSS v.26 and SPSS AMOS v.26. and all tests were considered statistically significant at $p < .05$.

Results

Demographic characteristics of the main study participants (N = 681) and bivariate analysis for the association between socio-demographic variables and gratitude score are presented in Table 1, reporting each included variable and p values.

Internal consistency and test – retest reliability

The analysis demonstrated that the results were consistent and stable. In the first completion, internal consistency of the S-GRAT-Gr was α = .887 and McDonald ω = .879, and in the second completion Cronbach's alpha and McDonald ω was .935 and .931 (N=50), respectively. Spearman's correlation coefficient and intraclass correlation (ICC) revealed a high test-retest correlation at the total score of S-GRAT-Gr (Spearman's $r = .864$; $p < .001$ and ICC = .948; $p < .001$). The mean total score after the first completion was 118.11 (±15.59), whereas after the second it was 117.86 (±18.91). The difference between the mean scores was not statistically significant ($p = .814$) and the effect size therefore was quite small (r=.06).

Table 1
Demographic variables and their relationship with gratitude

Gender			**Age**	**Marital Status**			**Educational Level**			**Work Status**		
	N	Mean (SD)	Mean (SD)		N	Mean (SD)		N	Mean (SD)		N	Mean (SD)
Male	304	107,24± 17,90	*31.46 ±10.52*[1]	Single	*309*	*109.28* ±17.79	Higher secondary education	63	108.03 ±17.46	Unemployed	170	108.39 *±17.33*
Female	377	114,85± 16,57		Married	208	114.42 *±16.63*	Undergraduate student	240	108.55 *±18.12*	State employee	*136*	*113.70* *±17.38*
				Cohabitation	44	116.20 *±15.81*	University graduate	233	112.47 *±17.12*	Private employee	207	113.63 *±16.07*
				Divorced / separated	39	112.00 *±19.35*	Postgraduate studies	145	116.13 *±16.34*	Freelancer	47	112.00 *±17.96*
										Farmer	29	108.53 *±19.55*
		.001**	.01*			.002*			.001**			.01*

Note. [1]: Mann-Whitney U, [2]: Kruskal-Wallis Test, *SD*: standard deviation, *p<.05; **p< .001.

Structural validity and reliability

An EFA approach was performed in a randomly selected sample (subsample from total sample, N = 300) to explore the construct validity of the S-GRAT-Gr (Table 2) and a Parallel Analysis (PA) was conducted on the items. First, the KMO measure and Bartlett's test for sphericity were used to determine the factor structure of the instrument. The KMO and Bartlett's test of sphericity for the total sample yielded a measure of .866, $p < .001$ [$X^2_{(300)} = 2279.28$, $df = 120$, $p < .01$]. Anti-image correlation values for all items were > .721, which is well above the acceptable limit of .50. A Principal Axis Factoring Analysis with Varimax rotation yielded the three-factor solution and Parallel analysis estimating this solution was appropriate. Factor loadings for the 16 items ranged from .55 to .82. Eigenvalues were greater than 1 and communalities of the items in the three-factor solution were all greater than .4. Factor 1 and factor 2 contained 6 items each and accounted for 35.8% and 14.8% of the variance, respectively. Factor 3 contained 4 items and accounted for 11.2% of the variance. The three-factor solution explained 61.908% of the total variance in the sample, which is considered acceptable (Zikmund et al., 2010).

Before examining Confirmatory factor analysis, the normal distribution of the data was assessed. Skewness (the range was between -2.2 to - .43) and kurtosis (the range was between - .22 to + 6.07) indicated that data was normally distributed (Field, 2013; Kline, 2015; Tabachnick & Fidell, 2013). Confirmatory factor analysis (CFA) was performed (N = 681) to examine the dimensionality of the S-GRAT-Gr, a three-factor model with 16 items, and to determine whether the newly collected data adequately fit the original structure. The three-factor model showed good fit to the data: $X^2_{(681)} = 486.86$, $p < .001$, $df = 101$, $x^2/df = 4.82$ RMSEA = .075 (90% CI of RMSEA = .07-.08), GFI = .92, CFI = .92, SRMR = .057, PNFI = .76 και PCFI = .79 and all values were within their common acceptance levels. The CFA results indicate that the model has acceptable fit indices, and they confirmed the three-factor structure of the original model over a Greek sample. The factor loadings of the scale ranged from .54 to .86. Hence, results showed high error covariances between variables e4 (.54) and e7 (.66), and an error covariance path was added to the model to improve fit. After combining these two items, which are theoretically related, the model fit indices were re-examined. The results showed better fit: $X^2_{(681)} = 302.9$, $p < .001$, $df = 100$, $x^2/df = 3.03$ RMSEA = .055 (90% CI of RMSEA = .05 - .06), GFI = .95, CFI = .96, SRMR = .049, PNFI = .79 και PCFI = .80 (Figure 1).

Cronbach's alpha of internal consistency (Table 3) was calculated as .87 for the Lack of a Sense of Deprivation factor, .85 for the Simple Appreciation factor, .86 for the Appreciation of Others factor and .88 for the total score of the GRAT-S, indicating good reliability, greater than the acceptable limit of .70 (Nunnally & Bernstein, 1994). McDonald omega was calculated as .87, .84, .85 and .87 respectively. Furthermore, Cohen's f was performed, and it is presented in Table 3.

Zero order correlations

Bivariate (zero-order) correlations between the key variables of the study are presented in Table 3. Regarding the personality dimensions, the S-GRAT-Gr showed a moderate positive correlation with Agreeableness ($r = .46$, $p = .01$) and positive, weaker but significant correlations with Intellect ($r = .27$, $p = .01$), Extraversion ($r = .25$, $p = .01$), Emotional Stability ($r = .22$, $p = .01$) and Conscientiousness ($r = .18$, $p = .01$). The scores of the LOSD and SA subscales also correlated with the five personality dimensions (Table 2), whereas the score of AO correlated positively with three personality traits ($r = .17$, .38 and .15; $p = .01$, for Intellect, Agreeableness and Extraversion, respectively). In addition, the total score of the S-GRAT-Gr and the score of the AO subscale presented strong positive correlations with the GQ-6 score ($r = .73$ and .64; $p = .01$, respectively), followed by the scores of LOSD ($r = .50$, $p = .01$) and SA ($r = .56$, $p = .01$). With respect to the criteria, the total S-GRAT-Gr and the LOSD subscale scores presented moderate positive correlations with Happiness ($r = .41$ and .41; $p = .01$, respectively) and Life Satisfaction ($r = .52$ and .50; $p = .01$, respectively), whereas the SA and AO scores presented weaker but still significant positive correlations with both variables (Table 3).

Table 2. *Exploratory Factor and Parallel Analysis of the S-GRAT-Gr*

Items	**Loadings**				**Anti-image correlation**	**h^2**
	F1	F2	F3	F4		
S-GRAT-Gr 10 R	.823				.859 [a]	.692
S-GRAT-Gr 11 R	.707				.889 [a]	.517
S-GRAT-Gr 15 R	.699				.877 [a]	.508
S-GRAT-Gr 6 R	.688				.915 [a]	.502
S-GRAT-Gr 3 R	.651				.905 [a]	.480
S-GRAT-Gr 2	.580				.897 [a]	.455
S-GRAT-Gr 4		.766			.791 [a]	.615
S-GRAT-Gr 9		.732			.892 [a]	.588
S-GRAT-Gr 7		.633			.721 [a]	.403
S-GRAT-Gr 12		.596			.877 [a]	.498
S-GRAT-Gr 16		.590			.909 [a]	.467
S-GRAT-Gr 13		.557			.923 [a]	.451
S-GRAT-Gr 8			.790		.823 [a]	.664
S-GRAT-Gr 5			.786		.802 [a]	.697
S-GRAT-Gr 14			.722		.856 [a]	.562
S-GRAT-Gr 1			.663		.901 [a]	.459
Eigen values of the actual data	5.732	2.374	1.799	.999		
Eigen values of the simulative data	1.460	1.351	1.297	1.220		
Explained variance (%)	61.908					
Number of items	16					

**Note.* S-GRAT-Gr: The Greek Short Gratitude, Resentment, and Appreciation Test. Extraction method: Principal Axis Factoring Analysis. Rotation method: varimax rotation. Satisfactory factor loadings (i.e., greater than |.40|.), (*R*) reversed scored items, h^2 communality, [a] measures of sampling adequacy (MSA)

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Figure 1. *Confirmatory factor analysis with standardized path coefficients (p<.001) based on the Short Gratitude, Resentment, and Appreciation Test (S-GRAT-Gr) in Greek context. LOSD (Lack of a Sense of Deprivation); SA (Simple Appreciation); AO (Appreciation of Others)*

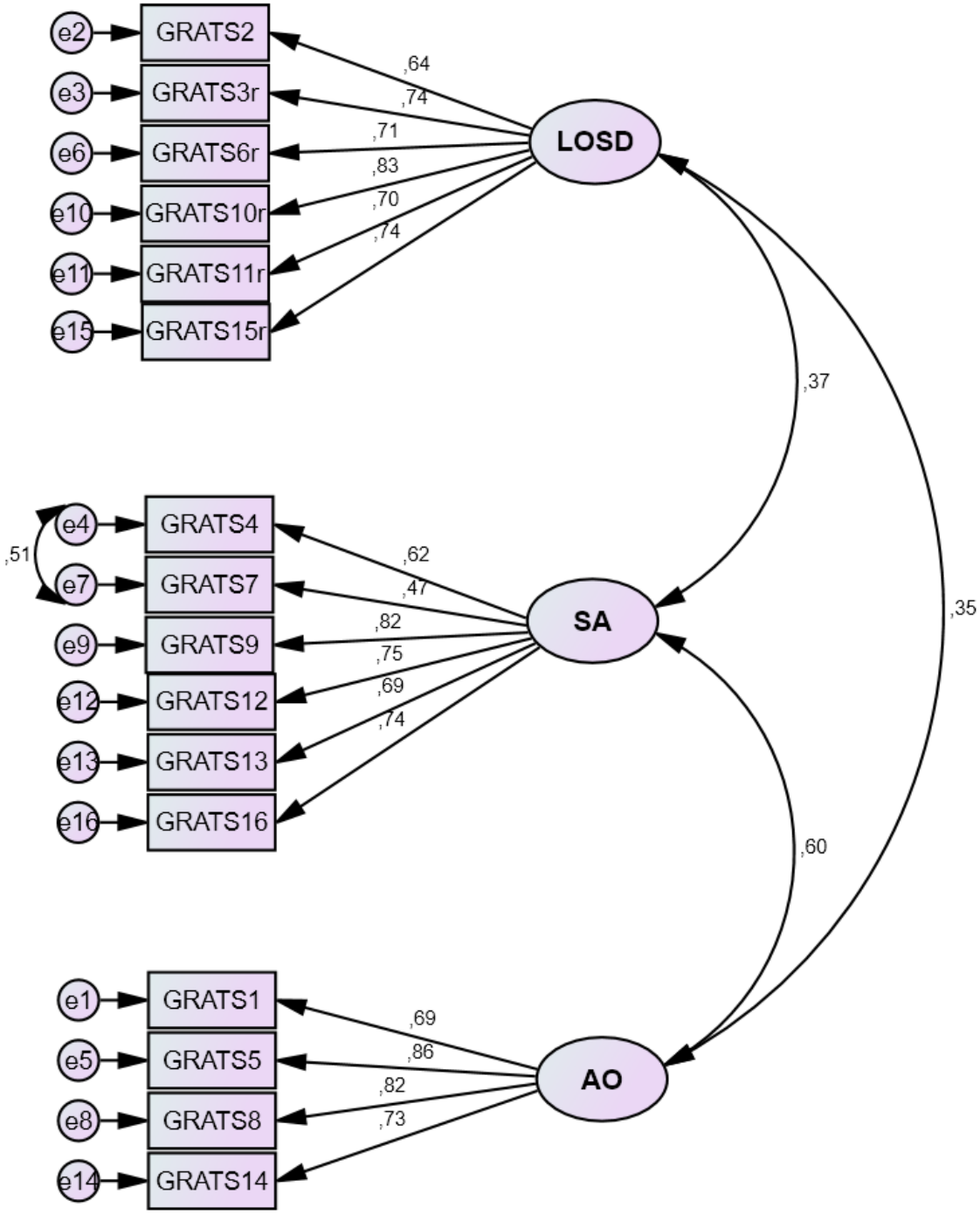

Table 3. *Pearson's zero-order correlation, internal consistencies, means, standard deviations and intercorrelation matrix for key variables in the study (n = 681)*

		1	2	3	4	5	6	7	8	9	10	11	12
1.	**S-GRAT-Gr**	-											
2.	**S-GRAT-Gr Factor LOSD**	.80**	-										
3.	**S-GRAT-Gr Factor SA**	.77**	.34**	-									
4.	**S-GRAT-Gr Factor AO**	.71**	.32**	.47**	-								
5.	**GQ-6**	.73**	.50**	.56**	.64**	-							
6.	**IPIP Conscientiousness**	.18**	.13**	.18**	.07	.17**	-						
7.	**IPIP Emotional Stability**	.22**	.30**	.09*	.06	.16**	.16**	-					
8.	**IPIP Intellect**	.27**	.18**	.27**	.17**	.25**	.18**	.15**	-				
9.	**IPIP Agreeableness**	.46**	.23**	.50**	.38**	.45**	.26**	.04	.39**	-			
10.	**IPIP Extraversion**	.25**	.23**	.17**	.15**	.27**	.15**	.23**	.51**	.31**	-		
11.	**SWLS**	.52**	.50**	.30**	.37**	.40**	.17**	.22**	.20**	.18**	.26**	-	
12.	**SHS**	.41**	.41**	.25**	.25**	.37**	.08*	.29**	.20**	.16**	.29**	.62**	-
	Cronbach's alpha	.88	.87	.85	.86	.73	.88	.84	.75	.78	.84	.85	.77
	McDonald ω	.87	.87	.84	.85	.73	.89	.85	.75	.80	.85	.85	.78
	Means	111.4	38.6	44.5	28.2	33.0	35.6	28.2	40.3	43.2	35.7	22.4	4.9
	SDs	17.5	9.5	7.6	5.7	5.1	7.6	8.2	5.6	5.2	7.9	5.8	1.0

**Note. S-GRAT-Gr*: The Greek Short Gratitude, Resentment, and Appreciation Test. *LOSD*: Lack of a Sense of Deprivation. *SA*: Simple Appreciation. *AO*: Appreciation for Others. *GQ-6*: Gratitude Questionnaire. *IPIP*: International Personality Item Pool. *SWLS*: Satisfaction with life scale. *SHS*: The Subjective Happiness Scale. *SDs*: Standard deviation score.

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed)

Incremental validity

Table 4 provides the effect size and the statistical indices for each block of the two regression models. The Big Five personality dimensions were entered as block 1, the GQ-6 score was added to the equation (block 2) and the global S-GRAT-Gr score was entered as the third block. To further investigate the incremental validity, the analyses were rerun with the three S-GRAT-Gr factors entered as the last block instead of the global S-GRAT-Gr. To develop general estimates of the incremental validity magnitude of the S-GRAT-Gr score, we also evaluated the size of the validity increment based on semi partial r (Hunsley and Meyer, 2003).

The first regression was performed with The Satisfaction with Life Scale as the criterion. At step 1, the Big Five personality dimensions accounted for variability in the dependent variable. More specifically, Conscientiousness (β = .09; t =2.23; sr=.08; p <.05), Emotional Stability (β =.16; t =4.16; sr =.15; p <.001), Agreeableness (β =.08, t =2.05, *sr =.07;* p <.05) and Extraversion (β =.15, t =3.53; sr =.13; p < .001) were individually significant predictors. The GQ-6 score was added to the equation (block 2) and the model gained additional explanatory power (β =.36; t = 9.21; sr =.32; p < 0.001). The global S-GRAT-Gr score was entered as the third block, causing a significant incremental contribution, with the global S-GRAT-Gr being a significant predictor (β = .47, t = 9.67; sr =.31; p < .001). When we rerun the analysis entering the three S-GRAT-Gr factors as the last block instead of the global S-GRAT-Gr, two of the three factors resulted in a significant contribution: LOSD (β = .35; t = 9.22; sr = .29; p < .001) and AO (β = .20; t = 4.70; sr = .15; p < .001).

The second regression was performed with The Subjective Happiness Scale as the criterion. The Big Five dimensions (block 1) accounted for variability in the dependent variable with Emotional Stability (β =.23; t = 6.25; sr = .22; p <.001) and Extraversion (β =.20, t = 4.73; sr =.17 p <.001) being individually significant predictors. The GQ-6 score was entered as block 2 and the model gained additional explanatory power (β =.31; t =7.85; sr =.27; p < .001). The global S-GRAT-Gr score was entered as the third block, causing a significant incremental contribution, with the global S-GRAT-Gr being a significant predictor (β =.28, t = 5.45; sr = .18; p < .001). Analyses were rerun with the three S-GRAT-Gr factors entered as the final block instead of the global S-GRAT-Gr. This change resulted in a significant model, with a significant contribution for the LOSD factor (β =.24; t = 5.90; sr =.20 p <.001). No significant contributions were found for the SA or the AO factor.

Table 4. *Hierarchical Regression Analyses With the IPIP-Big Five (Step 1), the GQ-6 (Step 2), and Either the Global S-GRAT-Gr (Step 3a), or the S-GRAT-Gr Factors (Step 3b)*

Criterion	Satisfaction with Life Scale			Subjective Happiness Scale		
Step 1	$F(5,675)=17.20^{***}$			$F(5,675)=22.31^{***}$		
	R^2_{adj}= .11, Cohen's f=.35			R^2_{adj}= .14, Cohen's f= .40		
Step 2	$F(6,674)=30.26^{***}$			$F(6,674)=30.54^{***}$		
	R^2_{adj}= .21, Cohen's f= .51			R^2_{adj}= .21, Cohen's f= .51		
Step 3a	$F(7,673)=42.86^{***}$			$F(7,673)=31.53^{***}$		
	R^2_{adj}= .31, Cohen's f= .67			R^2_{adj}= .24, Cohen's f= .56		
Step 3b	$F(9,671)=36.24^{***}$			$F(9,671)=25.74^{***}$		
	R^2_{adj}= .32, Cohen's f= .68			R^2_{adj}= .25, Cohen's f= .57		
Predictor	β	ΔR^2_{adj}	sr	β	ΔR^2_{adj}	sr
Step 1		.11***			.14***	
Conscientiousness	.09**		.08	-.01		-.01
Emotional Stability	.16***		.15	.23***		.22
Intellect	.05		.05	.03		.03
Agreeableness	.08**		.07	.08		.07
Extraversion	.15***		.13	.20***		.17
Step 2		.10***			.07***	
GQ-6	.36***		.32	.31***		.27
Step 3a		.10***			.03***	
Global S-GRAT-Gr	.47***		.31	.28***		.18
Step 3b		.12***			.04***	
Lack of a Sense of Deprivation (LOSD)	.35***		.29	.24***		.20
Simple Appreciation (SA)	.05		.04	.05		.04
Appreciation of others (AO)	.20***		.15	.04		.03

**Note.* The variables entered at Steps 1 and 2 were the same for each model. Step 3 was performed twice for each criterion, the first time with the global S-GRAT-Gr score as a predictor (Step 3a) and the second time with the four S-GRAT-Gr factor scores as predictors (Step 3b). *S-GRAT-Gr*: The Greek Short Gratitude, Resentment, and Appreciation Test. *GQ-6*: Gratitude Questionnaire. $R^2_{adj:}$ adjusted R^2, $\Delta R^2_{adj:}$ change in adjusted R^2, *sr*: semipartial r, *β*: regression coefficient.
**p<.05; ***p < .001.

Discussion

The present study was the first attempt to validate one of the most widely used measures of dispositional gratitude, the Short Gratitude Resentment and Appreciation Test (S-GRAT-Gr), in the Greek context.

Reliability and construct validity of S-GRAT-Gr

In terms of reliability, internal consistency for the total score and subscales of the S-GRAT-Gr was good and test – retest reliability was high. The EFA revealed a three-factor solution that explained the total acceptable (Zikmund et al., 2010) sample variance of 61.908 %. Results from CFA showed that the model had acceptable fit indices and confirmed the three-factor structure of the original model (Watkins et al., 2003) for a Greek sample. However, a high error covariance was detected between variables e4 and e7, so an error covariance path was added to improve the model. A possible explanation for the error revealed could be that the relationship between item 4 and item 7 is due to the fact that they belong to the same factor (Simple Appreciation). This is evident in the wording of the items: item 4 (Oftentimes I have been overwhelmed at the beauty of nature) and item 7 (Every Fall I really enjoy watching the leaves change colors). According to Watkins et al. (2003), grateful persons appreciate simple pleasures: *"Simple pleasures refer to those pleasures in life that are readily available to most people"* (p. 432). Consequently, these items are related in content. Despite the similarity, it was decided to include both items because item 4 covers the intensity of pleasure compared to 7.

Convergent validity of S-GRAT-Gr

With respect to convergent validity, the results showed that the total score of the S-GRAT-Gr and the scores of its subscales were moderately to strongly positively correlated with the GQ-6 score. The results are consistent with previous research findings in adult samples (Froh et al., 2011; Jans-Beken et al., 2015; Tran et al., 2022) and indicate that both scales assess the conceptualization of grateful disposition. Moreover, nomological network analysis showed that both the total score of the S-GRAT-Gr and the score of the subscales presented positive correlations with life satisfaction and happiness. These results suggest that a grateful person, who feels abundance in life, appreciation for the common pleasure of everyday aspects as well as for others' contributions to his or her well-being, evaluates his or her life circumstances to a greater extent and feels happier than people who do not reflect upon what they are grateful for. Relevant studies have confirmed this relationship (Froh et al., 2011; Garg & Mehak, 2021; Jans-Beken et al., 2015; Lin & Huang, 2015; Palazzeschi et al., 2022; Thomas & Watkins, 2003), in which positive emotions such as gratitude seemed to determine subjective happiness and satisfaction with life. Fredricksons' (1998, 2001) broaden-and-build theory states that positive emotions have transformative power because they broaden people's momentary thought–action repertoires by having a great impact on habitual modes of thinking, cognition, and action and build enduring personal growth by promoting physical, intellectual, and social resources. In other words, positive emotions fuel human flourishing (Fredrickson, 2001). Fredrickson (2004) also highlights that gratitude can be a representative positive emotion that fundamentally changes the functioning of human brain, by fostering the broadening and building of structural functions (Fredrickson, 2004). Additionally, gratitude has a crucial regulatory effect on negative emotions (Lodice et al., 2021; Manita et al., 2020; McCullough et al., 2002), which in turn promotes life satisfaction and happiness.

The results of the study also highlight the cross-cultural consistency of the relationship between basic personality taxonomies and dispositional gratitude. As expected, the strongest correlation was observed between the total score of the S-GRAT-Gr and Agreeableness, indicating that one's tendency to perceive and appreciate positive aspects of life is linked with pro-social traits, such as forgiveness, trust, generosity,

kindness, sympathy, and leniency. Dispositional gratitude also showed positive correlations with the other four personality traits. Grateful people are more likely to be curious and creative (Intellect), sociable and active (Extraversion), calm and relaxed (Emotional Stability), organized and reliable (Conscientiousness). These findings are consistent with other studies (Szcześniak et al., 2020; Wood et al., 2010; 2009; 2008) and support the relationship between personality traits and dispositional gratitude.

Incremental validity of S-GRAT-Gr

To confirm the usefulness of the S-GRAT-Gr score for personality assessment, we tested its unique contribution to criteria beyond existing tests that serve a theoretically similar construct. More specifically, we addressed the incremental validity of the S-GRAT-Gr score by conducting a three-step hierarchical regression for each criterion in the study. We sought to answer whether the S-GRAT-Gr score adds a new and unique explanation of variance in the SHS and the SWLS that is not accounted by the IPIP-Big 5 and the GQ-6. The later constructs, because of their theoretical and empirical relationship to the former, constitute a major hurdle beyond which the newly established scale should demonstrate incremental validity. To develop general estimates of the incremental validity magnitude of the S-GRAT-Gr scores, we also evaluated the size of the validity increment that is based on the semi partial *r* (Hunsley & Meyer, 2003).

In all cases, the global S-GRAT-Gr score or the scores of the S-GRAT-Gr factors were entered as the third block. The global S-GRAT-Gr score demonstrated a statistically significant increase in predicting Life Satisfaction (10%) and Happiness (3%) beyond the previously entered variables, answering the question of the weak utility of the scale. According to Hunsley and Meyer (2003), a semi partial (or incremental) *r* of .15 to .20 at the third step of the regression analysis indicates a reasonable contribution to the existing equation. The semi partial *r* was greater than .15 for both criteria, demonstrating the significance of this increase. The S-GRAT-Gr score had a unique impact on Life Satisfaction and Happiness beyond the basic taxonomies of personality and also beyond the GQ-6. The latter further highlights the potential theoretical contribution of the S-GRAT-Gr score, as both scales assess dispositional gratitude. The results are consistent with the research findings of Jans-Beken et al. (2015) in the Dutch context and suggest that the S-GRAT score refers to a different conceptualization of grateful disposition that has a major impact on aspects of everyday life. Nevertheless, a non-significant effect was found at the regression level of the analysis of the Simple Appreciation (SA) factor. The incremental evidence for the validity of the Lack of a Sence of Deprivation (LOSD) factor score is replicated by emerging evidence (Hammer & Brenner, 2017; Jans-Beken et al., 2015), whereas the findings of the incremental contributions of Simple Appreciation (SA) and Appreciation of Others (AO) are controversial (Hammer & Brenner, 2017; Jans-Beken et al., 2015) and still in their "infancy". Consequently, further research should attempt to demonstrate the incremental predictive power of the specific factors Simple Appreciation (SA) and Appreciation of Others (AO) in the context of other criterion variables.

Gratitude and demographic variables

With respect to the existing literature, there is very little research on the association between gratitude and socio-demographics.

Gender. There is a small number of published studies examining how gender relates to gratitude. The present study revealed significant gender differences in gratitude, with women scoring higher than men. Regarding the Greek cultural context, this finding is consistent with previous studies which indicate that women are more likely to experience, express and embrace gratitude (Gordon et al., 2011; Kashdan et al., 2006; Yue et al., 2017). It is suggested that men are less practiced at expressing emotions in the context of socializing and less willing to express softer emotions such as gratitude (Kashdan et al., 2006). On the other hand, women

are more aware of their emotions, and they experience and express them more intensively and frequently than men (Barrett et al., 2000; Ciarrochi et al., 2005; Naito et al., 2005; Simon & Nath, 2004). Furthermore, gender differences in emotions could partially be the result of stereotypical gender roles. According to the traditional masculinity and femininity roles, women are more likely to be caring and pleasing while men are required to be strong and brave (Fischer et al., 2004; Plant et al., 2000). Another hypothesis is that biological factors influence emotional differences, such as the different hormonal and brain compositions, according to which women are more reactive when feeling positive emotions than men and are better in perceiving emotions (Brebner, 2003; Whittle et al., 2017).

Age. Age was positively correlated with global trait gratitude. In Greece, age seems to have an impact on individuals' gratitude, as they become more grateful as they are getting older. Studies on the association between chronological age and trait gratitude have found both positive and null associations (Kern et al., 2016; Kashdan et al., 2006; Wood et al., 2008). The Socioemotional Selectivity Theory could provide an explanation. As people age, they become increasingly aware that time is limited and this perception of a finite time may lead them to prioritize meaningful events and to greater gratitude (Carstensen, 2006; Carstensen et al., 1999). Another proposed explanation could be that older adults tend to provide more positive evaluations of their lives and emotional states (Isaacowitz et al., 2006) and invest more in social relationships that afford greater well-being (Carstensen & Mikels, 2005; Reed & Carstensen, 2012).

Educational level. As far as the educational level is concerned, it was observed that education was associated with individuals' gratitude. Specifically, participants in the present study who reported higher education level reported higher levels of gratitude as well. These findings might reflect the fact that education can have a significant positive impact on personal well-being and consequently on gratitude. It has been found that higher levels of education lead to higher levels of happiness, well-being and life satisfaction (Cuñado & de Gracia, 2012; Nikolaev, 2018). Highly educated individuals tend to appreciate family, friends, and relatives and they spend more time with them; this has positive effect on well-being (Nikolaev, 2018), which is strongly related to gratitude (Wood et al., 2010).

Marital status. Participants who were married or cohabiting with their partners scored higher on global trait gratitude compared to the single and divorced ones. This finding may indicate that partnership in Greece contributes to grateful feelings. It is well established that married individuals report greater well-being compared to single or divorced (Wadsworth, 2016). Studies suggested that cohabitation is associated with well-being the same way as marriage (Rapp & Stauder, 2020). However, it should be noted that only a few participants reported cohabitation in the present study (n=44), which does not allow to define a conclusion.

Summarizing, the evidenced strong internal consistency and validity of the Greek version of the short Gratitude Resentment and Appreciation Test allows its use for conducting psychological and interdisciplinary research work. The S-GRAT-Gr may further be used in the Greek context to measure dispositional gratitude.

In the psychological realm, there is an increased interest in the study of gratitude. Research on gratitude in Greece, a country characterized by higher collectivistic values (Kafetsios et al., 2018), is still scarce. There is increasing evidence for cross-cultural differences in positive psychological interventions (Ng & Lim, 2019) and the function of gratitude in collectivistic cultures, in particular (Titova et al., 2017). The present study contributes to the study of gratitude, while it is one of the first to measure gratitude using a short questionnaire with sufficient psychometric properties. This allows the opening of new research avenues and intervention perspectives centering on gratitude as a variable, which is associated with individual's well-being. An advantage of the S-GRAT-Gr over other instruments for measuring gratitude is its ability to provide a more comprehensive assessment with its three dimensions and total score (Watkins, 2003).

Despite the sample size, it is important to note that the main limitation to generalizing these results is that participants in the present study were not randomly selected, which have led to an unbalanced sample in terms of participants' gender, marital status, and education. Therefore, a guarded interpretation is recommended when reading the findings. Future studies should include representative samples in terms of age, gender, education level, work status, urban or rural residence, and investigate whether the present results are stable across groups. Regarding the use of self-report method for data collection, a potential limitation is desirability bias that may have affected the results. Undoubtedly, there is much retain to be learned about gratitude in the Greek context and its relationship with different personal and social variables.

There are several reasons why gratitude could be an interesting and promising construct to explore further. In the positive psychology framework, gratitude is positively associated with a wide range of positive psychological outcomes, and negatively with variables such as psychological distress, depression, anxiety, envy, anger, etc. This research may provide researchers and counselors with a short tool that contributes to a general improvement of well-being and could serve as a powerful psychological buffer to enhance resilience. Especially after the recent Covid-19 pandemic, there is a pressing need for examining the psychological and social effects on the population and general mental health of individuals.

Conflict of interest

The authors have no conflict of interest

Data availability

All data and materials available on request.

References

Adler, M. G., & Fagley, N. S. (2005). Appreciation: Individual Differences in Finding Value and Meaning as a Unique Predictor of Subjective Well-Being. *Journal of Personality, 73*(1), 79–114. https://doi.org/10.1111/j.1467-6494.2004.00305.x

Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: gratitude and relationships in everyday life. *Emotion (Washington, D.C.)*, *8*(3), 425–429. https://doi.org/10.1037/1528-3542.8.3.425

Alleva, J. M., Tylka, T. L., & Kroon Van Diest, A. M. (2017). The Functionality Appreciation Scale (FAS): Development and psychometric evaluation in U.S. community women and men. *Body image*, *23*, 28–44. https://doi.org/10.1016/j.bodyim.2017.07.008

Alvi, S., Aftab, N., & Bano, S. (2022). Big Five Personality Types as Predictors of Gratitude Among Adults. *Journal of Management Practices, Humanities and Social Sciences*, *6*(1), 1-8. https://doi.org/10.33152/jmphss-6.1.1

Barrett, L. F., Lane, R. D., Sechrest, L., & Schwartz, G. E. (2000). Sex differences in emotional awareness. *Personality and Social Psychology Bulletin, 26*(9), 1027–1035. https://doi.org/10.1177/01461672002611001

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238–246. https://psycnet.apa.org/doi/10.1037/0033-2909.107.2.238

Bernabé-Valero, G., García-Alandete, J., & Gallego-Pérez, JF (2014). Construction of a questionnaire for the evaluation of gratitude: the Gratitude Questionnaire – 20 items (G-20). *Annals of Psychology / Annals of Psychology*, *30*(1), 278–286. https://doi.org/10.6018/analesps.30.1.135511

Brebner, J. (2003). Gender and emotions. *Personality and Individual Differences, 34*(3), 387–394. https://doi.org/10.1016/S0191-8869(02)00059-4

Brown, T. A. (2015). *Confirmatory Factor Analysis for Applied Research* (2nd ed.). The Guilford Press

Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science (New York, N.Y.)*, *312*(5782), 1913–1915.https://doi.org/10.1126/science.1127488

Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously. A theory of socioemotional selectivity. *The American psychologist*, *54*(3), 165–181. https://doi.org/10.1037//0003-066x.54.3.165

Carstensen, L. L., & Mikels, J. A. (2005). At the Intersection of Emotion and Cognition: Aging and the Positivity Effect. *Current Directions in Psychological Science, 14*(3), 117–121. https://doi.org/10.1111/j.0963-7214.2005.00348.x

Cheung, F., Cheung, S., Zhang, J., Leung, K., Leong, F., & Yeh, K.H. (2008). Relevance of Openness as a personality dimension in Chinese culture: Aspects of its cultural relevance. *Journal of Cross-Cultural Psychology, 39*, 81–108. https://doi.org/10.1177/0022022107311968

Child, D. (2006). *The Essentials of Factor Analysis*. 3rd ed. Continuum.

Ciarrochi, J., Hynes, K., & Crittenden, N. (2005). Can men do better if they try harder: Sex and motivational effects on emotional awareness. *Cognition Emotion, 19*(1), 133–141. https://doi.org/10.1080/02699930441000102

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Routledge. https://doi.org/10.4324/9780203771587

Cuñado, J., & de Gracia, F. P. (2012). Does education affect happiness? Evidence for Spain. *Social Indicators Research, 108*(1), 185–196. https://doi.org/10.1007/s11205-011-9874-x

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71-75. https://doi.org/10.1207/s15327752jpa4901_13

Dietrich, H., & Ehrlenspiel, F. (2010). Cognitive interviewing: A qualitative tool for improving questionnaires in sport science. *Measurement in Physical Education and Exercise Science*, *14*(1), 51-60. https://doi.org/10.1080/10913670903455025

Diessner, R., & Lewis, G. (2007). Further validation of the Gratitude, Resentment, and Appreciation Test (GRAT). *The Journal of Social Psychology, 147*(4), 445–447.https://doi.org/10.3200/SOCP.147.4.445-448

Dik, B. J., Duffy, R. D., Allan, B. A., O'Donnell, M. B., Shim, Y., & Steger, M. F. (2015). Purpose and Meaning in Career Development Applications. *The Counseling Psychologist*, *43*(4), 558–585. https://doi.org/10.1177/0011000014546872

Emmons, R. A., Froh, J., & Rose, R. (2019). Gratitude. In M. W. Gallagher & S. J. Lopez (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 317–332). American Psychological Association. https://doi.org/10.1037/0000138-020

Emmons, R. A., & McCullough, M. E. (Eds.). (2004). *The psychology of gratitude*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195150100.001.0001

Fabio, A. D. (2016). *Gratitude Resentment and Appreciation Test*: Primo contributo alla validazione della versione italiana [Gratitude Resentment and Appreciation Test: First contribution to the validation of the Italian version]. *Counseling: Giornale Italiano di Ricerca e Applicazioni, 9*(2), 1–4.

Field, A. (2013). Discovering statistics using IBM SPSS statistics. Sage.

Fischer, A. H., Rodriguez Mosquera, P. M., van Vianen, A. E., & Manstead, A. S. (2004). Gender and culture differences in emotion. *Emotion (Washington, D.C.), 4*(1), 87–94. https://doi.org/10.1037/1528-3542.4.1.87

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, *359*(1449), 1367–1378. https://doi.org/10.1098/rstb.2004.1512

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218–226. https://doi.org/10.1037/0003-066X.56.3.218

Fredrickson, B. L. (1998). What Good Are Positive Emotions? *Review of General Psychology*, *2*(3), 300–319. https://doi.org/10.1037/1089-2680.2.3.300

Froh, J. J., Fan, J., Emmons, R. A., Bono, G., Huebner, E. S., & Watkins, P. (2011). Measuring gratitude in youth: assessing the psychometric properties of adult gratitude scales in children and adolescents. *Psychological assessment*, *23*(2), 311–324. https://doi.org/10.1037/a0021590

Froh, J. J., Fives, C. J., Fuller, J. R., Jacofsky, M. D., Terjesen, M. D., & Yurkewicz, C. (2007). Interpersonal relationships and irrationality as predictors of life satisfaction. *The Journal of Positive Psychology, 2*(1), 29–39. https://doi.org/10.1080/17439760601069051

Froh, J. J., Yurkewicz, C., & Kashdan, T. B. (2009). Gratitude and subjective well-being in early adolescence: examining gender differences. *Journal of Adolescence*, *32*(3), 633–650. https://doi.org/10.1016/j.adolescence.2008.06.006

Garg, N., & Mehak. (2021). Gratitude resentment and appreciation scale (GRAT-16): analyzing psychometrics properties in the Indian context. *Current Psychology*. https://doi.org/10.1007/s12144-021-02169-6

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R. & Gough, H. G. (2006) The International Personality Item Pool and the Future of Public-Domain Personality Measures. *Journal of Research in Personality*, *40*, 84-96. http://dx.doi.org/10.1016/j.jrp.2005.08.007

Gordon, C. L., Arnette, R. A. M., &Smith, R. E. (2011). Have you thanked your spouse today?: Felt and expressed gratitude among married couples. *Personality and Individual Differences, 50*. 339-343. http://dx.doi.org/10.1016/j.paid.2010.10.012

Gudmundsson, E. (2009). Guidelines for translating and adapting psychological instruments. *Nordic Psychology, 61*(2), 29–45. https://doi.org/10.1027/1901-2276.61.2.29

Hair, J. F., L.D.S. Gabriel, M., da Silva, D. & Braga, S. (2019). Development and validation of attitudes measurement scales: Fundamental and practical aspects. *RAUSP Management Journal*, *54*, 490- 507. https://doi.org/10.1108/RAUSP-05-2019-0098

Hammer, J. H., & Brenner, R. E. (2019). Disentangling gratitude: A theoretical and psychometric examination of the Gratitude Resentment and Appreciation Test—Revised Short (GRAT–RS). *Journal of Personality Assessment, 101*(1), 96–105. https://doi.org/10.1080/00223891.2017.1344986

Harrington, D. (2009). *Confirmatory factor analysis*. Oxford University Press.

Hemarajarajeswari, J., & Gupta, P. K. (2021). Gratitude, psychological well-being and happiness among college students: a correlational study. *International Journal of Indian Psychology*, *9*(1), 532-541. https://doi.org/10.25215/0901.053

Henson, R. K., & Roberts, J. K. (2006). Use of EFA in published research: Common errors and some comment on improved practice. *Educational and Psychological Measurement, 66,* 393–416. https://psycnet.apa.org/doi/10.1177/0013164405282485

Hlava, P., Elfers, J., & Offringa, R. (2014). A Transcendent View of Gratitude: The Transpersonal Gratitude Scale. *International Journal of Transpersonal Studies, 33*, 3. https://doi.org/10.1037/T45075-000

Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling*, *6*, 1-55. http://dx.doi.org/10.1080/10705519909540118

Hunsley, J., & Meyer, G. J. (2003). The Incremental Validity of Psychological Testing and Assessment: Conceptual, Methodological, and Statistical Issues. *Psychological Assessment, 15*(4), 446–455. https://doi.org/10.1037/1040-3590.15.4.446

Isaacowitz, D. M., Wadlinger, H. A., Goren, D., & Wilson, H. R. (2006). Is there an age-related positivity effect in visual attention? A comparison of two methodologies. *Emotion (Washington, D.C.)*, *6*(3), 511–516. https://doi.org/10.1037/1528-3542.6.3.511

Jans-Beken, L., Lataster, J., Leontjevas, R., & Jacobs, N. (2015). Measuring Gratitude: A Comparative Validation of the Dutch Gratitude Questionnaire (GQ6) and Short Gratitude, Resentment, and Appreciation Test (SGRAT). *Psychologica Belgica*, *55*(1), 19–31. https://doi.org/10.5334/pb.bd

Kafetsios, K., Hess, U., & Nezlek, J. B. (2018). Self-construal, affective valence of the encounter, and quality of social interactions: Within and cross-culture examinations. *Journal of Social Psychology, 158, 1,* 82–92. https://doi.org/10.1080/00224545.2017.1305326

Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans. *Behaviour Research and Therapy, 44*(2), 177–199. https://doi.org/10.1016/j.brat.2005.01.005

Kern, M. L., Benson, L., Steinberg, E. A., & Steinberg, L. (2016). The EPOCH measure of adolescent well-being. *Psychological Assessment, 28*, 586-597. http://dx.doi.org/10.1037/pas0000201

Kline, R. B. (2010). *Principles and Practice of Structural Equation Modeling* (3rd ed.). Guilford Press.

Kline, R. B. (2015). Principles and Practice of Structural Equation Modeling. Guildford Press.

Knabb, J. J., Vazquez, V. E., Wang, K. T., & Pate, R. A. (2021). The Christian Gratitude Scale: An emic approach to measuring thankfulness in every season of life. *Spirituality in Clinical Practice*. Advance online publication. https://doi.org/10.1037/scp0000278

Lambert, N. M., Clark, M. S., Durtschi, J., Fincham, F. D., & Graham, S. M. (2010). Benefits of expressing gratitude: expressing gratitude to a partner changes one's view of the relationship. *Psychological science*, *21*(4), 574–580. https://doi.org/10.1177/0956797610364003

Lambert, N. M., Graham, S. M., & Fincham, F. D. (2009). A Prototype Analysis of Gratitude: Varieties of Gratitude Experiences. *Personality and Social Psychology Bulletin*, *35*(9), 1193–1207. https://doi.org/10.1177/0146167209338071

Lasota, A., Tomaszek, K., & Bosacki, S. (2022). How to become more grateful? The mediating role of resilience between empathy and gratitude. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 41*(10), 6848–6857. https://doi.org/10.1007/s12144-020-01178-1

Lim, S., & Jahng, S. (2019). Determining the number of factors using parallel analysis and its recent variants. *Psychological Methods, 24*(4), 452–467. https://doi.org/10.1037/met0000230

Lin, S. H., & Huang, Y. C. (2016). Psychometric properties and factorial structure of the Chinese version of the Gratitude Resentment and Appreciation Test, *British Journal of Guidance & Counselling, 44*(3), 347-361. https://doi.org/10.1080/03069885.2015.1119234

Locklear, L. R., Sheridan, S., & Kong, D. T. (2022). Appreciating social science research on gratitude: An integrative review for organizational scholarship on gratitude in the workplace. *Journal of Organizational Behavior*, 1–36. https://doi.org/10.1002/job.2624

Lodice, J. A., Malouff, J. M., &Schutt, N. S. (2021). The association between Gratitude and Depression: A Meta-Analysis. *International Journal of Depression and Anxiety. 4*, 024.https://doi.org/10.23937/2643-4059/1710024

Luthans, F., Avolio, B. J., Avey, J. B. and Norman, S. M. (2007). Positive psychological capital: measurement and relationship with performance and satisfaction. *Personnel Psychology, 60*, 541-572. https://doi.org/10.1111/j.1744-6570.2007.00083.x

Lyrakos, G. N., Dragioti, H., Batistaki, C., & Spinaris, V. (2013). Translation and validation study of the subjective happiness scale (shs) in greek general population, diabetes mellitus and patients with emotional disorders. *European Psychiatry*, *28*(S1).https://doi.org/10.1016/S0924-9338(13)76488-5

Lyrakos, G. N., Xatziagelaki, E., Papazafiropoulou, A. K., Batistaki, C., Damigos, D., Mathianakis, G., Bousboulas, S. & Spinaris, V. (2013a). Translation and validation study of the satisfaction with life scale (SWLS) in Greek general population, diabetes mellitus and patients with emotional disorders. *European Psychiatry*, *28*, 1. https://doi.org/10.1016/S0924-9338(13)76471-X

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, *46*, 137-155. https://doi.org/10.1023/A:1006824100041

Manita, E., Mawarpury, M., Khairani, M. & Sari, K. (2020). Is Gratitude Decrease Stress among Early Adult?. In Proceedings of the 1st International Conference on Psychology (ICPsy 2019), pages 61-65. https://doi.org/10.5220/0009437600610065

Mao, Y., Zhao, J., Xu, Y., & Xiang, Y. (2021). How gratitude inhibits envy: From the perspective of positive psychology. *PsyCh journal*, *10*(3), 384–392. https://doi.org/10.1002/pchj.413

Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin, 97*(3), 562–582. https://doi.org/10.1037/0033-2909.97.3.562

Martini M., Loera B., Converso D. (2016). Users' gratitude as a source of support for social-health operators: First validation of the perceived gratitude scale (PGrate). *Bollettino Di Psicologica Applicata*, 274(3), 23–33. https://doi.org/10.4236/psych.2014.56067

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*(1), 112–127. https://doi.org/10.1037/0022-3514.82.1.112

Meyers, L. S., Gamst, G., & Guarino, A. J. (2006). *Applied Multivariate Research: Design and Interpretation*. Sage.

Michailidis, G. (2021). Does gratitude affect the expression of aggression and anger in children? *Dialogues in Clinical Neuroscience & Mental Health*, *4*(3), 155-166. https://doi.org/10.26386/obrela.v4i3.153

Michailidis, G., & Maridaki-Kassotaki, A. (2020). Reliability and Construct Validity of the Greek Gratitude Questionnaire (GQ6) in a sample of children aged 11 to 12 years. Dialogues in Clinical Neuroscience & Mental Health, *3*(1), 56-62. https://doi.org/10.26386/obrela.v3i1.176

Morgan, B., Gulliford, L., & Kristjánsson, K. (2017). A new approach to measuring moral virtues: The Multi-Component Gratitude Measure. *Personality and Individual Differences, 107,* 179–189. https://doi.org/10.1016/j.paid.2016.11.044

Naito, T., Wangwan, J., & Tani, M. (2005). Gratitude in University Students in Japan and Thailand. *Journal of Cross-Cultural Psychology*, *36*(2), 247–263. https://doi.org/10.1177/0022022104272904

Ng, W., & Lim, W. S. (2019). Developing positive psychological interventions: Maximizing efficacy for use in east-ern cultures. In L. Van Zyl & S. Rothmann, Sr. (Eds.), Positive psychological intervention design and protocols for multi-cultural contexts (pp. 277–295). Springer. https://doi.org/10.1007/978-3-030-20020-6_12

Nikolaev, B. (2018), Does higher education increase hedonic and eudaimonic happiness? *Journal of Happiness Studies, 19*(2), 483-504. https://doi.org/10.1007/s10902-016-9833-y

Nunnally, J.C. & Bernstein, I.H. (1994). The Assessment of Reliability. Psychometric Theory, 3, 248-292.

Oğuz-Duran, N. (2017). The Revised Short Gratitude, Resentment, and Appreciation Test (S-GRAT): Adaptation for Turkish college students. *Journal of Happiness & Well-Being*, *5*, 23– 37.

Palazzeschi, L., Svicher, A., Gori, A., & Di Fabio, A. (2022). Gratitude in Organizations: Psychometric Properties of the Italian Version of the Gratitude Resentment and Appreciation Test-Revised Short (GRAT-RS) in Workers. *International journal of environmental research and public health*, *19*(17), 11084. https://doi.org/10.3390/ijerph191711084

Papadopoulou, V., Lykidou, S., Moraitou, D., & Papantoniou, G. (2017). The role of gratitude and forgiveness in retirement adjustment. *Hellenic Journal of Psychology*, *14*. 199-222.

Peterson, C., Peterson, N., & Powell, K. (2017). Cognitive Interviewing for Item Development: Validity Evidence Based on Content and Response Processes. *Measurement and Evaluation in Counseling and Development*, *50*. https://doi.org/10.1080/07481756.2017.1339564

Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The Gender Stereotyping of Emotions. *Psychology of Women Quarterly, 24*(1), 81–92. https://doi.org/10.1111/j.1471-6402.2000.tb01024.x

Portney, L.G. and Watkins, M.P. (2009). *Foundations of Clinical Research: Applications to Practice*. (3rd Ed.). Prentice Hall, Upper Saddle River.

Rapp, I., & Stauder, S. (2020). Mental and Physical Health in Couple Relationships: Is It Better to Live Together? *European Sociological Review*, *36*(2), 303–316. https://doi.org/10.1093/esr/jcz047

Reed, A. E., & Carstensen, L. L. (2012). The theory behind the age-related positivity effect. *Frontiers in Psychology, 3,* Article 339. https://doi.org/10.3389/fpsyg.2012.00339

Rosenberg, E. L. (1998). Levels of analysis and the organization of affect. *Review of General Psychology, 2*(3), 247–270. https://doi.org/10.1037/1089-2680.2.3.247

Simon, R. W., & Nath, L. E. (2004). Gender and Emotion in the United States: Do Men and Women Differ in Self-Reports of Feelings and Expressive Behavior? *American Journal of Sociology, 109*(5), 1137–1176. https://doi.org/10.1086/382111

Solomon, R. (2004). Foreword. In Emmons, R. A. & McCullough, M. E. (Eds.), *The psychology of gratitude* (pp. v–xi). Oxford University Press.

Spence, J. R., Brown, D. J., Keeping, L. M. and Lian, H. (2014). Helpful Today, But Not Tomorrow? Feeling Grateful as a Predictor of Daily Organizational Citizenship Behaviors. *Personnel Psychology, 67*, 705-738. https://doi.org/10.1111/peps.12051

Steindl-Rast, D. (2004). Gratitude as thankfulness and as gratefulness. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 282-289). Oxford University Press.

Szcześniak, M., Rodzeń, W., Malinowska, A., & Kroplewski, Z. (2020). Big Five Personality Traits and Gratitude: The Role of Emotional Intelligence. *Psychology research and behavior management*, *13*, 977–988. https://doi.org/10.2147/PRBM.S268643

Tabachnick, B. G., & Fidell, L. S. (2013). Using Multivariate Statistics (6th ed.). Pearson.

Titova, L., Wagstaff, A. E., & Parks, A. C. (2017). Disentangling the effects of gratitude and optimism: A cross-cultural investigation. *Journal of Cross-Cultural Psychology, 48*(5), 754-770. https://doi.org/10.1177/0022022117699278

Thomas, M. & Watkins, P. (2003). *Measuring the grateful trait: Development of revised GRAT*. Paper presented at the Annual convention of the Western Psychological Association, Vancouver, British Columbia, Canada.

Toepfer, S. M., Cichy, K., & Peters, P. (2012). Letters of gratitude: Further evidence for author benefits. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being, 13*(1), 187–201. https://doi.org/10.1007/s10902-011-9257-7

Tomaszek, K., & Lasota, A. (2018). Gratitude and its measurement – The polish adaptation of the GRAT – R Questionnaire. *Czasopismo Psychologiczne, 24*(2), 251–260. https://doi.org/10.14691/CPPJ.24.2.251

Tran, T. A. T., Nguyễn Phước, C. T., Dinh, H. V. T., & Nguyen, V. T. (2022). The Vietnamese version of the Gratitude Questionnaire (GQ) and the revised Short Gratitude, Resentment, and Appreciation Test (S-GRAT) : psychometric properties among adolescents. *Japanese Psychological Research*. https://doi.org/10.1111/jpr.12321

Tylka, T. L. (2013). Evidence for the Body Appreciation Scale's measurement equivalence/invariance between U.S. college women and men. *Body image*, *10*(3), 415–418. https://doi.org/10.1016/j.bodyim.2013.02.006

Wadsworth, T. (2016). Marriage and Subjective Well-Being: How and Why Context Matters. *Social Indicators Research*, *126*(3), 1025–1048. https://www.jstor.org/stable/48714759

Watkins, M. W. (2018). Exploratory Factor Analysis: A Guide to Best Practice. *Journal of Black Psychology*, *44*(3), 219–246. https://doi.org/10.1177/0095798418771807

Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude and relationships with subjective well-being. *Social Behavior and Personality: An International Journal, 31*(5), 431–452. https://doi.org/10.2224/sbp.2003.31.5.431

Whittle, S., Simmons, J. G., & Allen, N. B. (2017). Emotion and gender-specific neural processing in men and women. *Current Opiniom in Psychology, 17*, 19-24. https://doi.org/10.1016/B978-0-12-803506-1.00013-9

Willis, G. (2005). *Cognitive Interviewing: A Tool for Improving Questionnaire Design*. Sage.

Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: a review and theoretical integration. *Clinical psychology review*, *30*(7), 890–905. https://doi.org/10.1016/j.cpr.2010.03.005

Wood, A.M., Joseph, S., & Maltby, J. (2008). Gratitude uniquely predicts satisfaction with life: Incremental validity above the domains and facets of the five factor model. *Personality and Individual Differences*, *45*, 49-54. https://doi.org/10.1016/j.paid.2008.02.019

Wood, A. M., Joseph, S., & Maltby, J. (2009). Gratitude predicts psychological well-being above the Big Five facets. *Personality and Individual Differences, 46*, 443–447. https://doi.org/10.1016/j.paid.2008.11.012

World Health Organization (WHO) (2022). *Process of translation and adaptation of instruments*. Retrieved, October 20, 2022, from: https://www.mhinnovation.net/sites/default/files/files/WHO%20Guidelines%20on%20Translation%20and%20Adaptation%20of%20Instruments.docx

Yue, X. D., Hiranandani, N. A., Jiang, F., Hou, Z., & Chen, X. (2017). Unpacking the Gender Differences on Mental Health: The Effects of Optimism and Gratitude. *Psychological reports*, *120*(4), 639–649. https://doi.org/10.1177/0033294117701136

Youssef-Morgan, C. M., van Zyl, L. E., & Ahrens, B. L. (2022). The Work Gratitude Scale: Development and Evaluation of a Multidimensional Measure. *Frontiers in psychology*, *12*, 795328. https://doi.org/10.3389/fpsyg.2021.795328

Ypofanti, M., Zisi, V., Zourbanos, N., Mouchtouri, B., Tzanne, P., Theodorakis, Y., & Lyrakos, G. (2015). Psychometric Properties of the International Personality Item Pool Big-Five Personality Questionnaire for the Greek population. *Health psychology research*, *3*(2), 2206. https://doi.org/10.4081/hpr.2015.2206

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business research methods*. South Western Cengage Learning.

Appendix A

The Greek version of the short Gratitude Resentment and Appreciation Test (S-GRAT-GR)

Αριθμός ερώτησης	Ερώτηση	Διαφωνώ απόλυτα	Διαφωνώ	Διαφωνώ λίγο	Μάλλον διαφωνώ	Ούτε διαφωνώ, ούτε συμφωνώ	Μάλλον συμφωνώ	Συμφωνώ ως επί το πλείστον	Συμφωνώ	Συμφωνώ απόλυτα
1	Δεν θα βρισκόμουν στο σημείο που είμαι σήμερα χωρίς την βοήθεια πολλών ανθρώπων.									
2	Η ζωή υπήρξε καλή μαζί μου.									
3	Φαίνεται ότι τα καλά πράγματα στη ζωή μου ποτέ δεν είναι αρκετά και ποτέ δεν παίρνω αυτό που μου αναλογεί.									
4	Συχνά κατακλύζομαι από την ομορφιά της φύσης.									
5	Παρόλο που θεωρώ ότι είναι σημαντικό να νιώθω καλά με τα επιτεύγματά μου, θεωρώ εξίσου σημαντικό να θυμάμαι ότι έχουν συμβάλλει κι άλλοι στην επιτυχία μου.									
6	Δεν Θεωρώ ότι έχω πάρει όλα τα καλά πράγματα που μου αξίζουν στη ζωή.									
7	Κάθε φθινόπωρο απολαμβάνω πραγματικά να βλέπω τα φύλλα που αλλάζουν χρώμα.									
8	Παρόλο που κατά βάση εγώ έχω τον έλεγχο στη ζωή μου, δεν μπορώ να μην σκέφτομαι όλους αυτούς που με στήριξαν και με βοήθησαν στη διαδρομή.									
9	Θεωρώ ότι είναι σημαντικό να κάνω μια παύση από την καθημερινότητα και να εκτιμώ τις ομορφιές της ζωής.									
10	Στη ζωή μου, μου έχουν συμβεί περισσότερα άσχημα πράγματα από ότι άξιζα.									
11	Εξαιτίας των όσων έχω περάσει στη ζωή μου, πιστεύω ότι ο κόσμος μου χρωστά κάτι.									
12	Θεωρώ ότι είναι σημαντικό να κάνω συχνά μια «παύση» και να νιώθω ευλογημένος για όσα έχω.									
13	Θεωρώ ότι είναι σημαντικό να απολαμβάνεις τα απλά πράγματα στη ζωή.									
14	Νιώθω βαθιά ευγνωμοσύνη για αυτά που έχουν κάνει οι άλλοι για μένα στη ζωή μου.									
15	Για κάποιο λόγο φαίνεται ότι δεν έχω ποτέ τα πλεονεκτήματα που έχουν άλλοι.									
16	Θεωρώ ότι είναι σημαντικό να εκτιμάς την κάθε μέρα που είσαι ζωντανός.									

The following items should be reverse scored: 3, 6, 10, 11, 15
The following items form the Lack of a Sense of Deprivation (LOSD) factor: 2, 3, 6, 10, 11, 15
The following items form the Simple Appreciation (SA) factor: 4, 7, 9, 12, 13, 16
The following items form the Appreciation for Others (AO) factor: 1, 5, 8, 14
Total is from all items.

ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

Αξιοπιστία και Εγκυρότητα της Ελληνικής Εκδοχής του Σύντομου Τεστ Ευγνωμοσύνης, Δυσαρέσκειας και Εκτίμησης (S-GRAT-GR)

Αικατερίνη ΚΑΡΓΑΚΟΥ[1], Κωνσταντίνος ΚΑΦΕΤΣΙΟΣ[2,3], Μαρία ΣΤΑΜΑΤΟΠΟΥΛΟΥ[1], Παναγιώτης ΠΡΕΖΕΡΑΚΟΣ[1], Andrea Paola ROJAS GIL[1]

[1] Σχολή Επιστημών Υγείας, Τμήμα Νοσηλευτικής, Πανεπιστήμιο Πελοποννήσου,

[2] Σχολή Ψυχολογίας, Τομέας Κοινωνικής και Κλινικής Ψυχολογίας, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

[3] Τμήμα Ψυχολογίας, Πανεπιστήμιο Palackého στο Olomouci

ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ

Ευγνωμοσύνη
S-GRAT
Αξιοπιστία
Εγκυρότητα
Προσωπικότητα
Ευτυχία
Ικανοποίηση από τη Ζωή

ΣΤΟΙΧΕΙΑ ΕΠΙΚΟΙΝΩΝΙΑΣ

Andrea Paola Rojas Gil,
Διοικητικές Υπηρεσίες
Παναρκαδικού Νοσοκομείου,
Τρίπολη, 23100, Ελλάδα
arojas@uop.gr,
apaola71@yahoo.com.mx

ΠΕΡΙΛΗΨΗ

Η ευγνωμοσύνη έχει εννοιολογηθεί ως συναισθηματικό χαρακτηριστικό, διάθεση ή συναίσθημα και έχει συσχετιστεί με πολυάριθμα ευεργετικά αποτελέσματα για τα άτομα και τις κοινότητες. Το σύντομο Τεστ Ευγνωμοσύνης, Δυσαρέσκειας και Εκτίμησης (S-GRAT-Gr) αποτελεί ένα από τα πιο ευρέως χρησιμοποιούμενα εργαλεία μέτρησης της ευγνωμοσύνης ως χαρακτηριστικό, το οποίο αποτελείται από τρεις υποκλίμακες οι οποίες αξιολογούν την έλλειψη αίσθησης στέρησης, την εκτίμηση των απλών απολαύσεων και την κοινωνική εκτίμηση. Η παρούσα μελέτη εξέτασε τις ψυχομετρικές ιδιότητες της ελληνικής εκδοχής του S-GRAT. Χρησιμοποιώντας ένα δείγμα 681 και ένα μικρότερο δείγμα 50 ενηλίκων γενικού πληθυσμού, διαπιστώσαμε ότι η κλίμακα επέδειξε καλή αξιοπιστία εσωτερικής συνοχής και υψηλή αξιοπιστία δοκιμασίας – επαναδοκιμασίας. Η διερευνητική και επιβεβαιωτική ανάλυση επιβεβαίωσαν την αρχική δομή της κλίμακας τριών παραγόντων. Η συγκλίνουσα εγκυρότητα της υπό στάθμισης κλίμακας επιβεβαιώθηκε μέσω των στατιστικά σημαντικών συσχετίσεων του ολικού σκορ του S-GRAT-Gr με την Προσήνεια, την Πνευματική Καλλιέργεια, την Εξωστρέφεια, τη Συναισθηματική Σταθερότητα και την Ευσυνειδησία. Επιπρόσθετα, διαπιστώθηκαν θετικές συσχετίσεις με το Ερωτηματολόγιο Ευγνωμοσύνης (GQ-6), την Κλίμακα Υποκειμενικής Ευτυχίας και την Κλίμακα Ικανοποίησης από τη Ζωή. Η βαθμολογία του S-GRAT-Gr βρέθηκε να ερμηνεύει ένα σημαντικό ποσοστό της διακύμανσης του σκορ της Κλίμακας της Ικανοποίησης από τη Ζωή και της Κλίμακας Υποκειμενικής Ευτυχίας, πάνω και πέρα από την επίδραση των διαστάσεων της Προσωπικότητας, καθώς και από το GQ-6. Τα αποτελέσματα υποδεικνύουν ότι η ελληνική εκδοχή του αναθεωρημένου σύντομου Τεστ Ευγνωμοσύνης, Δυσαρέσκειας και Εκτίμησης (S-GRAT-Gr) είναι ένα αξιόπιστο και έγκυρο εργαλείο για την αξιολόγηση της ευγνωμοσύνης στο ελληνικό πλαίσιο.

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Ψυχολογία: Το Περιοδικό της Ελληνικής Ψυχολογικής Εταιρείας
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