Three scales about childhood trauma, traumatic experiences and bullying: Greek translation, test-retest reliability

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**BRIEF COMMUNICATION**

Three scales about childhood trauma, traumatic experiences and bullying: Greek translation, test-retest reliability

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**ABSTRACT**

Exposure to traumatic life events is one of the most robust predictors for psychosis. The Childhood Trauma Questionnaire-Short Form (CTQ-SF), a version of Childhood Experience of Care and Abuse (CECA_EUGEI) and a version of the Bullying Questionnaire (BQ_EUGEI) refer to early life adversities, traumatic episodes and bullying. Those scales belong to a battery of psychometric tools detecting environmental and genetic factors associated with First Episode Psychosis (FEP) that was employed in the Athens-FEP study. The goal of this paper is to present those three versions, regarding their content, their use in the international research, their translation in Greek and their test-retest reliability. The three questionnaires were translated by two independent translators, administered twice to 32 subjects with FEP, with a three weeks intermediate period. Intraclass correlation coefficients (ICCs) were used to investigate agreement between scores of the first and second administration. There was a statistically significant agreement for all measurements of the three questionnaires. Cronbach’s a were also calculated and were acceptable and over 0.7. Our study is an indication that the translated versions are reliable, although a more thorough test of their psychometric properties is needed. Both might be used in the Greek research field as part of a broad package of psychometric tools, specifically addressed to patients with FEP.

**KEYWORDS:** Psychosis, Childhood Trauma, Bullying, Translation, Reliability.

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**Introduction**

Childhood Trauma refers to severe early-life adversities, such as parental loss, physical and sexual abuse and negligence of a child’s basic physical and emotional needs, which results in long-lasting mental and/or physical effects. Exposure to traumatic life events is one of the most robust predictors for schizophrenia and psychosis spectrum disorders including “Ultra High Risk” (UHR).

Research suggests that there is additive interaction of genetic risk with a series of early life challenges, such as sexual abuse, emotional abuse, and bullying among others. In fact,
experiencing peer-bullying as a child has been found to lead to a higher probability of exhibiting psychotic symptoms later in life.\(^4\)

The necessity for a battery of psychometric tools, detecting environmental and genetic factors associated with FEP and addressed specifically to the distinctive characteristics of patients with FEP is of importance to the relevant research field. The Athens FEP Study, a longitudinal prospective research project, has organized such an assessment schedule, oriented to FEP patients,\(^5\) which to a considerable amount relies on the working package of the EUGEI-versions of psychometric tools.\(^2\) EUGEI (European Network of National Schizophrenia Networks studying Gene-Environment interactions) is an international multi-center study aiming to explore gene - environment interaction in relation to the emergence and clinical course of schizophrenia.\(^6\)

Among the scales of the “Athens FEP Study” research battery are Childhood Trauma Questionnaire-Short Form (CTQ-SF),\(^7\) EUGEI version of Childhood Experience of Care and Abuse (CECA\(_{\text{EUGEI}}\))\(^8\) and the EUGEI version of the Bullying Questionnaire (BQ\(_{\text{EUGEI}}\)).\(^9\)

CTQ-SF has been developed in order to provide a more rapid screening of maltreatment histories than the original CTQ, which was created in order to meet the requirements for reliable and valid assessment of a broad range of maltreatment experiences.\(^7\)

The CECA\(_{\text{EUGEI}}\) has been used to investigate traumatic episodes occurring before the age of 17.\(^8\)

The BQ\(_{\text{EUGEI}}\) assessed for peer-bullying during childhood and up to the age of 17 in the form of physical and verbal abuse but also in the form of slander, marginalisation, and ridicule and was adjusted for the needs of the EU-GEI project from the original Olweus Bully/Victim Questionnaire.\(^9,10\)

The goal of the present study is to present CTQ-SF, CECA\(_{\text{EUGEI}}\) and BQ\(_{\text{EUGEI}}\), regarding their content, their use in the international research, their translation in Greek and their test-retest reliability.

**Material and Methods**

**Participants and procedure**

The three EUGEI questionnaires were translated by two independent translators in Greek. The principal investigator of the Athens-FEP project checked and approved the final versions of the questionnaires. The two translators were qualified in the use of the English version of those scales after being trained with an enclosed training word-package provided by the EUGEI. The three tools were administered to 32 subjects, all diagnosed with FEP, participating in the Athens-FEP project. Their sociodemographic characteristics and final diagnoses, after one year of follow up, are presented in Table 1. Twenty-four of our subjects were recruited from the Early Psychosis Intervention Outpatient Service\(^11\) of Eginition University Hospital and eight of them from the Psychiatric Clinic of Sismanoglion General Hospital. The three scales were administered to our subjects twice with an intermediate period of three weeks between the first and second administration, by three qualified researchers. Their reliability was tested by the test-retest method.

The ethics committee and the Institutional Review Board at Eginition University Hospital approved the study protocol.

**Psychometric Tools**

The CTQ-SF consists of 25 clinical items and three validity items in a 5-point Lykert-scale, (fluctuating from “never” to “very often”) and its total score fluctuates from 25 to 125. The original 70-item self-administered inventory CTQ requires 10-15 minutes to be completed and is considered too lengthy for settings in which time constraints are present. CTQ-SF would
take no more than 5 minutes to self-administer. Factor analytic results yielded four to five rotated factors which were labeled: Physical abuse and emotional abuse as a single or as two separated factors as well as emotional neglect, sexual abuse and physical neglect. 

The CECA\textsubscript{EUGEI} has been used to investigate traumatic episodes occurring before the age of 17. It originates from a retrospective interview measure, CECA\textsuperscript{12} and its self-report questionnaire (CECA\textsubscript{Q}).\textsuperscript{13} The CECA\textsubscript{EUGEI} is divided into three sections: a) composition of birth family and parental attachments (item 1); b) separation, abandonment or bereavement trauma (items 2 and 3); c) traumatic episodes that occurred before the age of 17 years – (items 4 to 16) (i.e. unscheduled change of school, run away from home etc). The subscales were dichotomized into “yes/no” scores for the statistical analysis purposes.\textsuperscript{8} The answers for traumatic episodes items are “yes”, “no” or “refuse to answer”. Six factors are estimated by adding the existing categories of traumatic experiences: a) before 11 years old and b) after 11 years old: parent’ s death, c) parent’ s separation, d) adversities, e) cruel behavior from family members up to 11 and after 11 years old, f) physical or sexual abuse up to 11 and after 11 years old.

CECA\textsubscript{Q} allows the investigator to separate childhood from puberty traumatic experiences and to discover experiences of loss and bereavement, while CTQ\textsubscript{F} gives more emphasis in factors of abuse and neglect.

BQ consists of five questions for the measurement of frequency and intensity of bully/victim problems. The first four questions (Bull\textsubscript{1,2,3} and 4) intended to identify if the participant was a bullying victim and to what extent. Bull\textsubscript{1} asked participants about being bullied by peers as a child, Bull\textsubscript{2} about the physical impact they experienced (e.g., burnt, bruised), Bull\textsubscript{3} about the emotional impact (e.g., scared, bad dreams) and Bull\textsubscript{4} about the severity of the bullying. Finally, the fifth question (Bull\textsubscript{5}) asked participants about their involvement in bullying someone else as a child. Four questions (Bull\textsubscript{1,2,3} and 5) were answered in terms of frequency on a 5-point Likert type scale, (fluctuating from 0 = “Never” to 4 = “Very frequently (weekly)”). Bull\textsubscript{4} was answered in terms of intensity on a 4-point Likert type scale, (fluctuating from 0 = “None” to 3 = “Marked”). Two additional variables can be computed to account for the overall lived experience of bullying and bullying intensity respectively; Bull\textsubscript{TOTAL} (Bull\textsubscript{1} + Bull\textsubscript{2} + Bull\textsubscript{3} + Bull\textsubscript{4}), and Bull\textsubscript{INT} (Bull\textsubscript{1} \times Bull\textsubscript{4}).\textsuperscript{9}

Bull\textsubscript{4}, which focuses on the intensity aspect of bullying alone, has been used to uncover the gene-environment interplay, that may lead to severe psychopathology.\textsuperscript{3}

Statistical analysis
Analyses were conducted using SPSS statistical software (version 22.0) and significance was set at 0.05. Intraclass correlation coefficients (ICCs) were used to investigate agreement between scores of the first and second administration of the four questionnaires. Agreement was considered low when ICC is up to 0.4, mediocre when its range is between 0.41 and 0.6, high when it fluctuates between 0.61 and 0.890 and very high when it is higher than 0.8. Cronbach’s a were also calculated.

Results
The Greek versions of CTQ-SF, CECA\textsubscript{EUGEI} and BQ\textsubscript{EUGEI} are presented as supplementary material.

There was a statistically significant agreement for all measurements of the three questionnaires. Agreement for all measurements was very high, since the ICCs for the three questionnaires were higher than 0.8. (Table 2). Cronbach’s a were acceptable and over 0.7 (Table 2).

Discussion
The translated in Greek CTQ-SF, CECA\textsubscript{EUGEI} and BQ\textsubscript{EUGEI} present an excellent test-retest reliability for all items (Table 2). Our study is an indication that the translated versions are reliable. Among its limitations is the lack of a more thorough test of their psychometric properties and especially the necessity of their validity estimation.

CTQ-SF has been used among samples of inpatients and outpatients with schizophrenia spectrum disorders, outpatients with personality disorders or depression, adolescent inpatients, adult substance abusing individuals, general population, detained and delinquent boys.\textsuperscript{7,14}

CECA\textsubscript{EUGEI} has been used among samples of patients with schizophrenia spectrum disorders, bipolar disorder, major depressive disorder and healthy controls.\textsuperscript{8}

BQ\textsubscript{EUGEI} has been used among patients with psychosis and healthy population.\textsuperscript{3,9}

Similar to the CTQ-SF is the self-report version of the Early Trauma Inventory – Short form (ETI-SR-SF) which has been adapted in Greek\textsuperscript{15} and covers four types of trauma concerning (a) traumatic experience of various etiology – general trauma, (b) physical abuse, (c) emotional abuse, and (d) sexual abuse or harassment experiences. Nevertheless, ETI-SR-SF does not cover any type of trauma concerning negligence as CTQ-SF does nor experiences due to absence of care as CECA does.

There is no other psychometric tool translated and used in Greek population estimating bullying.

Thus, all three questionnaires have either properties that differentiate them from similar scales translated in Greek or there is not any other translated tool estimating the same factors. More importantly, all three of them are part of a broad, well established research package of psychometric tools, specifically addressed to patients with FEP, which might be used in the Greek research field.

References


Table 1. Participants’ sociodemographic characteristics, diagnoses (N=32)

<table>
<thead>
<tr>
<th></th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>19 (59.4)</td>
</tr>
<tr>
<td>Age (years), mean (SD)</td>
<td>26.2 (7.7)</td>
</tr>
<tr>
<td>Age of Onset (years), mean (SD)</td>
<td>23.7 (7.7)</td>
</tr>
<tr>
<td>Years of education, mean (SD)</td>
<td>13.6 (2.4)</td>
</tr>
<tr>
<td>Ever Employed</td>
<td>22 (68.7)</td>
</tr>
<tr>
<td>Migration</td>
<td>3 (9.4)</td>
</tr>
<tr>
<td>Final ICD-10 diagnoses</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia (F20)</td>
<td>16 (50%)</td>
</tr>
<tr>
<td>Acute and transient psychotic disorders (F23)</td>
<td>4 (12.5%)</td>
</tr>
</tbody>
</table>
Delusional Disorders (F22) 1 (3.1%)
Schizoaffective Disorder (F25) 1 (3.1%)
Other non-organic psychotic disorders (F28) 1 (3.1%)
Unspecified non organic psychosis F29 1 (3.1%)
Severe depressive episode with psychotic symptoms (F32.3) 2 (6.3%)
Bipolar Disorder (F31) 3 (9.4%)
Mental and behavioural disorders due to use of cannabinoids (F12.5) 2 (6.3%)

Table 2: Test-retest results estimated by intraclass correlation coefficients (ICCs) investigating agreement between scores of the first and second administration of BUEUGEI, CECAEUGEI and CTQ-SF

<table>
<thead>
<tr>
<th></th>
<th>ICC</th>
<th>95% CI</th>
<th>p</th>
<th>Cronbach’s a</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bullying Questionnaire</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullied by someone else</td>
<td>0.97</td>
<td>0.93 - 0.98</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Physically hurt by another</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Emotionally hurt by another</td>
<td>0.99</td>
<td>0.97 - 0.99</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Severity</td>
<td>0.99</td>
<td>0.97 - 0.99</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Did you bully</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>total_bullying</td>
<td>0.99</td>
<td>0.98 - 1.00</td>
<td>&lt;0.001</td>
<td>0.70</td>
</tr>
<tr>
<td>severity_bullying</td>
<td>0.97</td>
<td>0.93 - 0.98</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td><strong>Childhood Experience of Care and Abuse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Died</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td>0.72</td>
</tr>
<tr>
<td>Separation</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td>0.81</td>
</tr>
<tr>
<td>Adversities</td>
<td>0.97</td>
<td>0.94 - 0.99</td>
<td>&lt;0.001</td>
<td>0.78</td>
</tr>
<tr>
<td>Cruel behavior up to 11 years old</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td>0.71</td>
</tr>
<tr>
<td>Cruel behavior after 11 years old</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td>0.89</td>
</tr>
<tr>
<td>Physical or sexual abuse up to 11 years old</td>
<td>1.00</td>
<td>1.00 - 1.00</td>
<td>&lt;0.001</td>
<td>0.76</td>
</tr>
<tr>
<td>Physical or sexual abuse after 11 years old</td>
<td>0.90</td>
<td>0.80 - 0.95</td>
<td>&lt;0.001</td>
<td>0.75</td>
</tr>
<tr>
<td><strong>Childhood trauma questionnaire</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>0.99</td>
<td>0.98 - 1.00</td>
<td>&lt;0.001</td>
<td>0.82</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>0.99</td>
<td>0.98 - 1.00</td>
<td>&lt;0.001</td>
<td>0.86</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>0.90</td>
<td>0.80 - 0.95</td>
<td>&lt;0.001</td>
<td>0.78</td>
</tr>
<tr>
<td>Physical neglect</td>
<td>0.98</td>
<td>0.97 - 0.99</td>
<td>&lt;0.001</td>
<td>0.77</td>
</tr>
<tr>
<td>Emotional neglect</td>
<td>0.98</td>
<td>0.96 - 0.99</td>
<td>&lt;0.001</td>
<td>0.79</td>
</tr>
</tbody>
</table>
ΣΥΝΤΟΜΟ ΑΡΘΡΟ

Τρεις κλίμακες για παιδικό τραύμα, τραυματικές εμπειρίες και εκφοβισμό: Μετάφραση, αξιοπιστία ελέγχου-επανελέγχου

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ΙΣΤΟΡΙΚΟ ΑΡΘΡΟΥ: Παραλήφθηκε 21 Μαΐου 2022 / Αναθεωρήθηκε 27 Νοεμβρίου 2022 / Δημοσιεύθηκε Διαδικτυακά 15 Δεκεμβρίου 2022

ΠΕΡΙΛΗΨΗ

Η έκθεση σε τραυματικά γεγονότα ζωής είναι ένας ισχυρός προβλεπτικός παράγοντας της ψυχώσης. Το ερωτηματολόγια Παιδικού Τραύματος - Βραχεία Φόρμα, μια εκδοχή της κλίμακας Παιδικά βιώματα Φροντίδας και Κακοποίησης και μια εκδοχή του ερωτηματολογίου Εκφοβισμού αναφέρονται σε πρώιμες αντιξοότητες, τραυματικά επεισόδια και εκφοβισμό. Οι κλίμακες αυτές ανήκουν σε ένα πακέτο ψυχομετρικών εργαλείων, που διερευνούν την αλληλεπίδραση γονιδιακών και περιβαλλοντικών παραγόντων στην εκδήλωση Πρώτου Ψυχωσικού Επεισοδίου (FEP), που χρησιμοποιήθηκε από τη μελέτη FEP της Αθήνας. Στόχος της παρούσας εργασίας είναι η παρουσίαση των τριών ερωτηματολογίων αναφορικά με το περιεχόμενο τους, τη χρήση τους στη διεθνή έρευνα, την Ελληνική τους μετάφραση και την αξιοπιστία ελέγχου-επανελέγχου τους. Τα δύο ερωτηματολόγια μεταφράστηκαν από δύο ανεξάρτητους μεταφραστές και χορηγήθηκαν σε 32 άτομα με FEP δύο φορές. Για να εκτιμηθεί η συμφωνία στη βαθμολόγηση μεταξύ πρώτης και δεύτερης χορήγησης χρησιμοποιήθηκαν συντελεστές ενδοταξικής συσχέτισης (ICCs). Υπήρξε στατιστικά σημαντική, πολύ υψηλή συμφωνία στα σκορ μεταξύ των δύο χορηγήσεων για όλες τις μετρήσεις των τριών ερωτηματολογίων (ICCs>0,8). Επίσης υπολογίστηκαν Cronbach’s α και ήταν αποδεκτά και υψηλότερα του 0.7. Η μελέτη μας αποτελεί μια ενδείξη ότι οι δύο μεταφράσεις είναι αξιόπιστες, παρότι ένας πιο ολοκληρωμένος έλεγχος των ψυχομετρικών ιδιοτήτων τους είναι απαραίτητος. Επιπλέον, θα μπορούσαν να χρησιμοποιηθούν στην Ελλάδα, ως μέρος ενός εκτεταμένου πακέτου ψυχομετρικών εργαλείων για άτομα με FEP.

ΛΕΞΕΙΣ ΕΥΡΕΤΗΡΙΟΥ: Ψύχωση, Παιδικό τραύμα, Εκφοβισμός, Μετάφραση, Αξιοπιστία.

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