https://doi.org/10.22365/jpsych.2022.063 / Psychiatriki 2022, 33:200–209

Research article

Psychometric properties of the Greek version of Affective Lability Scale - Short Form (ALS-18) in a sample of adults with neurodevelopmental disorders

Eva Kalantzi, Artemios Pehlivanidis, Kalliopi Korobili, Vasilis Mantas, Charalabos Papageorgiou

Unit for Adult Neurodevelopmental Disorders, First Department of Psychiatry, National and Kapodistrian University of Athens, Eginition Hospital, Athens, Greece

ARTICLE HISTORY: Received 12 July 2021/Revised 15 September 2021/Published Online 21 February 2022

ABSTRACT

Affective dysregulation refers to maladaptive patterns of emotional regulation that impair daily life functioning, common in many psychiatric disorders. It is expressed with the form of affective lability, an emotional construct composed of frequent and intense fluctuations in emotion in response to both pleasant and unpleasant events or the interpretations of events. The Affective Lability Scale (ALS) is a widely used self-reporting questionnaire, that measures the tendency of emotions to shift from one to another, as well as their tendency to oscillate between depression and elation and between depression and anxiety. The original scale had 54 items, but a shorter form of 18-items (ALS-18) was created, with three domains: anxiety–depression shift, depression–elation shift and anger shift. The aim of the present study was to evaluate the psychometric properties of the ALS-18 Greek version. The translation was conducted by two of the authors. The study took place in the 1st Department of Psychiatry of the National and Kapodistrian University of Athens at Eginition hospital. A sample of 108 adults was included in the survey divided into two groups, neurodevelopmental disorder group (NDD: attention deficit hyperactivity disorder or autism spectrum disorder) and control group. They all completed ALS-18, The State – Trait Anxiety Inventory (STAIT), Difficulties in Emotion Regulation Scale (DERS), The Hospital Anxiety and Depression Scale (HADS). The ALS-18 had satisfactory internal consistency; Cronbach's α value was 0.91 for the total scale and 0.89 for Anxiety/Depression, 0.86 for Depression/Elation and 0.85 for Anger. The three-factor structure was replicated in our data. The internal consistency and reliability of all the ALS-18 factors in our study could be considered satisfactory with a Cronbach's alpha coefficient of 0.85 or above for all factors. Significantly higher mean values were found for all the subscales, Anxiety/Depression, Depression/Elation and Anger, in NDD subjects as compared to controls, showing good discriminative ability. The ALS factors discriminated well between clinical and non-clinical samples. The present study reveals that the Greek version of ALS-18 presents good psychometric properties, showing good internal consistency and reliability, as well as concurrent and discriminative validity. It has an elevated score in NDD and thus, our results indicate that affective lability could and maybe should, be a target integrated in therapeutic strategies.

KEYWORDS: Affective Lability Scale, ALS-18, affective lability, Greek, psychometric properties, neurodevelopmental disorders.

Introduction

Affective dysregulation refers to maladaptive patterns of emotional regulation that impair daily life functioning.[1] It is common in many psychiatric disorders – namely, depression,[2] anxiety disorders,[3] attention deficit hyperactivity disorder (ADHD),[4] autism spectrum disorder (ASD),[5] borderline personality disorder[6] – with the form of affective instability. That is an emotional feature that can be expressed with affective lability (AL), a construct composed of frequent and intense fluctuations in emotion in response to both pleasant and unpleasant events or the interpretations of events.[7] It is associated with poorer clinical outcomes and increased use of antipsychotic and

Corresponding author: Eva Kalantzi, First Department of Psychiatry, National and Kapodistrian University of Athens, Eginition Hospital, 72–74 Vas. Sophias Ave., GR-115 26 Athnes, Greece • e-mail: kalantzieva@yahoo.gr

non-antipsychotic mood stabilizer therapy, regardless of the mental disorder with which an individual initially presents.[8] Although frequent, it is measured in several ways that may lead to confusion. It is not always found as a core symptom, but it is often met as a "component" that plays a significant role in the clinical expression of many psychiatric disorders. The National Institute of Mental Health has proposed a dimensional framework for research, the Research Domain Criteria (RDoC)[9] and Affective Lability is proposed as the sixth domain of the matrix, being a regulatory factor for the expression of the initial five.[10]

In order to measure AL, Harvey et al[11] developed the Affective Lability Scale (ALS). It is a 54-item scale in which people rate their agreement with statements regarding the tendency of their mood to shift between what they consider normal mood to the affective domains of anger, depression, elation, and anxiety as well as their tendency to oscillate between depression and elation and between depression and anxiety. Items were created to tap into subjective experiences, physiological perceptions and behaviors, using six subscales.[11] Recognizing that this self-report measure is lengthy, Oliver and Simons[12] created an 18-item short form (ALS-18) of the 54 item ALS. Factor analysis has confirmed good fit in a non-clinical sample for three domains in the ALS-18: anxiety–depression shift (AD, five items), depression–elation shift (DE, eight items), and anger shift (Ang, five items).

Neurodevelopmental disorders (NDD) are a group of conditions with onset in the developmental period. The disorders typically manifest early in development, often before the child enters grade school and are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning. The two most common neurodevelopmental disorders are attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD). ADHD and ASD often co-occur.[13,14] Schizophrenia and bipolar disorder are not included in NDD.[15,16]

The emotional dimension in ADHD, although recognized for years,[17] is still not considered in the core diagnostic criteria for the disorder.[15] AL is considered as an important associate feature of ADHD.[18,19] ADHD is a common example of developmental psychopathology that, although typically studied through the lens of cognitive control, might be better understood by taking an emotion regulation perspective.[20] Samson et al[21] support that there is a relationship between all the core features of autism and emotion dysregulation.

Given that the ALS-18 was created using responses from a non-clinical sample of undergraduate students, Look et al,[22] aimed to evaluate the structure and construct validity of the ALS-18 in a sample that included people with DSM-IV Axis II personality disorders and healthy control participants, by comparing them in clusters and not by differentiating them according to specific diagnosis. They evaluated and showed the utility of this short form in a clinical sample that included people with impairment associated with AL. Weibel et al[23] demonstrated a good validity of ALS-18 in measuring affective lability in adult ADHD patients, a clinical group defined by attentional and hyperactive symptoms, but in which emotional dysregulation is also an important feature. Aas et al[24] found differentiation in ALS scores between bipolar patients from relatives and healthy controls. These three studies, showed that ALS has a good discriminant validity in differentiating clinical sample groups and healthy controls, making it a useful tool. The ALS has good internal consistency and is also the most frequently used measure having been used in almost all clinical diagnostic groups.[25]

Based on the existing studies, as well as on the fact that there is no proposed threshold or cut-off point that AL becomes pathological, it is possible that it exists as a continuum from normal to pathological.[24] The above mentioned good discriminant validity of ALS remains even when healthy controls are compared to a group of conditions and not only to a single disorder, such as the psychosis spectrum disorders.[26] According to Thomson emotion dysregulation is a transdiagnostic element of affective psychopathology.[27] Emotion regulation deficits are found in children with ASD and ADHD, suggesting that emotion regulation may be a transdiagnostic feature in neurodevelopmental disorders. Waddington[28] compared emotion regulation in ASD+ADHD, ASD-only, and ADHD-only groups and they did not significantly differ from each other on emotion recognition factors. The ASD+ADHD more strongly deviated from the controls than the non-comorbid groups. These findings suggest that emotion recognition is an overlapping feature for ASD and ADHD. In a recent review Mason[29] also found evidence that emotion regulation constitutes a transdiagnostic feature in the two common neurodevelopmental disorders, ADHD and ASD.[30] The purpose of this study was to evaluate, for the first time, the psychometric properties of the Greek version of ALS-18, when used in a clinical sample of adult normal intelligent, neurodevelopmental population, so as to provide a useful tool for clinical and research purposes in assessing affective lability in this population, in comparison to healthy controls.

Material and Method

Participants

A sample of 108 adults was included in the survey divided in two groups: one consisting of 91 adults with neurodevelopmental disorder (NDD), ADHD or ASD, with 61.5% being men and 38.5% women and mean age 28.8 years and another group consisting of 17 controls with 29.4% being men and 70.6% women and mean age 41.5 years (table 1).

The study was part of a larger research project on de novo diagnosed adults with ADHD and ASD.[13] The multi-disciplinary team that carries out all assessments consists of psychiatrists who have extended experience in the diagnosis and treatment of NDD in adults and are trained in Autism Diagnostic Observation Schedule (ADOS),[31,32] Autism Diagnostic Interview-Revised (ADI-R)[32,33] and Diagnostic Interview for ADHD in Adults (DIVA)[34] and clinical psychologists. In order to be included in the study subjects had to be adults with normal intelligence and fluent phrase/speech and to be assessed for the first time in their life for a possible ADHD and/or ASD diagnosis. Exclusion criteria were a previous ADHD and/or ASD diagnosis, the presence of acute psychopathology requiring urgent psychiatric treatment, current substance abuse disorder, IQ<70 according to WAIS and a known genetic cause. Diagnosis regarding the presence of ADHD and/or ASD is given during a consensus meeting of the multidisciplinary team and is based on DSM-5 criteria, while taking into consideration all available information. Written informed consent was obtained from all participants and the study was approved by the scientific and ethics committee of the University of Athens.

Measurements

The ALS was administered along with other measures, which are reported in detail below.

ALS-18

The Affective Lability Scale - Short Form (ALS-18) comprises a three-factor model of affective lability, measuring rapid changes from euthymic mood to other emotional states including elation, depression, and anger. It is generally assumed to measure aspects of temperament. Participants are asked to indicate how well each item describes their feelings over the past week on a scale of very undescriptive of me, rather undescriptive, rather descriptive, very descriptive of me (scored 0 to 3). In addition to having a total score (ranging from 0–54), the ALS-18 has three subscale scores: Anxiety/Depression (ranging from 0–15), Depression/Elation (ranging from 0–24) and Anger (ranging from 0–15), with each factor retaining at least two items from each of the original six scales of the ALS and it has been shown to correlate highly with the original ALS total score. Two fluent English-speaking researchers adapted the present version of the questionnaire from the original English version using the back-translation procedure. A written permission to adapt ALS-18 to the Greek language was given by the authors of the original scale.

The following scales were also administered in order to examine the validity of the Greek version of ALS-18.

The State – Trait Anxiety Inventory (STAIT)[35]

STAI-X2 is a self-report measure assessing anxiety as a state condition and anxiety as a trait characteristic, that consists of 40 questions on a 4-point Likert Scale. In our

Table 1. Sample characteristics.

	Total	NDD (N=91, 84.3%)	Control (N=17, 15.7%)		
	N (%)	N (%)	N (%)	Test statistic (df)	p
Gender					
Males	61 (56.5)	56 (61.5)	5 (29.4)	6.02 (1)	0.014[+]
Females	47 (43.5)	35 (38.5)	12 (70.6)		
Age (years), mean (SD)	31.1 (10.3)	28.8 (8.1)	41.5 (12.8)	–5.22 (93)	0.001[‡]
Educational status					
High school	20 (20.2)	18 (22)	2 (11.8)	5.97 (3)	0.104[++]
Technical college	14 (14.1)	11 (13.4)	3 (17.6)		
University	45 (45.5)	40 (48.8)	5 (29.4)		
Other	20 (20.2)	13 (15.9)	7 (41.2)		

[+]Pearson's chi-square; [++]Fisher's exact test; [‡]Student's t-test

study we used the second part of the inventory, regarding the trait characteristics. The STAI Greek version has good psychometric qualities and is widely used.[36]

Difficulties in Emotion Regulation Scale (DERS)[37]

DERS was designed to assess emotion dysregulation multi-dimensionally. Six dimensions were created that underline the DERS: Difficulty accepting emotion responses (Acceptance), lack of emotional awareness (Awareness), limited access to emotion regulation strategies (Strategies), difficulties engaging in goal directed behavior when emotionally aroused (Goals), impulse control difficulties (Impulse) and lack of emotional clarity (Clarity). The Greek version of the DERS, which demonstrated adequate reliability as evidenced in both internal consistency and test-retest stability comparable to the original scale, was used.[38]

The Hospital Anxiety and Depression Scale (HADS)[39]

HADS is widely used in several countries to assess anxiety and depression. It consists of 14 questions, with four possible answers (0–3) and a total score 0–42. The Greek version of HADS shows good psychometric properties in assessing anxiety and depression in general hospital patients.[40]

Statistical analysis

The statistical analysis was conducted using SPSS and AMOS (SPSS, Chicago, IL, USA) Statistical Software programs and statistically significant level was set at 0.05.

A confirmatory factor analysis (CFA) with maximum likelihood procedure was performed in order to confirm the model of ALS. The variance of the latent constructs was fixed at one during parameter estimation. The fit of the CFA model was assessed using the comparative fit index (CFI), the goodness of fit index (GFI) and the root mean square error of approximation (RMSEA). For the CFI and GFI indices, values close to or greater than 0.95 were taken to reflect a good fit to the data. RMSEA values of less than 0.05 indicate a good fit and values as high as 0.08 indicate a reasonable fit. The internal consistency of the questionnaire was analyzed with Cronbach's alpha. Reliability equal to or greater than 0.70 was considered acceptable. Pearson correlations coefficients were used to explore the association among the ALS subscales. Correlation coefficient between 0.1 and 0.3 were considered low, between 0.31 and 0.5 moderate and those over 0.5 were considered high. For the comparison of proportions chi-square and Fisher's exact tests were used. Independent samples Student's t-tests were used for the comparison of mean values between the two groups. P values reported are two-tailed.

Results

Participant characteristics

Females were 56 (61.5%) among the 91 participants of the NDD group and 5 (29.4%) among the 17 participants who constituted the control group (p= 0.014). The mean age of the NDD group was 31,3 years while for the controls was 41.5 years (p=0.001). The two groups showed no difference in the educational level (p=0.104) (table 1).

Psychometric properties of ALS

Internal consistency

Corrected item-total correlations and Cronbach's alpha if an item was deleted per factor are presented in table 2. All corrected item-total correlations were high, between 0.70–0.75 for Anxiety/Depression, between 0.49–0.74 for Depression/Elation and between 0.53–0.73 for Anger. Internal consistency reliability was accepted with Cronbach's alpha equal to 0.89 for Anxiety/Depression, 0.86 for Depression/Elation and 0.85 for Anger. Cronbach's alpha for the whole questionnaire was equal to 0.91. The alpha, if item deleted, was also computed for each item and there was no item that reduced the reliabilitythat was between 0.86–0.87 for Anxiety/Depression, between 0.83–0.86 for Depression/Elation and between 0.80–0.85 for Anger. Therefore, there were no problematic items with respect to internal consistency and the scale can be considered sufficiently reliable.

Factor analysis

A CFA was conducted to estimate if the model fitted the data well. The CFA indicated an adequate fit of the three-factor model (RMSEA=0.079, CFI=0.969 and GFI=0.958). None of the item cross loadings exceeded the item loadings on the intended latent construct.

The intercorrelations of the ALS subscales were Anxiety/Depression - Depression/Elation: 0.67, Anxiety/Depression – Anger: 0.83, Depression/Elation – Anger: 0.60. All subscales were significantly and positively correlated with each other and the correlations were above 0.6 and higher.

Concurrent validity

Association of ALS subscales with DERS dimensions are presented in table 3. Anxiety/Depression, Depression/Elation and Anger were positively correlated with all DERS subscales, except for lack of emotional awareness. The correlation coefficients ranged from low to high.

Table 2. Corrected Item-Total Correlations, internal consistency reliability and means of the ALS factors.

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	Mean (SD)
Anxiety/depression			0.89	6.93 (4.26)
Item 1	0.70	0.87		
Item 3	0.75	0.86		
Item 5	0.73	0.86		
Item 6	0.71	0.87		
Item 7	0.75	0.86		
Depression/elation			0.86	9.84 (5.76)
Item 2	0.53	0.86		
Item 10	0.64	0.84		
Item 12	0.74	0.83		
Item 13	0.49	0.86		
Item 15	0.65	0.84		
Item 16	0.69	0.84		
Item 17	0.63	0.85		
Item 18	0.52	0.86		
Anger			0.85	5.10 (3.95)
Item 4	0.67	0.82		
Item 8	0.71	0.81		
Item 9	0.73	0.80		
Item 11	0.67	0.82		
Item 14	0.53	0.85		

ALS: Affective Lability Scale

Table 3. Pearson's correlation coefficients of ALS subscales with DERS questionnaire.

	Anxiety/depression	Depression/elation	Anger
Nonacceptance of emotional responses	0.54***	0.48***	0.44***
Difficulty engaging in goal-directed behavior	0.56***	0.540***	0.53***
Impulse control difficulties	0.63***	0.40***	0.66***
Lack of emotional awareness	–0.09	–0.03	0.058
Limited access to emotion regulation strategies	0.63***	0.46***	0.57***
Lack of emotional clarity	0.27**	0.30**	0.37***
Total DERS score	0.68***	0.52***	0.68***

*p<0.05, **p<0.01, ***p<0.001, ALS: Affective Lability Scale, DERS: Difficulties in Emotion Regulation Scale

Convergent validity

Higher values in HADS subscales or in STAI were significantly associated with higher values in all ALS subscales (table 4).

Discriminative validity

Table 5 shows a comparison of all ALS subscales between subjects with NDD and controls. Significantly higher mean values were found for all the subscales, Anxiety/Depression, Depression/Elation and Anger, in NDD subjects as compared to controls, showing good discriminative ability.

Discussion

The study included adult patients with NDD (ADHD and high functioning ASD) and normal controls, in order to assess the usefulness of the Greek translation of the ALS-18. The ALS-18 had satisfactory internal consistency;

Table 4. Pearson's correlation coefficients of ALS subscales with HADS and STAI questionnaires.

	Anxiety/depression (ALS-18)	Depression/elation (ALS-18)	Anger (ALS-18)
Depression (HADS-14)	0.47	0.35	0.40
Anxiety (HADS-14)	0.50	0.38	0.42
STAI	0.69	0.60	0.59

All correlation coefficients were significant with p<0.001, ALS: Affective Lability Scale, HADS: The Hospital Anxiety and Depression Scale, STAI: The State – Trait Anxiety Inventory

Table 5. Comparison of ALS subscales between subjects with NDD and controls.

	Group					
	NDD		Control			
	Mean	SD	Mean	SD	t (df)	p
Anxiety/depression	7.54	4.27	3.65	2.23	3.65 (106)	<0.001
Depression/elation	11.04	5.41	3.41	2.18	5.71 (106)	<0.001
Anger	5.54	4.08	2.76	1.99	2.74 (106)	0.007

ALS: Affective Lability Scale, NDD: Neurodevelopmental Disorder

Cronbach's alpha value was 0.91 for the total scale and 0.89 for Anxiety/Depression, 0.86 for Depression/Elation and 0.85 for Anger. The three-factor structure was replicated in our data. The internal consistency and reliability of all the ALS-18 factors in our study could be considered satisfactory with a Cronbach's alpha coefficient of 0.85 or above for all factors. In the original ALS-18 the average alpha coefficient for the three factors was 0.83 while the overall total scale alpha coefficient was 0.90.[12]

The item-subscale correlations were moderate to high; from 0.49 to 0.75, with the majority being above 0.6, results that are consisted to previous literature. All subscales were significantly and positively correlated with each other and the correlations were above 0.6 and higher. In the original scale the factors were moderately correlated (from 0.49 [depression/elation–anger] to 0.59 [depression/anxiety–depression/elation]).[12]

Correlations with the DERS subscales were positive except for lack of emotional awareness subscale, whose correlations with the ALS-18 were weak. The correlation coefficients ranged from low (lack of emotional clarity) to high. This indicates that ALS and DERS are probably dependent, but in a complex way. This is similar to the findings of the Italian version of the scale, where the weakest correlation was with awareness, followed by clarity.[41]

The correlations of ALS with STAI and HADS scores were positive (moderate to high), with anxiety having slightly higher correlation than depression. Co-occurring anxiety and/or depression is a normal finding among both patients asking for an NDD diagnosis[14] and among depressive and/or anxious psychiatric outpatients diagnosed with ADHD.[42]

To evaluate the utility of the ALS-18 in a clinical sample, the ALS-18 total and subscales scores were compared across the two groups (NDD, HC). Results indicated that the groups differed on the total score and on each subscale. The ALS factors discriminated well between non-clinical and clinical sample, as shown before by Look[22] and Weibel.[23]

Our study has strengths and limitations. We cannot make causal attributions about the associations between the clinical variables and elevated AL due to the mixed population (ADHD and ASD) of the study group, although the NDD group was homogenous in many aspects like intellectual ability, functionality and years of education, with the vast majority having over 15 years of education. An investigation of potential differences in AL between the different diagnoses of ADHD and ASD groups would have been informative, but this was not possible due to the small sample group sizes. There is a need for the results to be replicated in larger samples. The small number of healthy controls, resulting in heterogeneity in demographics between the two study groups, should be considered as a limitation of the study. Future study aiming to assess the utility of the Greek of ALS-18 translation among different diagnostic categories should have a larger number of participants. Nevertheless, although the number of healthy controls was low, our results indicate that there is statistically significant difference between the scores of the two groups in all subscales (as in the aforementioned studies).

Conclusion

The present study reveals that the Greek version of ALS-18 exhibits good psychometric properties, showing good internal consistency and reliability as well as concurrent and discriminative validity. It has an elevated score in NDD and thus, our results indicate that affective lability could and maybe should, be a target integrated in therapeutic strategies (pharmacological or psychotherapeutic) in ADHD or ASD patients. Symptoms of ADHD and ASD often overlap. It is important to have trait-based dimensions when trying to discriminate adults with ADHD, ASD, or co-occurring ADHD/ASD.[13] In future research the possible differences in ALS scores between ADHD and ASD patients should be studied. The use of ALS may constitute another useful tool and facilitate differential diagnosis in the NDD population.

References

1. Carver CS, Lawerence JW, Scheier MF. A control-process perspective on the origins of affect. In L.L. Martin & A. Tesser (ed) *Striving and feeling: Interactions among goals, affect, and self-regulation*. Lawrence Erlbaum Associates, New Jersey, 1996.
2. Bowen RC, Mahmood J, Milani A, Baetz M. Treatment for depression and change in mood instability. *J Affect Disord* 2011, 128:171–174, doi: 10.1016/j.jad.2010.06.040
3. Bowen RC, Clark M, Baetz M. Mood swings in patients with anxiety disorders compared with normal controls. *J Affect Disord* 2004, 78:185–192, doi: 10.1016/S0165-0327(02)00304-X
4. Skirrow C, McLoughlin G, Kuntsi J, Asherson P. Behavioral, neurocognitive and treatment overlap between attention-deficit/hyperactivity disorder and mood instability. *Expert Rev Neurother* 2009, 9:489–503, doi: 10.1586/ern.09.2
5. Simonoff E, Jones CR, Pickles A, Happé F, Baird G, Charman T. Severe mood problems in adolescents with autism spectrum disorder. *J Child Psychol Psychiatry* 2012, 53:1157-1166, doi: 10.1111/j.1469-7610.2012.02600.x
6. Silvers J, Hubbard A, Biggs E, Shu J, Fertuck E, Chaudhury S et al. Affective lability and difficulties with regulation are differentially associated with amygdala and prefrontal response in women with Borderline Personality Disorder. *Psychiatry Res Neuroimaging* 2016, 254:74-82, doi: 10.1016/j.pscychresns.2016.06.009
7. Thompson RJ, Berenbaum H, Bredemeier K. Cross-sectional and longitudinal relations between affective instability and depression. *J Affect Disord* 2011, 130:53–59, doi: 10.1016/j.jad.2010.09.021
8. Patel R, Lloyd T, Jackson R, Ball M, Shetty H, Broadbent M et al. Mood instability is a common feature of mental health disorders and is associated with poor clinical outcomes. *BMJ Open* 2015, 5:e007504, doi: 10.1136/bmjopen-2014-007504
9. Insel T, Cuthbert B, Garvey M, Heinssen R, Kozak M, Pine DS et al. Research Domain Criteria (RDoC): Toward a new classification framework for research on mental disorders. *Am J Psychiatry* 2010, 167:748-751, doi: 10.1176/appi.ajp.2010.09091379
10. Fernandez KC, Jazaieri H, Gross JJ. Emotion Regulation: A Transdiagnostic Perspective on a New RDoC Domain. *Cognit Ther Res* 2016, 40:426–440, doi: 10.1007/s10608-016-9772-2
11. Harvey PD, Greenberg BR, Serper MR. The affective lability scales: development, reliability, and validity. *J Clin Psychol* 1989, 45:786-793, doi: 10.1002/1097-4679(198909)45:5<786:aid-jclp2270450515>3.0.co;2-p
12. Oliver M, Simons J. The affective lability scales: Development of a short-form measure. *Pers Individ Dif* 2004, 37:1279–1288, doi: 10.1016/j.paid.2003.12.013
13. Pehlivanidis A, Papanikolaou K, Korobili K, Kalantzi E, Mantas V, Pappa D et al. Trait-Based Dimensions Discriminating Adults with Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD) and Co-occurring ADHD/ASD. *Brain Sci* 2020, 11:18, doi:10.3390/brainsci11010018
14. Pehlivanidis A, Papanikolaou K, Mantas V, Kalantzi E, Korobili K, Xenaki LA et al. Lifetime co-occurring psychiatric disorders in newly diagnosed adults with attention deficit hyperactivity disorder (ADHD) or/and autism spectrum disorder (ASD). *BMC Psychiatry* 2020, 20:423, doi: 10.1186/s12888-020-02828-1
15. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 5th ed. American Psychiatric Publishing, Arlington, VA, 2013
16. World Health Organization. *International statistical classification of diseases and related health problems*. 11th ed. World Health Organization, Geneva, 2020. Available from https://icd.who.int/en
17. Wender PH, Reimherr FW, Wood DR. Attention deficit disorder (minimal brain dysfunction) in adults. A replication study of diagnosis and drug treatment. *Arch Gen Psychiatry* 1981, 38:449–456, doi: 10.1001/archpsyc.1981.01780290083009
18. Skirrow C, Ebner-Priemer U, Reinhard I, Malliaris Y, Kuntsi J, Asherson P. Everyday emotional experience of adults with attention deficit hyperactivity disorder: evidence for reactive and endogenous emotional lability. *Psychol Med* 2014, 44:3571–3583, doi: 10.1017/S0033291714001032
19. Shaw P, Stringaris A, Nigg J, Leibenluft E. Emotion dysregulation in attention deficit hyperactivity disorder. *Am J Psychiatry* 2014, 171:276–293, doi: 10.1176/appi.ajp.2013.13070966
20. Martel MM. Research review: a new perspective on attention-deficit/hyperactivity disorder: emotion dysregulation and trait models. *J Child Psychol Psychiatry* 2009, 50:1042–1051, doi: 10.1111/j.1469-7610.2009.02105.x
21. Samson AC, Phillips JM, Parker KJ, Shah S, Gross JJ, Hardan AY. Emotion dysregulation and the core features of autism spectrum disorder. *J Autism Dev Disord* 2014, 44:1766–1772, doi: 10.1007/s10803-013-2022-5
22. Look AE, Flory JD, Harvey PD, Siever LJ. Psychometric properties of a short form of the Affective Lability Scale (ALS-18). *Pers Individ Dif* 2010, 49:187–191 doi: 10.1016/j.paid.2010.03.030
23. Weibel S, Micoulaud-Franchi JA, Brandejsky L, Lopez R, Prada P, Nicastro R et al. Psychometric Properties and Factor Structure of the Short Form of the Affective Lability Scale in Adult Patients With ADHD. *J Atten Disord* 2019, 23:1079–1089, doi: 10.1177/1087054717690808
24. Aas M, Pedersen G, Henry C, Bjella T, Bellivier F, Leboyer M et al. Psychometric properties of the Affective Lability Scale (54 and 18-item version) in patients with bipolar disorder, first-degree relatives, and healthy controls. *J Affect Disord* 2015, 172:375–380, doi: 10.1016/j.jad.2014.10.028
25. Marwaha S, He Z, Broome M, Singh SP, Scott J, Eyden J et al. How is affective instability defined and measured? A systematic review. *Psychol Med* 2014, 44:1793–1808, doi: 10.1017/S0033291713002407

26. Høegh MC, Melle I, Aminoff SR, Laskemoen JF, Büchmann CB, Ueland T et al. Affective lability across psychosis spectrum disorders. *Eur Psychiatry* 2020, 63:e53, doi: 10.1192/j.eurpsy.2020.44

27. Thompson RA. Emotion dysregulation: A theme in search of definition. *Dev Psychopathol* 2019, 31:805-815, doi: 10.1017/S0954579419000282.

28. Ros R, Graziano PA. A Transdiagnostic Examination of Self-Regulation: Comparisons Across Preschoolers with ASD, ADHD, and Typically Developing Children. *J Clin Child Adolesc Psychol* 2020, 49:493–508, doi: 10.1080/15374416.2019.1591280.

29. Waddington F, Hartman C, de Bruijn Y, Lappenschaar M, Oerlemans A, Buitelaar J et al. Visual and auditory emotion recognition problems as familial cross-disorder phenomenon in ASD and ADHD. *Eur Neuropsychopharmacol* 2018, 28:994–1005, doi: 10.1016/j.euroneuro.2018.06.009.

30. England-Mason G. Emotion Regulation as a Transdiagnostic Feature in Children with Neurodevelopmental Disorders. *Curr Dev Disord Rep* 2020, 7:130–138, doi: 10.1007/s40474-020-00200-2.

31. Lord C, Rutter M, DiLavore PC, Risi S, Gotham K, Bishop SL. *Autism diagnostic observation schedule*. 2nd ed. Western Psychological Services, Torrance, CA, 2012

32. Papanikolaou K, Paliokosta E, Houliaras G, Vgenopoulou S, Giouroukou E, Pehlivanidis A et al. Using the Autism Diagnostic Interview-Revised and the Autism Diagnostic Observation Schedule-Generic for the diagnosis of autism spectrum disorders in a Greek sample with a wide range of intellectual abilities. *J Autism Dev Disord* 2009, 39:414–420, doi: 10.1007/s10803-008-0639-6

33. Le Couteur A, Lord C, Rutter M. *The autism diagnostic interview – revised (ADI-R).* Western Psychological Services, Los Angeles, CA, 2003

34. Kooij SJ, Francken MH, Bron TI. *Diagnostic Interview for ADHD in Adults (DIVA).* Greek Version (Pehlivanidis A & Papanikolaou K) DIVA Foundation, The Hague, the Netherlands, 2019

35. Spielberger CD, Gorsuch RL, Lushene RE, Vagg PR, Jacobs GA. *The State-Trait Anxiety Inventory of Adults (STAIT).* Manual. Mind Garden, Palo Alto, CA, 1983

36. Fountoulakis KN, Papadopoulou M, Kleanthous S, Papadopoulou A, Bizeli V, Nimatoudis I et al. Reliability and psychometric properties of the Greek translation of the State-Trait Anxiety Inventory Form Y: Preliminary data. *Ann Gen Psychiatry* 2006, 5:2, doi: 10.1186/1744-859X-5-2

37. Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *J Psychopathol Behav Assess* 2004, 26:41–54, doi: 10.1023/B:JOBA.0000007455.08539.94

38. Mitsopoulou E, Kafetsios, Karademas E, Papastefanakis E, Simos P. The Greek Version of the Difficulties in Emotion Regulation Scale: Testing the Factor Structure, Reliability and Validity in an Adult Community Sample. *J Psychopathol Behav Assess* 2013, 35:123–131, doi: 10.1007/s10862-012-9321-6

39. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. *Acta Psychiatr Scand* 1983, 67:361–370, doi: 10.1111/j.1600-0447.1983.tb09716.x

40. Michopoulos I, Douzenis A, Kalkavoura C, Christodoulou C, Michalopoulou P, Kalemi G et al. Hospital Anxiety and Depression Scale (HADS): validation in a Greek general hospital sample. *Ann Gen Psychiatry* 2008, 7:4, doi: 10.1186/1744-859X-7-4

41. Contardi A, Imperatori C, Amati I, Balsamo M, Innamorati M. Assessment of Affect Lability: Psychometric Properties of the ALS-18. *Front Psychol* 2018, 9:427, doi: 10.3389/fpsyg.2018.00427

42. Pehlivanidis A. Awareness of adult attention-deficit/hyperactivity disorder (ADHD) in Greece. *Psychiatriki* 2012, 23(Suppl 1):60–65, PMID: 22796974

APPENDIX
Κλίμακα Συναισθηματικής Ευμεταβλητότητας
Affective Lability Scale - Short Form (ALS-18)

Κατάσταση	Δεν με χαρακτηρίζει καθόλου	Με χαρακτηρίζει μερικές φορές	Με χαρακτηρίζει τις περισσότερες φορές	Με χαρακτηρίζει απόλυτα
1. Κάποιες φορές νιώθω όπως όλοι και μέσα σε λίγα λεπτά μπορεί να εκνευριστώ τόσο πολύ ώστε να έχω σωματικά ενοχλήματα	0	1	2	3
2. Υπάρχουν φορές που έχω πολύ λίγη ενέργεια και σε μικρό χρονικό διάστημα έχω την ίδια ενέργεια με τους περισσότερους	0	1	2	3
3. Τη μία στιγμή μπορεί να νιώθω εντάξει και την επόμενη να είμαι εκνευρισμένος/η και σε ένταση	0	1	2	3
4. Συχνά υπάρχει εναλλαγή ανάμεσα στην ικανότητά μου να ελέγχω τα νεύρα μου και στην αδυναμία μου να το κάνω	0	1	2	3
5. Πολλές φορές ο εκνευρισμός και η ένταση που νιώθω μετατρέπονται ξαφνικά σε στεναχώρια και πτώση τις διάθεσης	0	1	2	3
6. Μερικές φορές το έντονο άγχος μου για κάτι μετατρέπεται σε άσχημο συναίσθημα γι' αυτό	0	1	2	3
7. Έχω εναλλαγές από την απόλυτη ηρεμία στην υπερένταση και τον εκνευρισμό	0	1	2	3
8. Υπάρχουν φορές που ενώ νιώθω ήρεμος/η, την επόμενη στιγμή μπορεί να εκνευριστώ από κάτι μικρό ή ασήμαντο	0	1	2	3
9. Συχνά νιώθω καλά και μετά ξαφνικά μπορεί να θυμώσω τόσο που να θέλω να χτυπήσω ή να σπάσω κάτι	0	1	2	3
10. Κάποιες φορές μπορεί να σκέφτομαι καθαρά και να είμαι συγκεντρωμένος/η και την επόμενη στιγμή να έχω μεγάλη δυσκολία να το κάνω	0	1	2	3
11. Υπάρχουν φορές που είμαι τόσο θυμωμένος/η που δεν μπορώ να σταματήσω να φωνάζω και σύντομα μετά δεν έχω διάθεση να το κάνω	0	1	2	3
12. Η ενεργητικότητά μου εναλλάσσεται: άλλες φορές είναι πολύ υψηλή και κάποιες άλλες η παραμικρή προσπάθεια μου φαίνεται «βουνό»	0	1	2	3
13. Υπάρχουν στιγμές που ενώ αισθάνομαι πολύ καλά για τον εαυτό μου σύντομα νιώθω πως δεν διαφέρω από τους υπόλοιπους	0	1	2	3
14. Υπάρχουν φορές που είμαι τόσο θυμωμένος/η που νιώθω την καρδιά μου να σφυροκοπά και μπορεί να αρχίσω να τρέμω, σύντομα όμως ηρεμώ	0	1	2	3
15. Η παραγωγικότητά μου άλλοτε μπορεί να είναι πολύ χαμηλή και άλλοτε σαν όλων των υπολοίπων	0	1	2	3
16. Κάποιες φορές νιώθω πολύ ενεργητικός/η τη μία στιγμή και την επόμενη μπορεί να έχω τόσο λίγη ενέργεια που με δυσκολία να κάνω οτιδήποτε	0	1	2	3
17. Υπάρχουν στιγμές που έχω περισσότερη ενέργεια από ό,τι συνήθως και περισσότερη από τους περισσότερους ανθρώπους, σύντομα όμως έχω την ίδια ενέργεια με τους υπόλοιπους	0	1	2	3
18. Κάποιες φορές νιώθω πως τα κάνω όλα με αργό ρυθμό, αλλά σύντομα νιώθω πως δεν είμαι πιο αργός/ή από τους υπόλοιπους	0	1	2	3

Ερευνητική εργασία

Ψυχομετρικές ιδιότητες της ελληνικής έκδοσης της Κλίμακας Συναισθηματικής Ευμεταβλητότητας (ALS-18) σε δείγμα ενηλίκων με νευροαναπτυξιακές διαταραχές

Εύα Καλαντζή, Αρτέμιος Πεχλιβανίδης, Καλλιόπη Κορομπίλη, Βασίλειος Μαντάς, Χαράλαμπος Παπαγεωργίου

Ειδικό Ιατρείο Νευροαναπτυξιακών Διαταραχών Ενηλίκων, Α΄ Ψυχιατρική Κλινική, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αιγινήτειο Νοσοκομείο, Αθήνα

ΙΣΤΟΡΙΚΟ ΑΡΘΡΟΥ: Παραλήφθηκε 12 Ιουλίου 2021/Αναθεωρήθηκε 15 Σεπτεμβρίου 2021/Δημοσιεύθηκε Διαδικτυακά 21 Φεβρουαρίου 2022

ΠΕΡΙΛΗΨΗ

Η συναισθηματική αστάθεια αναφέρεται σε δυσπροσαρμοστικά πρότυπα συναισθηματικής ρύθμισης, τα οποία επηρεάζουν τη λειτουργικότητα στην καθημερινή ζωή και εμφανίζεται συχνά σε πολλές ψυχιατρικές διαταραχές. Συναντάται με τη μορφή της συναισθηματικής ευμεταβλητότητας, μια συναισθηματική «κατασκευή» που εκφράζεται με συχνές και έντονες διακυμάνσεις του συναισθήματος ως απάντηση τόσο σε ευχάριστα όσο και σε δυσάρεστα γεγονότα ή σε ερμηνείες των γεγονότων. Η Κλίμακα Συναισθηματικής Ευμεταβλητότητας (ALS) είναι ένα ευρέως χρησιμοποιούμενο ερωτηματολόγιο αυτοαναφοράς, που μετρά την τάση των συναισθημάτων να αλλάζουν από το ένα στο άλλο, καθώς και τις διακυμάνσεις μεταξύ κατάθλιψης και ενθουσιασμού και μεταξύ κατάθλιψης-άγχους. Η αρχική κλίμακα είχε 54 λήμματα, αλλά δημιουργήθηκε μια μικρότερη μορφή 18 λημμάτων (ALS-18), με τρεις υποκλίμακες: εναλλαγή άγχους-κατάθλιψης, εναλλαγή κατάθλιψης-ενθουσιασμού και εμφάνιση θυμού. Σκοπός της παρούσας μελέτης ήταν η αξιολόγηση των ψυχομετρικών ιδιοτήτων της ελληνικής μετάφρασης της ALS-18. Η μετάφραση πραγματοποιήθηκε από δύο από τους συγγραφείς. Η μελέτη έλαβε χώρα στην Α΄ Ψυχιατρική Κλινική ΕΚΠΑ, στο Αιγινήτειο Νοσοκομείο, στα πλαίσια της μονάδας νευροαναπτυξιακών διαταραχών (ΝΑΔ). Δείγμα 108 ενηλίκων συμπεριλήφθηκε στην έρευνα χωρισμένο σε δύο ομάδες, ΝΑΔ (διαταραχή ελλειμματικής προσοχής - υπερκινητικότητας και διαταραχή αυτιστικού φάσματος) και μάρτυρες. Όλοι συμπλήρωσαν τις ALS-18, State – Trait Anxiety Inventory (STAIT), Difficulties in Emotion Regulation Scale (DERS) και Hospital Anxiety and Depression Scale (HADS). Η στατιστική ανάλυση έδειξε ικανοποιητική εσωτερική συνέπεια. Το Cronbach α ήταν 0,91 συνολικά και 0,89 για την υποκλίμακα Άγχος/Κατάθλιψη, 0,86 για την υποκλίμακα Κατάθλιψης/Ενθουσιασμού και 0,85 για την υποκλίμακα του Θυμού. Η δομή των τριών παραγόντων αναπαράχθηκε στα δεδομένα μας. Η αξιοπιστία εσωτερικής συνέπειας όλων των παραγόντων ALS-18 στη μελέτη μας θα μπορούσε να θεωρηθεί ικανοποιητική με συντελεστή Cronbach α τουλάχιστον 0,85 για όλους τους παράγοντες. Σημαντικά υψηλότερες μέσες τιμές βρέθηκαν για όλες τις υποκλίμακες, Άγχος/Κατάθλιψη, Κατάθλιψη/Ενθουσιασμός και Θυμός σε άτομα με ΝΑΔ, σε σύγκριση με τους υγιείς μάρτυρες, εμφανίζοντας έτσι μια καλή ικανότητα διάκρισης. Η ALS δείχνει καλή διακριτική ικανότητα μεταξύ κλινικού και μη κλινικού δείγματος. Η ελληνική έκδοση του ALS-18 παρουσιάζει καλές ψυχομετρικές ιδιότητες και αποτελεί ένα εύχρηστο εργαλείο στα χέρια των κλινικών, ώστε να μελετάται καλύτερα η διάσταση της συναισθηματικής αστάθειας, η οποία είναι παρούσα σε μεγάλο ποσοστό ψυχιατρικών διαταραχών, με στόχο την εξατομικευμένη θεραπευτική παρέμβαση.

ΛΕΞΕΙΣ ΕΥΡΕΤΗΡΙΟΥ: Affective Lability Scale, ALS-18, συναισθηματική αστάθεια, Ελληνικά, ψυχομετρικές ιδιότητες, νευροαναπτυξιακές διαταραχές.

Συγγραφέας επικοινωνίας: Εύα Καλαντζή, Α΄ Ψυχιατρική Κλινική, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αιγινήτειο Νοσοκομείο, Λεωφ. Βασιλίσσης Σοφίας 72–74, 115 26 Αθήνα, Διεύθυνση e-mail: kalantzieva@yahoo.gr