RELIABILITY, VALIDITY, AND PSYCHOMETRIC PROPERTIES OF THE GREEK TRANSLATION OF THE CAMBRIDGE DEPERSONALIZATION SCALE (CDS)

Konstantinos Kontoangelos1,2, Sofia Tsiori1, Garyfalia Poulakou3, Konstantinos Protopapas3, Ioannis Katsarolis3, Vissaria Sakka3, Dimitra Kavatha3, Antonios Papadopoulos3, Anastasia Antoniadou3, and Charalambos C. Papageorgiou1,2

1Department of Psychiatry, Eginition Hospital, School of Medicine, University of Athens, Athens, Greece
2University Mental Health Research Institute, Athens Greece
34th Department of Internal Medicine, University Hospital « Attikon », Athens, Greece

Corresponding author: Konstantinos Kontoangelos, MD. Athens University Medical School, 1st Department of Psychiatry, Eginition Hospital, 74 Vas. Sofias Avenue, 11528, Athens, Greece. Tel: +30-210-7289189 Fax: +30-210-7242020. E-mail: kontange@hol.gr

ABSTRACT

Introduction: The Cambridge Depersonalisation Scale is meant to capture the frequency and duration of depersonalisation symptoms over the ‘last 6 months’. Methods: In order to develop a Greek version of CDS scale, the CDS scale was translated in Greek by 2 psychiatrists. Then, the Greek version of CDS scale was back-translated by a person who did not knew the original English version. The back-translated version was reviewed in order to establish whether is consistent with the original English version. After this procedure we administered the Greek version of CDS scale to a sample of 294 Greeks in order to assess the reliability and the validity of the Greek version of scale. Results: The five components solution accounted for 58.204% of the total variation. Initial eigenvalues of the five components were: factor 1=11.555, factor 2=1.564, factor 3=1.356, factor 4=1.247 and factor 5=1.157. Six items did not load on any factor. Correlations between factors were low ranged from 0.134 to 0.314 and no complex variables were found. Cronbach’s alpha and Guttman split-half coefficient were used to evaluate interval consistency of CDS scale in 294 individuals. The alpha coefficients and Guttman split-half coefficient of the CDS scale were 0.938 and 0.921, respectively. The test-retest reliability proved to be satisfactory. The intraclass correlation coefficients for the total CDS score was very good and equal to 0.883. The CDS scale correlated highly with the SCL-90 and all subscales (p-value<0.0001). Conclusion: The psychometric strength of CDS – Greek its reliable for its future use, particularly for screening for subjects with possible diagnosis of CDS.

Key words: Cambridge depersonalization Scale, CDS, depersonalization, reliability, validity, HIV.

1. INTRODUCTION

The Cambridge Depersonalization Scale (CDS) is a self rating scale questionnaire constructed to capture the frequency and duration of depersonalization symptoms over the last six months. The instrument has proved to be valid and reliable and can be useful in both clinical and neurobiological research (1).

DSM-IV defines depersonalization as an alteration in the perception of experience of the self so that one feels detached from, and as if one is an outside observer of, one’s mental processes or body (2). The precise prevalence of depersonalization disorder in the general population is unknown but some studies indicate prevalence rates of clinically significant depersonalization approximately 1-2 (3). Depersonalization has been described in neurological and organic diseases associated to drug consumption and in different psychiatric disorders. Thus it would be a non-specific and independent phenomenon that sometimes occur predominantly and is sufficiently serious to acquire the category of the disorder (4).

Other useable self-rating scales to estimate depersonalization are the Dixon’s scale, Jacob’s and Bovazzo’s depersonalization scale and the Dissociative Experience Scale (5). The Cambridge Depersonalization Scale that was developed by Sierra and Berrios is a comprehensive instrument containing 29 items addressing the complaints classically associated with the depersonalization syndrome. Its items describe abnormal experiences affecting different sensory
Reliability, Validity, and Psychometric Properties of the Greek Translation of the Cambridge Depersonalization Scale

modalities like describing an inability to experience a range of different emotions; heightened self-observation, lack of agency feelings. Other items describe cognitive as feelings of thought emptiness, subjective changes in the ability to recall personal events, inability to evoke images, and distortions in the experiencing of time and space (6).

The global score of the scale is the arithmetical sum of all items (range, 0-290) and its item is rated on two likert scales for frequency and duration of experience (range 0-10).

The aim of the current study was to assess the reliability, validity and psychometric properties of the Greek translation Cambridge Depersonalization Scale.

2. METHODS

The Cambridge Depersonalization Scale (CDS) is a scale used to assess the frequency and duration of depersonalization symptoms for a period covering the last 6 months (7). The Cambridge Depersonalization Scale (CDS) is a self-administered questionnaire that is composed by 29 items. Each one of the 29 items is rated on two independent Likert scales, one for frequency (range: 0-4) and another for severity (range: 1-6). A total score is calculated by adding all item scores and we can also calculate an index of intensity for each item by adding the frequency and severity score (range: 0-10).

In order to develop a Greek version of CDS scale, the CDS scale was translated in Greek by 2 psychiatrists. Then, the Greek version of CDS scale was back-translated by a person who did not know the original English version. The back-translated version was reviewed in order to establish whether is consistent with the original English version. After this procedure we administered the Greek version of CDS scale to a sample of 294 Greeks in order to assess the reliability and the validity of the Greek version of scale.

In addition to the CDS Greek scale, subjects were assessed with two other scales useful for assessing validity. For criterion based validity, the SCL-90 and EPQ scales was administered as independent valauators. Psychometric Personality scale of extraversion, neuroticism, psychotism (Eysenck Personality Questionnaire, EPQ) (8). The Eysenck personality questionnaire consists of 84 entries evaluated by the patient with a yes or no. The purpose of this questionnaire is to explore four dimensions of personality: psychotism (P), neuroticism (N) extraversion (E) and lying (L). The scales N and L are of particular clinical interest. The N scale is the best studied and is associated with a clinical diagnosis of neurosis or oral personalities according to psychoanalytic terminology. The E scale corresponds roughly to histrionic personalities. The P scale corresponds to obsessive-compulsive personalities and is unrelated to psychosis. Finally, the L scale controls the degree of hypocrisy of the examined party but can also be high in patients with psychosomatic disorders who are not pretending. A weighted Greek version is available (9). Psychometric general psychosomatic burden scale (SCL-90) (10). The SCL-90 questionnaire is self-completed and measures 9 psychopathology parameters (as many as its subscales), which are: 1) somatisation, 2) depression, 3) anxiety, 4) phobic anxiety, 5) obsessive compulsive, 6) paranoid ideation, 7) psychotism 8) hostility, 9) interpersonal sensitivity. The questionnaire includes 90 questions in total. All entries are rated from 0 to 4, giving a total score of 360. The scale is used to extrapolate 3 aggregate indexes: a) the general gravity index, b) the positive symptoms distress index c) the set of positive symptoms. A weighted Greek version is available (11).

The translated questionnaire was administered to 128 HIV outpatients aged 37±19 (range: 17-64) and 166 controls aged 32,4±13,4 (range: 19-92).

The present study was conducted at the Attikon University Hospital and the sample was randomly selected from Patients came from the Infectious Diseases unit of the Atikkon Hospital, Athens, Greece. All subjects complete the

### Table 1. Means scores (range 0-10), standard deviation and communalities for each item of the scale

| Item | Mean | Std. Deviation | Communalities |
|------|------|----------------|---------------|
| 1. Feeling unreal or cutoff from the world | 1.88 | 1.98 | 0.608 |
| 2. Things look flat, as if looking at a picture | 0.99 | 1.48 | 0.471 |
| 3. Body feels as if it didn't belong to oneself | 0.71 | 1.40 | 0.559 |
| 4. Not feeling frightened in normally frightening situations | 2.27 | 2.27 | 0.558 |
| 5. Favorite activities no longer enjoyable | 2.11 | 2.38 | 0.589 |
| 6. Feeling of being a detached observer of oneself | 1.52 | 1.92 | 0.639 |
| 7. Flavour of meals no longer gives a feeling of pleasure or distaste | 0.80 | 1.60 | 0.735 |
| 8. Body feels very light, as if it were floating on air | 0.54 | 1.21 | 0.494 |
| 9. No emotions felt when weeping or laughing | 0.67 | 1.43 | 0.497 |
| 10. Feeling of not having any thoughts at all | 0.86 | 1.48 | 0.545 |
| 11. Own voice sounds remote and unreal | 0.56 | 1.26 | 0.553 |
| 12. Feel like hands or feet becoming bigger or smaller | 0.39 | 1.05 | 0.644 |
| 13. Surroundings feel detached or unreal | 1.11 | 1.81 | 0.575 |
| 14. Recently done things feel as if they took place a long time ago | 1.53 | 1.79 | 0.608 |
| 15. See oneself outside, as if looking in a mirror | 0.59 | 1.32 | 0.528 |
| 16. Personal memories feel as if one had not been involved in them | 1.45 | 2.00 | 0.614 |
| 17. When in a new situation, feeling as if it had happened before | 1.75 | 1.68 | 0.586 |
| 18. Unable to feel affection towards family and friends | 1.01 | 1.81 | 0.576 |
| 19. Objects look smaller or further away | 0.45 | 1.13 | 0.647 |
| 20. Unable to feel properly things touched with hands | 0.34 | 1.00 | 0.554 |
| 21. Unable to picture things in mind | 1.02 | 2.00 | 0.578 |
| 22. Feeling detached from bodily pain | 0.50 | 1.26 | 0.622 |
| 23. Feeling of being outside the body | 0.62 | 1.35 | 0.705 |
| 24. Feeling mechanical and 'robotic' when moving | 0.87 | 1.49 | 0.608 |
| 25. Smell of things no longer gives feeling of pleasure or dislike | 0.47 | 1.16 | 0.735 |
| 26. Detached from own thoughts like they have life of their own | 0.68 | 1.36 | 0.563 |
| 27. Urge to touch oneself to be reassured of body existence | 0.36 | 1.02 | 0.537 |
| 28. Unable to feel hunger or thirst | 0.70 | 1.45 | 0.523 |
| 29. Previously familiar places look unfamiliar | 0.57 | 1.17 | 0.430 |
Reliability, Validity, and Psychometric Properties of the Greek Translation of the Cambridge Depersonalization Scale

All the subjects completed the questionnaires by themselves. The average time completing the questionnaires was 20 minutes.

**Statistical Analysis**

In order to investigate the factor structure and dimensionality of the 29-item Greek version of CDS scale we contacted explanatory factor analysis by using Promax oblique rotation (12). Five components were extracted, based on Cattell’s scree test. Cronbach’s alpha (13) and Guttman split-half coefficient (14) were used to evaluate interval consistency of CDS scale and of the five factors extracted for principal component analysis, in 294 subjects. The test-retest reliability was examined by asking, one week later, a subsample of subjects to complete the questionnaire a second time. In order to investigate the consistency between the two measurements we evaluated intra-class correlation coefficients for the total score and for each independent question (15).

Finally, the Spearman’s Rho correlation coefficients between the score of CDS-Greek scale and of SCL-90 and EPQ scales and subscales was calculated to assess the criterion based validity. All statistical analyses were carried out with IBM SPSS Statistics V20.0 and for all statistical tests we use 5% significant levels.

### 3. RESULTS

#### Factor analysis

A principal components analysis using Promax oblique rotation with a Kappa of 2 was performed on 294 individuals. Factor analysis based on the correlation matrix. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was 0.928 hence suggesting a high factorability for the sample. Bartlett’s Test of Sphericity rejected the null hypothesis of an identity matrix ($X^2=4350.252, df= 406$ and $p$-values≤0.0001) in Table 1, extracted communalities were fairly high with

| Factors | 1     | 2     | 3     | 4     | 5     |
|---------|-------|-------|-------|-------|-------|
| 12. Feel like hands or feet becoming bigger or smaller | 0.765 | 0.050 | 0.057 | 0.057 | -0.082 |
| 22. Feeling detached from bodily pain | 0.611 | 0.080 | -0.063 | 0.351 | -0.200 |
| 15. See oneself outside, as if looking in a mirror | 0.609 | 0.076 | 0.046 | 0.083 | 0.144 |
| 8. Body feels very light, as if it were floating on air | 0.579 | 0.345 | 0.047 | -0.183 | -0.094 |
| 23. Feeling of being outside the body | 0.562 | 0.164 | -0.119 | 0.093 | 0.430 |
| 19. Objects look smaller or further away | 0.545 | 0.016 | 0.177 | 0.058 | 0.357 |
| 27. Urge to touch oneself to be reassured of body existence | 0.509 | -0.114 | 0.354 | -0.028 | 0.223 |
| 26. Detached from own thoughts like they have life of their own | 0.501 | 0.188 | 0.210 | -0.030 | 0.220 |
| 11. Own voice sounds remote and unreal | 0.428 | 0.181 | 0.215 | 0.113 | 0.213 |
| 1. Feeling unreal or cutoff from the world | 0.123 | 0.632 | 0.139 | 0.035 | 0.129 |
| 6. Feeling of being a detached observer of oneself | 0.102 | 0.613 | 0.172 | 0.119 | 0.127 |
| 4. Not feeling frightened in normally frightening situations | 0.010 | 0.601 | -0.045 | 0.374 | -0.127 |
| 24. Feeling mechanical and ‘robotic’ when moving | 0.358 | 0.472 | 0.142 | 0.037 | 0.134 |
| 13. Surroundings feel detached or unreal | 0.311 | 0.466 | -0.062 | 0.201 | 0.171 |
| 7. Flavour of meals no longer gives a feeling of pleasure or distaste | -0.018 | 0.101 | 0.835 | 0.010 | -0.025 |
| 25. Smell of things no longer gives feeling of pleasure or dislike | 0.157 | 0.004 | 0.749 | 0.205 | -0.158 |
| 28. Unable to feel hunger or thirst | 0.202 | 0.101 | 0.467 | 0.203 | 0.116 |
| 9. No emotions felt when weeping or laughing | 0.180 | 0.069 | 0.441 | 0.057 | 0.304 |
| 17. When in a new situation, feeling as if it had happened before | 0.014 | 0.168 | 0.025 | 0.689 | 0.042 |
| 21. Unable to picture things in mind | 0.063 | -0.092 | 0.095 | 0.629 | 0.289 |
| 14. Recently done things feel as if they took place a long time ago | 0.118 | 0.147 | 0.200 | 0.587 | 0.045 |
| 18. Unable to feel affection towards family and friends | 0.058 | 0.090 | -0.136 | 0.134 | 0.709 |
| 10. Feeling of not having any thoughts at all | 0.092 | 0.284 | 0.299 | -0.082 | 0.449 |
| 29. Previously familiar places look unfamiliar | 0.274 | -0.067 | 0.164 | 0.301 | 0.303 |
| 3. Body feels as if it didn’t belong to oneself | 0.443 | 0.110 | 0.089 | 0.124 | 0.359 |
| 20. Unable to feel properly things touched with hands | 0.421 | -0.062 | 0.238 | 0.152 | 0.344 |
| 5. Favorite activities no longer enjoyable | -0.170 | 0.453 | 0.358 | -0.033 | 0.360 |
| 2. Things look flat, as if looking at a picture | 0.351 | 0.442 | -0.094 | -0.024 | 0.214 |
| 16. Personal memories feel as if one had not been involved in them | -0.077 | 0.152 | 0.106 | 0.497 | 0.448 |

Table 2. Pattern matrix of extract factors.
Reliability, Validity, and Psychometric Properties of the Greek Translation of the Cambridge Depersonalization Scale

To investigate the consistency between the two measurements, we evaluated intraclass correlation coefficients to questionnaire for a second time after one week. For each questionnaire, 98 were those who answered the questions of the participated in the study and initially answered the questions of the external factors, we used the test-retest method in order to evaluate the test-retest reliability. Of the total 294 individuals, 0.134 to 0.314 (Table 3) and no complex variables were found. The corresponding values for the sub-scales contained the items 18 and 10. Six items did not load on any factor. Correlations between factors were low ranged from 0.430-0.735. This, in conjunction with the fact that the extracted factors were well determined, suggests that the sample size was adequate. Five components were extracted, based on Cattell's scree test. The five components solution accounted for 58.204% of the total variation. Initial eigenvalues of the five components were: factor 1=11.555, factor 2=1.564, factor 3=1.356, factor 4=1.247 and factor 5=1.157. In Table 2, which item load on the five components, are listed with their loadings. As we can see, the 12, 22, 15, 8, 23, 19, 27, 26 and 11 loading in factor 1. Factor 2 contained the items 4, 1, 6, 13 and 24. Factor 3 contained the items 7, 25, 28 and 9. Factor 4 contained the items 17, 21 and 14. Finally factor 5 contained the items 18 and 10. Six items did not load on any factor. Correlations between factors were low ranged from 0.134 to 0.314 (Table 3) and no complex variables were found.

Validity and Reliability of CDS scale

Interval consistency reliability:

Cronbach's alpha and Guttman split-half coefficient were used to evaluate interval consistency of CDS scale in 294 individuals (Table 4). The alpha coefficients and Guttman split-half coefficient of the CDS scale were 0.938 and 0.921, respectively. The corresponding values for the sub-scales are presented in Table 4. Essentially an alpha coefficient averages the inter-correlations between all the items in a particular test or sub-scale to give some indication of the extent to which a scale hangs together as a measure of a single dimension.

Test-retest

To investigate whether the CDS scale is influenced by external factors, we used the test-retest method in order to evaluate the test-retest reliability. Of the total 294 individuals participated in the study and initially answered the questionnaire, 98 were those who answered the questions of the questionnaire for a second time after one week. For each question we evaluated intraclass correlation coefficients to investigate the consistency between the two measurements.

| Factors | 1   | 2   | 3   | 4   | 5   |
|---------|-----|-----|-----|-----|-----|
| 1       | 1.000 | 0.262 | 0.245 | 0.315 | 0.194 |
| 2       | 0.262 | 1.000 | 0.240 | 0.220 | 0.218 |
| 3       | 0.245 | 0.240 | 1.000 | 0.227 | 0.203 |
| 4       | 0.315 | 0.220 | 0.227 | 1.000 | 0.134 |
| 5       | 0.194 | 0.218 | 0.203 | 0.134 | 1.000 |

Table 3: Correlations between extracted factors.

| Questions                                                                 | Intraclass correlation coefficients | 95% confidence interval   |
|---------------------------------------------------------------------------|-------------------------------------|---------------------------|
| CDS total scale                                                           | 0.883                               | (0.826-0.922)             |
| 1. Feeling unreal or cutoff from the world                                | 0.779                               | (0.671-0.852)             |
| 2. Things look flat, as if looking at a picture                           | 0.686                               | (0.531-0.790)             |
| 3. Body feels as if it didn't belong to oneself                           | 0.664                               | (0.498-0.775)             |
| 4. Not feeling frightened in normally frightening situations              | 0.586                               | (0.382-0.722)             |
| 5. Favorite activities no longer enjoyable                                | 0.603                               | (0.407-0.734)             |
| 6. Feeling of being a detached observer of oneself                        | 0.583                               | (0.378-0.721)             |
| 7. Flavour of meals no longer gives a feeling of pleasure or distaste     | 0.778                               | (0.668-0.851)             |
| 8. Body feels very light, as if it were floating on air                   | 0.792                               | (0.689-0.861)             |
| 9. No emotions felt when weeping or laughing                            | 0.791                               | (0.688-0.860)             |
| 10. Feeling of not having any thoughts at all                            | 0.7                                 | (0.552-0.799)             |
| 11. Own voice sounds remote and unreal                                    | 0.714                               | (0.573-0.808)             |
| 12. Feel like hands or feet becoming bigger or smaller                    | 0.647                               | (0.473-0.763)             |
| 13. Surroundings feel detached or unreal                                  | 0.763                               | (0.647-0.841)             |
| 14. Recently done things feel as if they took place a long time ago      | 0.717                               | (0.578-0.811)             |
| 15. See oneself outside, as if looking in a mirror                        | 0.741                               | (0.613-0.826)             |
| 16. Personal memories feel as if one had not been involved in them        | 0.741                               | (0.613-0.826)             |
| 17. When in a new situation, feeling as if it had happened before        | 0.743                               | (0.616-0.828)             |
| 18. Unable to feel affection towards family and friends                   | 0.694                               | (0.544-0.795)             |
| 19. Objects look smaller or further away                                 | 0.722                               | (0.586-0.814)             |
| 20. Unable to feel properly things touched with hands                     | 0.805                               | (0.709-0.869)             |
| 21. Unable to picture things in mind                                     | 0.615                               | (0.426-0.742)             |
| 22. Feeling detached from bodily pain                                     | 0.839                               | (0.760-0.892)             |
| 23. Feeling of being outside the body                                     | 0.795                               | (0.694-0.862)             |
| 24. Feeling mechanical and 'robotic' when moving                          | 0.792                               | (0.682-0.861)             |
| 25. Smell of things no longer gives feeling of pleasure or dislike       | 0.805                               | (0.710-0.870)             |
| 26. Detached from own thoughts like they have life of their own           | 0.748                               | (0.624-0.831)             |
| 27. Urge to touch oneself to be reassured of body existence               | 0.836                               | (0.755-0.890)             |
| 28. Unable to feel hunger or thirst                                      | 0.731                               | (0.599-0.820)             |
| 29. Previously familiar places look unfamiliar                           | 0.689                               | (0.535-0.791)             |

Table 5: Test-retest reliability.
To test this model in a sample of Greek population and found that the Greek version of CDS scale, has good internal consistency, with variables presenting high levels of reliability, validity, and psychometric properties of the Greek Translation of the Cambridge Depersonalization Scale.

4. DISCUSSION

This study was undertaken to develop a Greek language version of the CDS and to assess its psychometric properties in patients with depersonalization symptoms. The translation process was relatively straightforward with only small differences between the original and the back-translated version of the questionnaire. The present study indicates that the Greek version of CDS scale, has good internal consistency with Cronbach’s $\alpha = 0.938$ and Guttman split-half coefficient 0.921, respectively. Test-retest reliability was also satisfactory, with variables presenting high levels of external validity. Criterion base validity was evidenced by significant correlations between the Greek CDS-scale with the SCL-90 and all subscales ($p<0.0001$). As expected the Greek CDS scale correlated highly with the SCL-90 and all subscales ($p<0.0001$). Table 6: Correlation of CDS with SCL-90 and EPQ scales.

| SCL-90 scale | Total CDS score | N | Spearman’s rho | p-value |
|--------------|-----------------|---|----------------|---------|
| Psychoticism | 291 0.048 0.411 |   |                |         |
| Neuroticism  | 291 -0.619 0.007|   |                |         |
| Extraversion | 291 -0.779 0.0001|  |                |         |
| Lie          | 291 -0.419 0.0000|  |                |         |

** Criterion based validity

To measure the criterion validity of CDS scale, we compare it against the SCL-90 and EPQ scale. The CDS scale correlated highly with the SCL-90 and all subscales ($p<0.0001$). As expected the Greek CDS scale correlated highly with N, E and L subscales of EPQ scale (Table 6).

4. DISCUSSION

This study was undertaken to develop a Greek language version of the CDS and to assess its psychometric properties in patients with depersonalization symptoms. The translation process was relatively straightforward with only small differences between the original and the back-translated version of the questionnaire. The present study indicates that the Greek version of CDS scale, has good internal consistency with Cronbach’s $\alpha = 0.938$ and Guttman split-half coefficient 0.921, respectively. Test-retest reliability was also satisfactory, with variables presenting high levels of external validity. Criterion base validity was evidenced by significant correlations between the Greek CDS-scale with the SCL-90 and EPQ scale. Simeon D et al. (16) presents a five factor structure. One limitation of this study is that we did not assess the questionnaire in several populations, including healthy individuals. The main limitation for this study was that the gold standard for the diagnosis of major depression was not a standardized interview but clinical diagnosis by a psychiatrist.

Table 6: Correlation of CDS with SCL-90 and EPQ scales.

| EPQ scale | Total CDS score | N | Spearman’s rho | p-value |
|-----------|-----------------|---|----------------|---------|
| Summarization | 291 0.222 0.0000|   |                |         |
| Obsessive-Compulsive | 291 0.416 0.0000|   |                |         |
| Interper-Sens | 291 0.233 0.0000|   |                |         |
| Depression | 291 0.395 0.0000|   |                |         |
| Anxiety | 291 0.342 0.0000|   |                |         |
| Hostility | 291 0.288 0.0000|   |                |         |
| Phobic Anxiety | 291 0.367 0.0000|   |                |         |
| Paranoic Ideation | 291 0.322 0.0000|   |                |         |
| Psychoticism | 291 0.390 0.0000|   |                |         |
| General Symptomatic Index | 291 0.393 0.0000|   |                |         |

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

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

REFERENCES

1. Molina Castillo Jj, Martinez de la Iglesia, Albert Colomer C, Berrios GS, Sierra M, Luque Luque R. Cross-cultural adaptation and validation of the Cambridge Depersonalization Scale. Actas Esp Psiquiatr. 2006; 34(3): 185-92.
2. American psychiatric Association 1994. Diagnostic and statistical manual of Mental Disorders, 4th ed. American Psychiatric Press, Washington, DC.
3. Hunter EC, Sierra M, David AS. The epidemiology of depersonalization and derealization. A systematic review. Soc Psychiatry Psychiatr. Epidemiol. 2004; 39(1): 9-18.
4. Fleiss J, Gurland B, Goldberg K. Independence of depersonalization and derealization. J Consult Clin Psychology. 1975; 43(1): 110-11.
5. Sugiu M, Hiroawa M, Tanaka S, Nishi Y, Yamada Y, Mizuno M. Reliability and Validity of a Japanese version of the Cambridge depersonalization scale as a Screening instrument for depersonalization disorder. Psychiatry Clin Neurosci. 2009; 63(3): 314-21. doi:10.1111/j.1440-1673.2009.01939.x.
6. Sierra M, Baker D, Medford N, David A. Unpacking the depersonalization syndrome: an exploratory factor analysis on the Cambridge Depersonalization Scale. Psychological Med. 2005; 35(10): 1523-32.
7. Sierra M, Berrios GE. The Cambridge Depersonalisation Scale: a new instrument for the measurement of depersonalisation. Psychiatry Research. 2000; 93(2): 153-64.
8. Eysenck HJ, Eysenck. Manual of the EPQ (Personality Questionnaire) holder and Stoyngheton Educational, London. SBG, 1975.
9. Dimtriou E. EPQ personality Questionnaire. Greek Validation in the Greek Population, Dimitriou E. Engelfalos, 1986; 23: 41-54.
10. Derogatis L, Melisaratos N. The brief symptom inventory: an introduc- tory report. Psychiatr Med. 1983; 13(3): 595-605.
11. Donias S, Karastergiou A, Manos N. Validation of the Symptom Checklist-90-R in Greek Population. Psychiatrak. 1991; 2: 42-8.
12. Field, A. P. Discovering statistics using SPSS (3rd ed.) London: SAGA 2009.
13. Cronbach, LJ. Coefficient alpha and the internal structure of tests. Psychometrika. 1951; 16(3): 297-34.
14. Guttman L. A basis for analyzing test-retest reliability. Psychometrika, 1945; 10(4): 255-82.
15. Koch Gary G. Intraclass correlation coefficient. In: Samuel Kot and Norman L. Johnson. Encyclopedia of Statistical Sciences. 4. New York: John Wiley & Sons. pp. 213-217.
16. Simeon D, Kozin DS, Segal K, Lerch B, Dujour R, Giesbrecht T. Constructing depersonalization: further evidence for symptom clusters. Psychiatry Res. 2008 Jan 15; 157(1-3): 303-6.

AUTHORS CONTRIBUTION: Konstantinos Kontoanetos participated in the acquisition of data, analysis and interpretation of data, and wrote the first draft of the manuscript. Sofia Tsiori G. Poulakou, Konstantinos Protopapa, Ioannis Katsarolis, Vissaria Sakka, Dimitra Kavatha, participated in the study concept and design, interpretation of the data, and drafting and critical revision of the manuscript for important intellectual content. Antonios Papadopoulos participated in the acquisition of data and critical review of the manuscript for important intellectual content. participated in the acquisition and interpretation of data and critical review of the manuscript for important intellectual content. Anastasia Antoniadou participated in the interpretation of data and critical review of the manuscript for important intellectual content. Charalambos Papageorghiou participated in the study concept and design, acquisition and interpretation of the data, and drafting and critical revision of the manuscript and had the overall supervision and corrected the final draft. All authors read and approved the final manuscript.

Mater Sociomed. 2016 Oct; 28(5): 387-391 • ORIGINAL PAPER 391