GR ISSN 1105-2333

PSYCHIATRIKI

Quarterly journal published by the Hellenic Psychiatric Association, Volume 25, No 1, January-March 2014

Καταχωρείται και περιλαμβάνεται στα MEDLINE/PubMed, Index Copernicus, Google Scholar EMBASE/Excerpta Medica, GFMER, CIRRIE, SCIRUS for Scientific Inf., EBSCOhost™ και στο Iatrotek

ΨΥΧΙΑΤΡΙΚΗ

Τριμηνιαία έκδοση της Ελληνικής Ψυχιατρικής Εταιρείας, Τόμος 25, Τεύχος 1, Ιανουάριος-Μάρτιος 2014

Καταχωρείται και περιλαμβάνεται στα MEDLINE/PubMed, Index Copernicus, Google Scholar, EMBASE/Excerpta Medica, GFMER, CIRRIE, SCIRUS for Scientific Inf., EBSCOhost™ και στο Iatrotek

ΨΥΧΙΑΤΡΙΚΗ

Τριμηνιαία έκδοση της Ελληνικής Ψυχιατρικής Εταιρείας
Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
Τηλ.: 210-77 58 410, Fax: 210-72 42 032

Εκδότης:
Βασίλης Κονταξάκης
E-mail: editor@psych.gr

Ιδιοκτήτης:
Ελληνική Ψυχιατρική Εταιρεία
Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
Τηλ.: 210-72 14 148

Γραμματεία ΕΨΕ:
Υπεύθυνη: Ε. Γκρέτσα
Τηλ.: 210-72 14 148, Fax: 210-72 42 032
E-mail: psych@psych.gr, Ιστοσελίδα: www.psych.gr

Εργασίες για δημοσίευση, επιστολές, βιβλία για παρουσίαση να απευθύνονται στον Πρόεδρο της Συντακτικής Επιτροπής:
Παπαδιαμαντοπούλου 11, 115 28 Αθήνα

Ετήσιες συνδρομές:
Εσωτερικού € 40,00
Εξωτερικού $ 80,00 + ταχυδρομικά
Καταβάλλονται με επιταγή στον ταμία της ΕΨΕ:
Παπαδιαμαντοπούλου 11, 115 28 Αθήνα

Τα μέλη της Εταιρείας δεν υποχρεούνται σε καταβολή συνδρομής

ΕΠΙΜΕΛΕΙΑ ΕΚΔΟΣΗΣ
EN ISO 9001:2000

ΒΗΤΑ medical arts
ΒΗΤΑ Ιατρικές Εκδόσεις
ΜΟΝΟΠΡΟΣΩΠΗ ΕΠΕ

Αδριανείου 3 και Κατεχάκη, 115 25 Αθήνα (Ν. Ψυχικό)
Τηλ.: 210-67 14 371 – 210-67 14 340, Fax: 210-67 15 015
e-mail: betamedarts@hol.gr
e-shop: www.betamedarts.gr
EN ISO 9001:2000

Υπεύθυνος τυπογραφείου
Α. Βασιλάκου, Αδριανείου 3 – 115 25 Αθήνα
Τηλ. 210-67 14 340

Indexed and included in MEDLINE/PubMed, Index Copernicus, Google Scholar, EMBASE/Excerpta Medica, GFMER, CIRRIE, SCIRUS for Scientific Inf., EBSCOhost™ and in Iatrotek

PSYCHIATRIKI

Quarterly journal published by the Hellenic Psychiatric Association
11, Papadiamantopoulou str., 115 28 Athens
Tel.: +30-210-77 58 410, Fax: +30-210-72 42 032

Publisher:
Vassilis Kontaxakis
E-mail: editor@psych.gr

Owner:
Hellenic Psychiatric Association
11, Papadiamantopoulou str., 115 28 Athens
Tel.: +30-210-72 14 148

Secretariat:
Head: H. Gretsa
Tel.: +30-210-72 14 148, Fax: +30-210-72 42 032
E-mail: psych@psych.gr, Web-site: www.psych.gr

Manuscripts, letters, books for review should be addressed to the Editor:
11 Papadiamantopoulou str., GR-115 28 Athens, Greece

Annual subscriptions:
(€ 40.00 or $ 80.00 + postage) are payable by check to the treasurer of the Hellenic Psychiatric Association:
11, Papadiamantopoulou str., GR-115 28 Athens

For the members of the Association subscription is free

EDITING
EN ISO 9001:2000

BETA medical arts
BETA Medical Publications

3, Adrianiou str., GR-115 25 Athens-Greece
Tel.: +30210-67 14 371 – +30210-67 14 340,
Fax: +30210-67 15 015
e-mail: betamedarts@hol.gr, e-shop: www.betamedarts.gr
EN ISO 9001:2000

Printing supervision
A. Vassilakou, 3 Adrianiou str. – GR-115 25 Athens
Tel. (+30)-210-67 14 340

ΕΛΛΗΝΙΚΗ ΨΥΧΙΑΤΡΙΚΗ ΕΤΑΙΡΕΙΑ

HELLENIC PSYCHIATRIC ASSOCIATION

ΔΙΟΙΚΗΤΙΚΟ ΣΥΜΒΟΥΛΙΟ

Πρόεδρος: Ι. Γκιουζέπας
Αντιπρόεδρος: Δ. Πλουμπίδης
Γεν. Γραμματέας: Κ. Κόντης
Ταμίας: Α. Ζαχαριάδης
Μέλη: Λ. Μαρκάκη
Ε. Σουμάκη
Χ. Τσόπελας

EXECUTIVE COUNCIL

Chairman: J. Giouzepas
Vice-Chairman: D. Ploumpidis
Secretary General: C. Kontis
Treasurer: A. Zachariadis
Members: L. Markaki
E. Soumaki
C. Tsopelas

ΠΕΙΘΑΡΧΙΚΟ ΣΥΜΒΟΥΛΙΟ

Μέλη: Ι. Πιτταράς
Α. Δουζένης
Γ. Γιαννιός

DISCIPLINARY COUNCIL

Members: J. Pittaras
A. Douzenis
G. Giannios

ΕΞΕΛΕΓΚΤΙΚΗ ΕΠΙΤΡΟΠΗ

Μέλη: Ν. Τζαβάρας
Ν. Ζαχαριάδης
Σ. Κρασανάκης

FINANCIAL CONTROL COMMITTEE

Members: N. Tzavaras
N. Zachariadis
S. Krasanakis

ΠΕΡΙΦΕΡΕΙΑΚΑ ΤΜΗΜΑΤΑ

ΑΘΗΝΩΝ
Πρόεδρος: Β. Κονταξάκης
Γραμματέας: Δ. Αναγνωστόπουλος
Ταμίας: Χ. Χριστοδούλου

ΜΑΚΕΔΟΝΙΑΣ
Πρόεδρος: Γ. Καπρίνης
Γραμματέας: Κ. Φωκάς
Ταμίας: Λ. Αθανασιάδης

ΚΕΝΤΡΙΚΗΣ ΕΛΛΑΔΟΣ
Πρόεδρος: Ο. Μουζάς†
Γραμματέας: Π. Στοφόρος
Ταμίας: Α. Ξηρομερίτης

ΒΟΡΕΙΟΔΥΤΙΚΗΣ ΕΛΛΑΔΟΣ & ΔΥΤΙΚΗΣ ΣΤΕΡΕΑΣ
Πρόεδρος: Β. Μαυρέας
Γραμματέας: Α. Μαρτίνος
Ταμίας: Ε. Λαυρέντζου

ΠΕΛΟΠΟΝΝΗΣΟΥ
Πρόεδρος: Φ. Γουρζής
Γραμματέας: Α. Κατριβάνου
Ταμίας: Ι. Βλάχος

ΜΕΓΑΛΗΣ ΒΡΕΤΤΑΝΙΑΣ
Πρόεδρος: Γ. Ίκκος
Γραμματέας: Ν. Χριστοδούλου
Ταμίας: Π. Λέκκος

DIVISIONS

ATHENS
Chairman: V. Kontaxakis
Secretary: D. Anagnostopoulos
Treasurer: C. Christodoulou

MACEDONIA
Chairman: G. Kaprinis
Secretary: C. Fokas
Treasurer: L. Athanasiadis

CENTRAL GREECE
Chairman: O. Mouzas†
Secretary: P. Stoforos
Treasurer: A. Xiromeritis

NORTHWESTERN GREECE
Chairman: V. Mavreas
Secretary: A. Martinos
Treasurer: E. Lavrentzou

PELOPONNESUS
Chairman: P. Gourzis
Secretary: A. Katrivanou
Treasurer: J. Vlachos

GREAT BRITAIN
Chairman: G. Ikkos
Secretary: N. Christodoulou
Treasurer: P. Lekkos

ΚΛΑΔΟΙ

ΑΥΤΟΚΑΤΑΣΤΡΟΦΙΚΩΝ ΣΥΜΠΕΡΙΦΟΡΩΝ
Πρόεδρος: Μ. Χαβάκη-Κονταξάκη
Γραμματείς: Δ. Παππά, Κ. Παπλός

ΒΙΑΙΩΝ ΣΥΜΠΕΡΙΦΟΡΩΝ
Πρόεδρος: Χ. Τσόπελας
Γραμματείς: Α. Δουζένης, Δ. Τσακλακίδου

ΒΙΟΛΟΓΙΚΗΣ ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Ε. Λύκουρας†
Γραμματείς: Ι. Χατζημανώλης, Π. Σακκάς

ΙΔΙΩΤΙΚΗΣ ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Λ. Μαρκάκη
Γραμματείς: Β. Τσιπάς, Δ. Λέννας

ΙΣΤΟΡΙΑΣ ΤΗΣ ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Δ. Πλουμπίδης
Γραμματείς: Αθ. Καράβατος, Ι. Πολυχρονίδης

ΚΟΙΝΩΝΙΚΗΣ ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Α. Μιχοπούλου
Γραμματείς: Γ. Γαρύφαλλος, Σ. Θεοδωροπούλου

ΟΥΣΙΟΕΞΑΡΤΗΣΕΩΝ
Πρόεδρος: Ι. Λιάππας
Γραμματείς: Ι. Διακογιάννης, Θ. Παπαρρηγόπουλος

ΠΑΙΔΟΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Δ. Αναστασόπουλος
Γραμματείς: Δ. Αναγνωστόπουλος, Κ. Κανελλέα

ΠΡΟΛΗΠΤΙΚΗΣ ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Β. Κονταξάκης
Γραμματείς: Δ. Κόντης, Η. Τζαβέλλας

ΣΕΞΟΥΑΛΙΚΟΤΗΤΑΣ ΚΑΙ ΔΙΑΠΡΟΣΩΠΙΚΩΝ ΣΧΕΣΕΩΝ
Πρόεδρος: Λ. Αθανασιάδης
Γραμματείς: Κ. Παπασταμάτης, Α. Κώνστα

ΣΥΜΒΟΥΛΕΥΤΙΚΗΣ - ΔΙΑΣΥΝΔΕΤΙΚΗΣ ΨΥΧΙΑΤΡΙΚΗΣ & ΨΥΧΟΣΩΜΑΤΙΚΗΣ
Πρόεδρος: Μ. Συγγελάκης
Γραμματείς: Α. Βιδάλης, Θ. Υφαντής

ΤΕΧΝΗΣ & ΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Σ. Κρασανάκης
Γραμματείς: Η. Βλάχος, Χ. Γιαννουλάκη

ΤΗΛΕΨΥΧΙΑΤΡΙΚΗΣ
Πρόεδρος: Κ. Κατσαδώρος
Γραμματείς: Χ. Ζαχαροπούλου, Ι. Μαλογιάννης

ΨΥΧΙΑΤΡΟΔΙΚΑΣΤΙΚΗΣ
Πρόεδρος: Α. Δουζένης
Γραμματείς: Ι. Γιαννοπούλου, Γ. Τζεφεράκος

ΨΥΧΟΓΗΡΙΑΤΡΙΚΗΣ
Πρόεδρος: Ρ. Γουρνέλλης
Γραμματείς: Ν. Δέγλερης, Ι. Μιχόπουλος

ΨΥΧΟΠΑΘΟΛΟΓΙΑΣ
Πρόεδρος: Ν. Τζαβάρας
Γραμματείς: Γ. Καπρίνης, Μ. Διαλλινά

ΨΥΧΟΘΕΡΑΠΕΙΑΣ
Πρόεδρος: Χ. Καραμανωλάκη
Γραμματείς: Κ. Χαραλαμπάκη, Γ. Μιχόπουλος

ΨΥΧΟΦΑΡΜΑΚΟΛΟΓΙΑΣ
Πρόεδρος: Β. Αλεβίζος
Γραμματείς: Ι. Χατζημανώλης, Θ. Μουγιάκος

ΨΥΧΟΦΥΣΙΟΛΟΓΙΑΣ
Πρόεδρος: Ι. Λιάππας
Γραμματείς: Ι. Νηματούδης, Χ. Παπαγεωργίου

ΨΥΧΙΑΤΡΙΚΗΣ ΗΘΙΚΗΣ & ΔΕΟΝΤΟΛΟΠΑΣ
Πρόεδρος: Α. Παράσχος†
Γραμματείς: Β. Αλεβίζος, Α. Δουζένης

ΨΥΧΙΑΤΡΙΚΗΣ & ΘΡΗΣΚΕΙΑΣ
Πρόεδρος: Α. Αυγουστίδης
Γραμματείς: Στ. Κούλης, Κ. Εμμανουηλίδης

ΨΥΧΟΜΕΤΡΙΚΩΝ & ΝΕΥΡΟΨΥΧΟΛΟΓΙΚΩΝ ΜΕΤΡΗΣΕΩΝ
Πρόεδρος: Κ. Φουντουλάκης
Γραμματείς: Ι. Νηματούδης, Ι. Ζέρβας

SECTIONS

SELF-DESTRUCTIVE BEHAVIORS
Chairman: B. Havaki-Kontaxaki
Secretaries: D. Pappa, K. Paplos

VIOLENT BEHAVIORS
Chairman: C. Tsopelas
Secretaries: A. Douzenis, D. Tsaklakidou

BIOLOGICAL PSYCHIATRY
Chairman: E. Lykouras†
Secretaries: J. Hatzimanolis, P. Sakkas

PRIVATE PSYCHIATRY
Chairman: L. Markaki
Secretaries: V. Tsipas, D. Lennas

HISTORY OF PSYCHIATRY
Chairman: D. Ploumpidis
Secretaries: Ath. Karavatos, J. Polyhronidis

SOCIAL PSYCHIATRY
Chairman: A. Michopoulou
Secretaries: G. Garyfallos, S. Theodoropoulou

SUBSTANCE ABUSE
Chairman: J. Liappas
Secretaries: J. Diakoyiannis, T. Paparrigopoulos

CHILD PSYCHIATRY
Chairman: D. Anastasopoulos
Secretaries: D. Anagnostopoulos, K. Kanellea

PREVENTIVE PSYCHIATRY
Chairman: V. Kontaxakis
Secretaries: D. Kontis, E. Tzavellas

SEXUALITY AND INTERPERSONAL RELATIONSHIPS
Chairman: L. Athanasiadis
Secretaries: K. Papastamatis, A. Konsta

CONSULTATION-LIAISON PSYCHIATRY & PSYCHOSOMATICS
Chairman: M. Syngelakis
Secretaries: A. Vidalis, Th. Yfantis

ART & PSYCHIATRY
Chairman: S. Krasanakis
Secretaries: E. Vlachos, C. Giannoulaki

TELEPSYCHIATRY
Chairman: K. Katsadoros
Secretaries: C. Zacharopoulou, J. Malogiannis

FORENSIC PSYCHIATRY
Chairman: A. Douzenis
Secretaries: J. Giannopoulou, G. Tzeferakos

PSYCHOGERIATRICS
Chairman: R. Gournellis
Secretaries: N. Degleris, J. Michopoulos

PSYCHOPATHOLOGY
Chairman: N. Tzavaras
Secretaries: G. Kaprinis, M. Diallina

PSYCHOTHERAPY
Chairman: C. Karamanolaki
Secretaries: K. Charalambaki, J. Michopoulos

PSYCHOPHARMACOLOGY
Chairman: V. Alevizos
Secretaries: J. Chatzimanolis, T. Mougiakos

PSYCHOPHYSIOLOGY
Chairman: J. Liappas
Secretaries: J. Nimatoudis, C. Papageorgiou

PSYCHIATRY & ETHICS
Chairman: A. Paraschos†
Secretaries: V. Alevizos, A. Douzenis

PSYCHIATRY & RELIGION
Chairman: A. Avgoustidis
Secretaries: S. Koulis, K. Emmanouilidis

PSYCHOMETRIC & NEUROPSYCHOLOGIC MEASUREMENTS
Chairman: K. Fountoulakis
Secretaries: J. Nimatoudis, J. Zervas

PSYCHIATRIKI

Quarterly journal published by the Hellenic Psychiatric Association

CONTENTS

ΨΥΧΙΑΤΡΙΚΗ

Τριμηνιαία έκδοση της Ελληνικής Ψυχιατρικής Εταιρείας

ΠΕΡΙΕΧΟΜΕΝΑ

Editorial
Άρθρο Σύνταξης

Transgenerational transmission and Child Psychiatry

Psychiatriki 2014, 25:15–18

Transgenerational transmission is one of the major issues in child and adolescent psychiatry. Not only because, as in other fields of mental health, it fuels the nature nurture theoretical controversies or the body mind scientific debates, but also because it is, with children, at the center of every day medical, psychological or psychiatric practices.

It is indeed difficult to deny that, in front of a mental health disorder at this age, one of the main stakes of the professionals is to weight cautiously the part taken by the relational environment in the mechanisms leading to the child's disorder onset. To be sensitive to the specific dependency of the child to his context is indeed one of the corner stone of child psychiatry and associate disciplines; so much as they can be seen as their main specificity in the field of medicine, psychiatry and social sciences. In child psychiatry, this very strong stream is however frequently challenged by another vivid trend: the tendency to see any disorder emerging at an early stage of life as the natural consequence of a dysfunctional development, with the idea that the more precocious it is the more biological it has to be.

This other stream is clearly illustrated by the observation that among the many concerns raised by the recent release of DSM-5, very few dealt with the change of labeling for the chapter the most specific to child psychiatry: from the DSM-IV purely descriptive "Disorders usually first diagnosed in infancy, childhood or adolescence" to the more etiologically oriented DSM-5 "Neurodevelopmental disorders".

In the current scientific context, it is hard to believe that this new label means that DSM-5 assumes that all the other DSM-5 disorders are not neurodevelopmental at all. Such assumption would indeed ignore a large number of works suggesting the contrary. For example in Schizophrenia where genetically induced neurodevelopmental impairments are likely to be involved, and this not only for those who adopt neurodevelopmental perspectives but also for those who advocate one of the vulnerability models. Is it then that DSM-5 considers the non neurodevelopmental determinants infancy childhood or adolescence onset disorders to be less relevant or to have less impact in childhood mental disorders than they have in schizophrenia and other later onset psychiatric disorders? Such assumption may be less scientifically (or even politically) incorrect than the previous one, but it is as neglectful of number of empirical evidences showing the weight of relational (non genetic) transmission and of many environmental factors strongly influential in the development of the child.

The best example of the importance of such mechanisms is given by the number of evidence based papers on Attachment Transmission.[1] As we all know, attachment is defined as an innate behavioral system that enables the baby to regulate his/her closeness to his/her mother; its relevance in human as it is in animal, was a crucial point of Bowlby' s breaking through theory in 1969.[2] Standardized instruments were developed by Bowlby's followers[3,4] to assess the quality of attachment; they helped to validate the hypothesis whereby there exists a variety of attachment patterns in mothers as in infants that are underpinned by mental representations Bowlby described as Internal Working Model.[2] The same research tools also showed that most of these attachment patterns were transmitted by the mother to the baby.[5] Moreover, several studies showed that some attachment pattern are protective factors for various mental health disorder whereas other attachment pattern can be considered as risk factors for these disorders or others, when associated with aversive life events or traumatic experiences[1–6] Transmission of attachment became a topic of clinical relevance to contribute to the explanation of complex phenomenon as vulnerability or resilience in mental health.[1]

Because of the evidences that the mechanism of this transmission was of a non genetic nature[7] researchers were facing what they called a transmission gap,[8] showing that beside the attention we have to give to the genetic determinant of neurodevelopemental dimensions of the mental health disorders in childhood there is an equal need for attention to psychological dimensions of the transgenerational transmission. However, recent advances in neuroscience and psychology teach us that this new stake imposes us to keep in mind that we have reached "a time when the clarification of the essence of our biological embodiment is of growing interest for phenomenology".

Michel Botbol
Professor of Child and Adolescent Psychiatry,
University of Western Brittany and Brest University Hospital
EA 4686, France

References

1. Botbol M. Towards an integrative biological and psychodynamic approach of transmission of Attachment. *J Physiol Paris* 2010, 104:263–271
2. Bowlby J. *Attachment and loss*. Vol. 1. Basic Books, New York, NY, 1969
3. Ainsworth MDS, Blehar M, Waters E, Wall S. *Patterns of attachment: A psychological study of the strange situation*. Hillsdale NJ, Lawrence Erlbaum, 1978
4. Main, M. Metacognitive knowledge, metacognitive monitoring, and singular (coherent) versus multiple (incoherent) models of attachment: findings and directions for future research. In: Parkes C, Stevenson-Hinde J, Marris P (eds) *Attachment across the life cycle*. Routeledge, London, 1991:127–159
5. Fonagy P, Steele M, Steele H. Maternal representations of attachment during pregnancy predict the organization of infant-mother attachment at one year of age. *Child Development* 1991, 62:891–905
6. Main M. Introduction to the special section on attachment and psychopathology: Overview of the field of attachment. *J Consult Clin Psychol* 1996, 64:237–243
7. Bokhorst CL, Bakermans-Kranenburg MJ, Fearon RM, van Ijzendoorn MH, Fonagy P, Schuengel, C. The importance of shared environment in mother-infant attachment security: A behavioural genetic study. *Child Development* 2003, 74:1769–1782
8. Van IJzendoorn MH. Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psycholog Bull* 1995, 117:387–403

Άρθρο Σύνταξης
Editorial

Διαγενεαλογική μετάδοση και Παιδοψυχιατρική

Ψυχιατρική 2014, 25:15–18

Το θέμα της Διαγενεαλογικής μετάδοσης αποτελεί ένα από τα σημαντικότερα ζητήματα στην παιδική και εφηβική Ψυχιατρική. Όχι μόνο επειδή, όπως και σε άλλους τομείς της ψυχικής υγείας, πυροδοτεί και ευοδώνει θεωρητικές αντιπαραθέσεις στις επιστημονικές συζητήσεις για τη σχέση νόσου-σώματος, αλλά και επειδή θέτει τα παιδιά, στο επίκεντρο της καθημερινής ιατρικής, ψυχολογικής και ψυχιατρικής πρακτικής.

Είναι πράγματι δύσκολο να αρνηθεί κανείς ότι, αντιμετωπίζοντας μια διαταραχή ψυχική υγείας σε αυτήν την ηλικία, ένα από τα κύρια διακυβεύματα των επαγγελματιών είναι να σταθμίζουν προσεκτικά τη συμμετοχή των περιβαλλοντικών παραγόντων και μηχανισμών σε σχέση με την έναρξη της διαταραχής. Ένας από τους ακρογωνιαίους λίθους της παιδοψυχιατρικής και των σχετικών με αυτήν κλάδων είναι να λαμβάνει υπ' όψιν τη συγκεκριμένη εξάρτηση του παιδιού με το σύνολο του πλαισίου που λειτουργεί. Η σημασία αυτού του πλαισίου είναι τόσο μεγάλη ώστε μπορεί να θεωρηθεί κεντρικής σημασίας στον τομέα της Ιατρικής, της Ψυχιατρικής και των κοινωνικών επιστημών.

Στην Παιδοψυχιατρική, αυτό το πολύ ισχυρό ρεύμα, ωστόσο, συχνά αμφισβητείται από μια άλλη τάση: την τάση να δούμε κάποια διαταραχή αναδυόμενη σε πρώιμο στάδιο της ζωής ως φυσικό επακόλουθο μιας αναπτυξιακής διαταραχής, με το σκεπτικό ότι όσο πιο πρώιμη είναι η διαταραχή τόσο πιο βιολογικό είναι το υπόβαθρό της.

Αυτή η τάση φαίνεται καθαρά από την παρατήρηση ότι μεταξύ των πολλών ανησυχιών που εκφράστηκαν κατά την πρόσφατη έκδοση του DSM-5, πολύ λίγοι ασχολήθηκαν με την αλλαγή της ονομασίας του κεφαλαίου της Παιδοψυχιατρικής. Από τα καθαρά περιγραφικά κριτήρια του DSM-IV στις «Διαταραχές που διαγιγνώσκονται για πρώτη φορά κατά τη βρεφική ηλικία, την παιδική ηλικία ή την εφηβεία» φτάσαμε στην πιο αιτιολογικά προσανατολισμένη απόδοση του DSM-5 «Νευροαναπτυξιακές διαταραχές».

Στο σημερινό επιστημονικό πλαίσιο, είναι δύσκολο να πιστέψει κανείς ότι η νέα αυτή ονομασία σημαίνει ότι το DSM-5 υποθέτει ότι όλες οι άλλες διαταραχές δεν είναι νευροαναπτυξιακές. Μια τέτοια παραδοχή θα αγνοήσει πράγματι ένα μεγάλο αριθμό εργασιών που υποδηλώνει το αντίθετο. Για παράδειγμα, η σχιζοφρένεια, όπου γενετικά επαγόμενες νευροαναπτυξιακές διαταραχές είναι πιθανό να εμπλέκονται στην αιτιοπαθογένειά της. Η άποψη αυτή αφορά όχι μόνο εκείνους που υιοθετούν τις νευροαναπτυξιακές προοπτικές, αλλά και εκείνους που υποστηρίζουν το μοντέλα «ευαλωτότητας». Είναι δηλαδή αυτονόητο ότι το DSM-5 θεωρεί ότι οι μη-νευροαναπτυξιακοί παράγοντες που καθορίζουν την εμφάνιση διαταραχών στη βρεφική, παιδική ή την εφηβική ηλικία έχουν μικρότερη επίπτωση από ό, τι έχουν στη σχιζοφρένεια και σε άλλες διαταραχές που εμφανίζονται αργότερα.

Η υπόθεση αυτή μπορεί να είναι λιγότερο επιστημονικά (ή ακόμα και πολιτικά) εσφαλμένη από την προηγούμενη, αλλά είναι εξίσου σοβαρός ο αριθμός των εμπειρικών αποδεικτικών στοιχείων που αναδεικνύουν τη σοβαρότητα των διαταραγμένων διαπροσωπικών σχέσεων ως τρόπους μετάδοσης (μη-γενετικούς) καθώς και πολλών άλλων περιβαλλοντικών παραγόντων που έχουν έντονη επίδραση στην ανάπτυξη του παιδιού.

Το καλύτερο παράδειγμα για να κατανοήσει κάνεις τη σημασία των μηχανισμών αυτών βρίσκεται στον μεγάλο αριθμό εμπεριστατωμένων εργασιών για τη θεωρία προσκόλλησης.[1] Όπως όλοι γνωρίζουμε, η προσκόλληση ορίζεται ως μια έμφυτη συμπεριφορά που επιτρέπει στα μωρά να ρυθμίζουν την εγγύτητα με τη μητέρα τους. Η σημασία της τόσο για τους ανθρώπους όσο και για τα ζώα, ήταν ένα κρίσιμο σημείο στην πρωτοποριακή θεωρία του Bowlby το 1969.[2] Διάφορα τυποποιημένα εργαλεία αναπτύχθηκαν από τους οπαδούς του Bowlby[3–4] για να αξιολογήσουν την ποιότητα της προσκόλλησης. Τα εργαλεία αυτά συνετέλεσαν στο να επικυρωθεί η υπόθεση σύμφωνα με την οποία υπάρχει ποικιλία μοντέλων προσκόλλησης σε μητέρες όπως και στα βρέφη που υποστηρίζονται από τις νοητικές αναπαραστάσεις του Bowlby και

περιγράφονται ως Μοντέλο Εσωτερικής Διεργασίας.[2] Τα ίδια εργαλεία της έρευνας έδειξαν επίσης ότι τα περισσότερα από αυτά τα μοντέλα προσκόλλησης μεταβιβάζονται από τη μητέρα στο μωρό.[5] Επιπλέον, αρκετές μελέτες έδειξαν ότι ορισμένα μοντέλα προσκόλλησης είναι προστατευτικοί παράγοντες για διάφορες ψυχικές διαταραχές, ενώ άλλα μοντέλα προσκόλλησης μπορεί να θεωρούνται ως παράγοντες κινδύνου, όταν συνδυάζονται με οδυνηρά γεγονότα ζωής ή τραυματικές εμπειρίες.[1–6] Η μεταβίβαση του είδους της προσκόλλησης είναι ένα θέμα ιδιαίτερης κλινικής σημασίας και έχει συμβάλλει στο να ερμηνευθούν σύνθετα φαινόμενα, όπως η ευπάθεια ή η αντοχή στην ψυχική υγεία.[1]

Λόγω των αποδεικτικών στοιχείων ότι ο μηχανισμός αυτής της μετάδοσης ήταν μη γενετικής φύσης,[7] οι ερευνητές βρέθηκαν αντιμέτωποι με αυτό που ονομάζεται «χάσμα μεταφοράς»,[8] τονίζοντας ότι εκτός από την προσοχή που πρέπει να δοθεί στο γενετικό παράγοντα της νευροαναπτυξιακής διάστασης στις διαταραχές της ψυχικής υγείας στην παιδική ηλικία, υπάρχει μια εξίσου σημαντική ανάγκη για προσοχή στις ψυχολογικές διαστάσεις της διαγενεαλογικής μετάδοσης. Οι πρόσφατες εξελίξεις στις νευροεπιστήμες και την Ψυχολογία μάς έχουν διδάξει ότι αυτό το νέο διακύβευμα, μας επιβάλλει να έχουμε κατά νου ότι έχουμε φτάσει σε μια στιγμή όπου η αποσαφήνιση της ουσίας της βιολογικής μας υπόστασης έχει αυξημένο ενδιαφέρον και για τη φαινομενολογική μας διάσταση.

Michel Botbol
Καθηγητής Παιδικής και Εφηβικής Ψυχιατρικής,
Πανεπιστήμιο Δυτικής Βρετάνης και Πανεπιστημιακό Νοσοκομείο της Brest,
ΕΑ 4686, Γαλλία

Βιβλιογραφία

1. Botbol M. Towards an integrative biological and psychodynamic approach of transmission of Attachment. *J Physiol Paris* 2010, 104:263–271
2. Bowlby J. *Attachment and loss*. Vol. 1. Basic Books, New York, NY, 1969
3. Ainsworth MDS, Blehar M, Waters E, Wall S. *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ, Lawrence Erlbaum, 1978
4. Main, M. Metacognitive knowledge, metacognitive monitoring, and singular (coherent) versus multiple (incoherent) models of attachment: findings and directions for future research. In: Parkes C, Stevenson-Hinde J, Marris P (eds) *Attachment across the life cycle*. Routeledge, London, 1991:127–159
5. Fonagy P, Steele M, Steele H. Maternal representations of attachment during pregnancy predict the organization of infant-mother attachment at one year of age. *Child Development* 1991, 62:891–905
6. Main M. Introduction to the special section on attachment and psychopathology: Overview of the field of attachment. *J Consult Clin Psychol* 1996, 64:237–243
7. Bokhorst CL, Bakermans-Kranenburg MJ, Fearon RM, van Ijzendoorn MH, Fonagy P, Schuengel C. The importance of shared environment in mother-infant attachment security: A behavioural genetic study. *Child Development* 2003, 74:1769–1782
8. Van IJzendoorn MH. Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psycholog Bull* 1995, 117:387–403

Research article
Ερευνητική εργασία

Prevalence of mental disorders in a Greek island

S. Stylianidis,[1,2] S. Pantelidou,[2] P. Chondros,[2]
J.L. Roelandt,[3] A. Barbato[4]

[1]Department of Psychology, Panteion University of Social and Political Sciences, Athens,
[2]Scientific Association for the Regional Development and Mental Health, Athens, Greece,
[3]World Health Organization Collaborating Centre for Research and Training in Mental Health, Lille, France,
[4]Epidemiology and Social Psychiatry Unit, Mario Negri Institute for Pharmacological Research, Milan, Italy

Psychiatriki 2014, 25:19–26

In Greece, the need for epidemiological data became evident at the beginning of the mental health reform during 1983 with the emergence of the necessity to develop community-based mental health services. This survey was conducted in 2005 by the Association for Regional Development and Mental Health (EPAPSY), supported by the local authorities. It followed the methodology of the survey "Mental Health in the General Population: Images and Realities" (MHGP), a large scale multisite epidemiological research conducted by the World Health Organization Collaborative Centre of Lille in France and other countries. The aim of this study was to assess prevalence, sociodemographic and co-morbidity patterns of mental disorders in the general adult population of Evia Island, Greece. This was a cross-sectional survey investigating point, period and lifetime prevalence of mental disorders. The target population was the non-institutionalized adult population of island of Evia (population 230,000 people). The Mini International Neuropsychiatric Interview and a sociodemographic data questionnaire were administered by trained interviewers to 900 residents of Evia. The quota sampling method was used to obtain a sample representative of the target population. Lifetime prevalence of any disorder, as identified by the MINI, was 29%. The prevalence of depression was high, with 17.5% of women and 14.6% of men currently meeting the criteria for diagnosis. Affective and anxiety disorders were found to be more frequent in women than men, except for dysthymia, social phobia and post-traumatic stress disorder which were slightly more frequent in men. The prevalence of psychiatric disorders in Evia was much higher than the prevalence found by other epidemiological studies in Greece and among the highest in Southern Europe. The high prevalence of mental disorders found in Evia means that almost one third of the population will suffer from a clinically significant disorder in their lifetime. Therefore, the resulting social burden is very relevant and requires the inclusion of mental health care among the main goals of a public health strategy. Methodological issues concerning the comparison of results between different countries, the limitations of the study and the rates of alcohol use disorders discussed. High rates of mental disorders are related to demographic changes, such as the increasing are size of elderly population, and probably to economic hardship and rise in unemployment. Results should be taken into consideration for the planning and development of interventions for vulnerable groups.

Key words: Psychiatric epidemiology, community survey, prevalence, mental disorders, Evia, Greece.

Introduction

Epidemiological research on incidence and prevalence of psychiatric disorders in a particular geographical region is considered one of the first steps in assessing the need for planning and developing new psychiatric service.[1] In Greece, the need for epidemiological data became evident at the beginning of the mental health reform during 1983 with the emergence of the necessity to develop community-based mental health services.[2] However, very few epidemiological surveys of mental disorders have hence been conducted in Greece. Therefore, data from large scale studies on prevalence of psychiatric disorders and disability in the general population are very limited, refer mainly to urban areas and have been conducted more than ten years ago,[3–5] with the exception of one study focused on elderly population.[6]

Earlier data show that about 16% of the general population in Athens suffer from a mental disorder[3] and women, widowed spouses and people of low, elderly socioeconomic status had highest rates.[5] Furthermore, in the WHO collaborative study of mental illness in primary care, data from Athens site showed one-month prevalence of 22% and level of recognition of mental disorders by general practitioners of only 17%.[4]

Since no data on distribution of mental disorders outside Athens metropolitan area were available, the Scientific Association for Regional Development and Mental Health (EPAPSY), an NGO active in Greece the field of mental health since 1988, set up an epidemiological survey in the island of Evia aimed at determining the prevalence of psychiatric disorders in the general population, providing reference data for subsequent mental health care planning and describing the population's attitudes towards mental disorders and their treatments. In this paper we will present and discuss prevalence rates, sociodemographic correlates and comorbidity findings.

Material and method

Setting

Evia is a big island in the Aegean Sea (3,909 km^2), situated along the coast line of Central Greece, about 80 km N-E of Athens. It is one of the most densely populated departments of the region with a population of 230,000 residents. Its population is a melting pot of different ethnic groups such as the old indigenous population, the mixed Greek-Turkish population (the integration of this group became a conflicting issue after the declaration of independence of the Greek state), the populations from Psara and Samos islands, the Albanians (immigration from Albania during the 17th century), the Macedonians (internal immigration of workers), Romas (near the main town Halkida) and finally Greek refugees coming from the west coast of Turkey in 1922, as a consequence of the Greek-Turkish war.

This population bears a "fluid identity", with a great variety of cultural codes and patterns compared with other regions of continental Greece. A historical lack of homogeneity combined with the weakness and dysfunction of the social institutions and services, the lack of economic support and the absence of an effective developmental policy from the State have produced a fragile social cohesion and prevailing individualistic social attitudes.

In comparison with Greece, Evia's population is older (31% over 60) and less educated (52% primary school level or less). Outside the capital Halkida, with 53,000 inhabitants, it is scattered in many rural villages. During the last fifteen years, a very relevant downsizing of the industrial infrastructure took place, resulting in a rise of unemployment rates, which reached 25% of general population.[7]

Design

This was a cross-sectional survey investigating point, period and lifetime prevalence of mental disorders. It followed the methodology of the survey "Mental Health in the General Population: Images and Realities"(MHGP), a large scale multisite epidemiological research conducted by the World Health Organization Collaborative Centre of Lille (WHO-CC, Lille, France) in France and other countries.[8–10] The Evia survey took place in 2005.

The target population was the non-institutionalized adult population of Evia. The quota sampling method was used to obtain a sample representing as closely as possible the Evia population. Therefore, the quotas formed were based on the structure of target population, according to gender, age, level of education and professional status, based on 2001 national Greek census. Weighing was applied to ensure that the sample was consistent with the population structure. The quota sampling method has been used in a number of epidemiological surveys[11] and has been considered the most cost-effective mean of obtaining a repre-

sentative sample when the resources are limited.[12] In order to achieve a sufficient number of subjects for the mental disorders explored, with a 5% alpha risk, a sample of 900 subjects was considered to be adequate to ensure accuracy in the analysis.

Measures

The following instruments were used:

1. The Mini International Neuropsychiatric Interview (MINI), a short diagnostic structured interview developed to assess psychiatric diagnoses according to DSM-IV and ICD-10 criteria.[13] For the purpose of this study a validated Greek version of MINI was realized,[14] to identify the presence of disorders belonging to the following ICD-10 categories:
   - Affective disorders (depressive episode F32, recurrent depressive disorder F33, manic episode F30, dysthymia F34.1)
   - Neurotic, stress-related and somatoform disorders (agoraphobia F40, social phobia F40.1, panic disorder F41, generalized anxiety disorder F41.1, post-traumatic stress disorder F43.1)
   - Psychoactive substance use disorders F10-F19.

An ad hoc Sociodemographic Data Questionnaire to collect data on social and demographic characteristics of the subjects, including gender, age, year of birth, marital status, educational level, professional status, family income, religion and cultural reference group.

Procedures

Thirty mental health professionals (psychiatrists, psychologists, social workers, psychiatric nurses) participated in the research project as interviewers. Twenty-three of them were working in residential services in Evia managed by EPAPSY, four interviewers were working at the Mental Health Centre of Halkida (Evia) and three were volunteer participants. All interviewers were trained during a three-day seminar and performed pilot interviews under supervision. The MINI was administered in face-to-face interviews which lasted 25 minutes on average. The respondents were recruited in the streets and public places on "first to hand" basis, provided they lived in Evia and corresponded to the quotas given to each interviewer. Efforts were made to minimize selection bias by sampling from a wide range of sites. The interviewers explained the study and obtained verbal informed consent before beginning the interviews.

Data analysis

The data were coded and inserted in a data entry software program EPI-INFO, provided by the Department of Medical Research and Information of EPSM Lille-Metropole (DIRM). Data were sent to DIRM for verification. Descriptive statistics were used to study the frequency and percentage of the main sociodemographic characteristics as well as the prevalence of psychiatric disorders. Cross-tabulations were used to describe the prevalence in certain groups of the sample according to certain sociodemographic characteristics. Furthermore, logistic regression method was used to identify statistically significant variables associated with specific psychiatric disorders. Finally, x^2 was used to explore the comorbidity.

Results

Sociodemographic characteristics

The sample sociodemographic characteristics are shown in table 1. Such characteristics were predefined at the beginning of the study, according to the quota method, based on data provided by the Greek National Statistical Service in 2001 census. Classification of professional status follows the indications of the International Labour Organization.[15] Frequencies and percentages are presented in table 1. The mean family income of respondents ranged between 840 euro and 1300 euro per month. The overwhelming majority of the subjects were Greek Orthodox Christians (98%).

Prevalence of mental disorders

Data on prevalence of psychiatric disorders are shown in table 2. Lifetime prevalence of any disorder as identified by the MINI was 29%.

Generally, depressive and anxiety disorders were found to be more frequent in women than men, except for dysthymia, social phobia and post-traumatic stress disorders, which were slightly more frequent in men. The prevalence of depression was high, with 17.5% of women and 14.6% of men currently meeting the criteria for diagnosis. Substance use disorders were far more prevalent in men.

Table 3 shows prevalence by age and marital status. The highest percentage of any affective disorders was detected in the age group of over 75, while anxiety disorders were more frequent in the 18–39 year age groups. Both anxiety and affective disorders were prevalent in the divorced group.

Table 1. Sociodemographic characteristics.

	Males (n=455)		*Females (n=445)*		*Total (n=900)*	
	n	*(%)*	*n*	*(%)*	*n*	*(%)*
Age						
18–29	97	21.3	90	20.2	187	20.8
30–39	85	18.7	80	17.9	165	18.3
40–49	72	15.8	71	15.9	143	15.9
50–59	64	14.0	60	13.4	124	13.7
60–74	109	24.0	120	26.9	229	25.4
Over 75	27	5.9	24	5.3	51	5.6
Missing	1	0.2			1	0.01
Marital status						
Single	140	31.1	96	21.7	236	26.5
Married	262	58.3	268	60.7	530	59.5
Divorced	23	5.1	31	7.0	54	6.0
Widowed	24	5.3	46	10.4	70	7.8
Missing	6	1.4	4	0.9	10	1.1
Education						
Primary	171	37.5	173	38.8	344	38.2
Secondary	168	36.9	159	35.7	327	36.3
Tertiary	59	12.9	62	13.9	121	13.4
Uneducated	57	12.5	51	11.4	108	12.0
Missing	–	–	–	–	–	–
Occupation						
Clerks	80	17.5	88	19.8	168	18.6
Technicians and associate professionals	16	3.5	7	1.7	23	2.6
Agricultural and fishery workers	40	8.7	11	2.5	51	5.7
Craft and trade workers	56	12.3	43	9.6	99	11.0
Professionals	26	5.7	13	2.9	39	4.3
Retired	138	30.4	104	23.5	242	26.9
Students	24	5.2	15	3.3	39	4.4
Housewives	0	0	113	25.5	113	12.7
Other	9	1.9	2	0.4	11	1.2
Unemployed	66	14.6	48	10.8	114	12.6
Missing			1	0.2	1	0.1

Logistic regression analysis shows gender as the most important variable associated with depressive episodes ($p<0.05$). Marital status was found to be the most important variable related to social phobia ($p<0.05$) and to alcohol abuse ($p<0.05$), while for alcohol and drug abuse the most significant variable was unemployment ($p<0.05$).

Comorbidity

There was a statistically significant association ($x^2=15$, $p<0.01$) between agoraphobia and depressive episodes; 41% of those suffering agoraphobia also suffered from a depressive episode at the time of the study. Depressive episodes were also often detected in people suffering from panic disorder (57% also suffered from depressive episodes, $x^2=69$, $p<0.01$). Furthermore, 36% of those suffering from generalized anxiety disorder suffered also from depressive episodes ($x^2=26$, $p<0.01$). Finally, a statistically significant association between depressive episodes and alcohol dependence was also detected ($x^2=9$, $p<0.01$).

Table 2. Prevalence of mental disorders.

	Males)		*Females*		*Total*	
	n	*(%)*	*n*	*(%)*	*n*	*(%)*
Lifetime						
Any disorder	132	29.0	132	29.6	264	29.3
Recurrent depression	16	3.5	40	8.9	56	6.2
Manic episode	4	0.8	6	1.3	10	1.1
2-year						
Dysthymia	16	3.5	12	2.6	28	3.1
1-year						
Alcohol use disorders	23	5	3	0.6	26	2.8
Drug use disorders	6	1.3	1	0.2	7	0.7
6-month						
Generalized anxiety disorder	29	6.3	40	8.9	69	7.6
Current						
Depressive episode	54	11.8	78	17.5	132	14.6
Social phobia	11	2.4	9	2.0	20	2.2
Panic disorder	13	2.8	34	7.6	47	5.2
Agoraphobia	8	1.7	21	4.7	29	3.2
Post-traumatic stress disorder	5	1 .0	4	0.8	9	1.0

Table 3. Prevalence of affective and anxiety disorders by age and marital status.

	Affective disorders		*Anxiety disorders*	
	n	*(%)*	*n*	*(%)*
Age				
18–29	33	17.7	37	19.8
30–39	30	18.2	35	21.2
40–49	27	18.9	23	16.1
50–59	13	10.4	18	14.5
60–74	38	16.6	36	15.7
75+	11	21.6	8	15.7
Marital status				
Single	40	17	42	17.8
Married	83	15.7	92	17.4
Divorced	15	27.8	32	5.9
Widowed	14	20	8	11.4

Discussion

The overall lifetime prevalence of mental disorders detected in Evia is slightly lower than the rate of 31.9% found in the French sample in the MHGP.[9] However, it is higher than the rates found in other Mediterranean countries, such as Italy, Spain, Israel and Lebanon by the European study of the Epidemiology of Mental Disorders (ESEMeD) and other WHO surveys, which ranged from 17.6% (Israel) to 25.8% (Lebanon).[16] Differences can be partly due to differences in case identification instruments: the WHO surveys used the Composite Diagnostic Interview (CIDI). The original validity study of MINI suggested that CIDI is as sensitive as the MINI, but more specific, thus likely to generating slightly lower prevalence figures.[13] However, the comparison between the French rates found by MINI in MHGP (31.9%) and those found by CIDI in ESEMeD (37.9%) shows an opposite trend.[9,16] Even if we take into account differences due to assessment tools, Evia lifetime rates of mental disorders are among the highest ever found in Western European countries.[16] Even the comparison with the old population survey realized in Athens[5] shows higher rates in Evia.

The comparison with other surveys on individual disorders rates should be made with caution, because of differences in measures, methodology and type of prevalence assessed. However, some common patterns can be detected. Anxiety disorders are the most prevalent diagnostic group, followed by affective disorders, as found in almost all epidemiological investigations worldwide.[16] Generally speaking, the rates of almost all disorders look high in Evia. If we look at the distribution and medians of all published European

one-year prevalence studies, we can see that for depression the interquartile prevalence range is 4.8–8% and for generalized anxiety disorders 0.8–2.2%.[7] In Evia the 6-month prevalence of generalized anxiety disorders is 7.6%, and the 2-week prevalence of depression is 14.6%.

The rates of alcohol use disorders require a close examination. In the ESEMeD study the one-year prevalence of DSM IV alcohol abuse and dependence in six European countries (Belgium, France, Germany, Italy, Netherlands, Spain) was on average 1.7% in males and 0.3% in females.[18] Evia figures for males are three times higher. A recent review examined general population studies findings on alcohol abuse from all over Europe,including countries not surveyed by ESEMeD, showing a one-year prevalence interquartile range 0.4–7.5% in males and 0.1–2.1% in females.[19] Therefore, Evia rates are close to the upper end estimates.

The accuracy of data about alcohol use disorders in epidemiological surveys have recently been a matter of concern, especially in relation to the low rates obtained in the ESEMeD.[20] It is possible that ICD-10 definition of alcohol harmful used is broader that DSM-IV definition of alcohol abuse, thus leading to higher estimates of alcohol disorders.[19] It is also possible that use of MINI produces higher rates than CIDI, as indicated by the 4.2% rate found in France by MHGP, in contrast with 0.7% rate found by ESEMeD in the same country.[9,21] However, this is not necessarily the case, because in Italy a survey carried out in Florence the MINI found low rates similar to ESEMeD findings in the Italian site.[22] A more substantial criticism has been raised on the capacity of detecting alcohol disorders in general psychiatric surveys, especially in southern European countries, where the social acceptance of alcohol consumption might discourage subjects from reporting their use.[20] Actually, a recent investigation using a technique specifically focused on alcohol use reported much higher rates in an area of Northern Italy.[23]

All in all, rates of alcohol use disorders are more likely to be biased low than high and this strengthen the public health importance of rates found in Evia.

The higher prevalence in women rather than men for affective and anxiety disorders, as well the higher rates of affective disorders in the elderly are in accordance with most findings from international studies.[18] It should be noted that there was not an assessment of organic psychiatric disorders, which are common in the elderly. Affective symptoms may be a consequence of organic disorders or may be comorbid with them. A recent Greek study assessed the prevalence and correlates of depression in a sample of people over the age of 60 in a rural town of Greece.[6] It found a prevalence of 27% for mild depression and 12% for moderate to severe depression, rates remarkably similar to the ones found in Evia. Cognitive impairment was strongly associated with increased risk for depression. The rapidly ageing of population in Greece will be therefore associated with an epidemiological pattern that will increase mental health care needs and must concern public health policymakers.

Regarding comorbid disorders, high comorbidity of generalized anxiety disorder and affective disorders was also found by a study in Greek psychiatric outpatients.[23] 65% of patients suffering from generalized anxiety disorder also had another diagnosis, with panic disorder, dysthymia and depression being the most frequent. The results of our study are also in accordance with the ESEMeD findings, which showed the same patterns.[25]

A relevant issue is the significant correlation between unemployment and substance use disorders, already noted in other countries.[20,27] The growing levels of unemployment of Evia in last years may therefore be a risk factor which could partly explain the high rates of such disorders.

Before drawing the conclusions, we should acknowledge the limitations of our study: First of all the use of quota sampling instead of probability sampling. Given the available resources (i.e. limited economic support of the study, limited time available) the quota method was chosen instead of other sampling methods considered to be more accurate; second, the lack of assessment of a number of diagnostic categories, such as psychoses, personality disorders, eating disorders, obsessive compulsive disorders, organic disorders and disorders in children and adolescents, third, the exclusion from the survey of people in institutions.

Despite such limitations, we think this study has important implications. The high prevalence of mental disorders found in Evia means that almost one third of the population will suffer from a clinically significant disorder in their lifetime. Therefore, the resulting social burden is very relevant and requires the inclusion of mental health care among the main goals of a pub-

lic health strategy. The high rates of mental disorders are related to demographic changes, such as the increasing size of elderly population, and probably to economic hardship and rise in unemployment. The lack of recent epidemiological data from other Greece makes it impossible to generalize the findings from the Evia to other areas of the country. The replication of this survey in areas with different levels of service provisions and different sociodemographic characteristics would give a relevant contribution to the implementation of a mental health policy at national level.

At local level, this study was conceived as a first step towards the planning of mental health care at local level through the detection of the size of mental health problems in the general population and was realized with the involvement of local authorities and the mobilization of local resources.

The data gathered points out the need for the implementation of specific interventions for vulnerable groups, including promotion of mental health, prevention, treatment and rehabilitation. Further research in the next years will have to show to what extent mental health services in Evia have been implemented, to investigate changes over time in prevalence rates and to study treated prevalence patterns with the goal of assessing access of population to mental health care.

Επιπολασμός ψυχικών διαταραχών σε ένα ελληνικό νησί

Σ. Στυλιανίδης,[1,2] Σ. Παντελίδου,[2] Π. Χόνδρος,[2] J.L. Roelandt,[3] A. Barbato[4]

[1]Τμήμα Ψυχολογίας, Πάντειο Πανεπιστήμιο Κοινωνικών και Πολιτικών Επιστημών, Αθήνα,
[2]Εταιρεία Περιφερειακής Ανάπτυξης και Ψυχικής Υγείας, Αθήνα,
[3]World Health Organization Collaborating Centre for Research and Training in Mental Health, Lille, France,
[4]Epidemiology and Social Psychiatry Unit, Mario Negri Institute for Pharmacological Research, Milan, Italy

Ψυχιατρική 2014, 25:19–26

Στην Ελλάδα, η ανάγκη για επιδημιολογικά δεδομένα με σκοπό τη δημιουργία κοινοτικών δομών ψυχικής υγείας έχει διαπιστωθεί από την έναρξη της ψυχιατρικής μεταρρύθμισης το 1983. Η έρευνα πραγματοποιήθηκε το 2005 από την Εταιρεία Περιφερειακής Ανάπτυξης και Ψυχικής Υγείας (ΕΠΑΨΥ) με την υποστήριξη της τοπικής αυτοδιοίκησης. Ήταν μέρος της έρευνας «Ψυχική υγεία στον γενικό πληθυσμό: εικόνες και πραγματικότητες» του Συνεργαζόμενου Ερευνητικού Κέντρου του Παγκόσμιου Οργανισμού Υγείας της Lille που πραγματοποιήθηκε σε διάφορες περιοχές στη Γαλλία και σε άλλες χώρες. Στόχος της μελέτης αυτής ήταν η εκτίμηση του επιπολασμού, του κοινωνικο-δημογραφικού προφίλ και της συνοσηρότητας των ψυχικών διαταραχών στον γενικό πληθυσμό της Εύβοιας. Ο πληθυσμός στόχος ήταν ο μη νοσηλευόμενος ενήλικος πληθυσμός της Εύβοιας (πληθυσμός: 230.000). Εκπαιδευμένοι ερευνητές χορήγησαν τη Mini International Neuropsychiatric Interview και ένα ερωτηματολόγιο κοινωνικο-δημογραφικών δεδομένων σε 900 κατοίκους της Εύβοιας. Χρησιμοποιήθηκε η μέθοδος της κατά στρώματα δειγματοληψίας (quota sampling). Ποσοστό 29% του πληθυσμού δήλωσαν ότι υποφέρουν από τουλάχιστον μία ψυχιατρική διαταραχή. Ο επιπολασμός των διαταραχών διάθεσης ήταν υψηλός, καθώς 17,5% των γυναικών και 14,6% των ανδρών πληρούσαν τα κριτήρια του διαγνωστικού εργαλείου. Οι συναισθηματικές και αγχώδεις διαταραχές εμφάνισαν υψηλότερη συχνότητα στις γυναίκες, με εξαίρεση τη δυσθυμία, την κοινωνική φοβία και το μετα-τραυματικό άγχος. Ο επιπολασμός των ψυχιατρικών διαταραχών στην Εύβοια ήταν πολύ υψηλότερος από τον αντίστοιχο που βρέθηκε σε άλλες επιδημιολογικές μελέτες στην Ελλάδα και ανάμεσα στις υψηλότερες στη Νότια Ευρώπη. Ο υψηλός επιπολασμός που καταγράφηκε στην Εύβοια δείχνει ότι το ένα τρίτο του πληθυσμού έχει υποφέρει κατά τη διάρκεια της ζωής του από κάποια ψυχιατρική διαταραχή. Αυτό συνεπάγεται υψηλή κοινωνική επιβάρυνση και τονίζεται η ανάγκη συμπερίληψης της ψυχικής υγείας στις πολιτικές και στρατηγικές της δημόσιας υγείας στη χώρα. Στη συζήτηση εξετάζονται η δυνατότητα σύγκρισης των

αποτελεσμάτων της έρευνας με αποτελέσματα άλλων ερευνών, οι μεθοδολογικοί περιορισμοί της έρευνας καθώς και τα υψηλά ποσοστά κατάχρησης αλκοόλ. Τα υψηλά ποσοστά που διαπιστώνονται συσχετίζονται με δημογραφικές αλλαγές, όπως το αυξανόμενο μέγεθος γηράσκοντος πληθυσμού, και πιθανότατα με οικονομικούς παράγοντες και την αύξηση της ανεργίας. Τα δεδομένα πρέπει να ληφθούν υπόψη για τον σχεδιασμό των υπηρεσιών και την ανάπτυξη δράσεων για ευπαθείς πληθυσμούς.

Λέξεις ευρετηρίου: Ψυχιατρική επιδημιολογία, κοινοτική έρευνα, επιπολασμός ψυχικές διαταραχές, Εύβοια, Ελλάς.

References

1. Thornicroft G. *Measuring mental health needs*. The Royal College of Psychiatrists, London, 2001
2. Karastergiou A, Mastrogianni A, Georgiadou E, Kotrotsios S, Mauratzotou K. The reform of the Greek mental health services. *J Ment Health* 2005, 14: 197–203
3. Mavreas V, Beis A, Mouyias A, Rigoni F, Lyketsos GC. Prevalence of Psychiatric disorders in Athens: a community study. *Soc Psychiatry* 1986, 21:172–181
4. Mavreas V, Kontea D, Dikeos E. Results from the Athens centre. In: Üstün TB, Sartorius N (eds) *Mental illness in general health care*. John Wiley & Sons Ltd, New York, 1995
5. Madianos M, Vlachonikolis I, Madianou D, Stefanis C. Prevalence of Psychological disorders in the Athens area: prediction of causal factors. *Acta Psychiatr Scand* 1985, 71:479–487
6. Papadopoulos FC, Petridou E, Argyropoulou S, Kontaxakis V, Dessypris N, Anastasiou A et al. Prevalence and correlates of depression in late life: a population based study from a rural Greek town. *Int J Geriatr Psychiatry* 2005, 20:350–357
7. Hellenic Manpower Organization, 2007 data extracted from www.oaed.gr, 2009
8. Bellamy V, Roelandt JL, Caria A. Premiers résultats de l' enqukte santé mentale en population générale: images et réalités. *Inform Psychiatr* 2005, 81:295–304
9. Castelain JP. Prévalence des troubles psychiques et caractéristiques socio-ιconomiques: Eléments pour une analyse de l' exclusion et de la précarité. *Inform Psychiatr* 2005, 81:351–356
10. Goodfellow B, Calandreau F, Roelandt JL. Psychiatric Epidemiology in New Caledonia. *Int J Ment Health* 2010, 39:68–81
11. Owen L, McNeil A, Callum C. Trends in smoking during pregnancy in England, 1992–1997: Quota sampling surveys. *BMJ* 1998, 317:728
12. Cumming RG. Is probability sampling always better? A comparison of results from a quota and a probability sample survey. *Community Health Stud* 1990, 14:132–137
13. Lecrubier Y, Sheehan D, Weiller E, Amorim P, Bonora I, Sheehan KH et al. The Mini International Neuropsychiatric Interview (MINI) a short diagnostic interview: Reliability and validity according to the CIDI. *Eur Psychiat* 1997, 12:224–231
14. Papadimitriou G, Berati S, Matsoukas T, Soldatos KP. *Mini International Neuropsychiatric Interview*. Greek Version 5.0.0, 2005
15. International Labour Organization. *International Standard Classification of Occupations* (ISCO-88). ILO, Geneva, 1991
16. Kessler RC, Aguilar-Gaxiola S, Alonso J, Chatterji S, Lee S, Ormel J et al. The global burden of mental disorders: An update from the WHO World Mental Health surveys. *Epidemiol Psichiatr Soc* 2009, 18:23–33
17. Wittchen HU, Jacobi F. Size and burden of mental disorders in Europe. A critical review and appraisal of 27 studies. *Eur Neuropsychopharmacol* 2005, 15:357–376
18. Alonso J, Angermeyer MC, Bernert S, Bruffaerts R, Brugha TS, Bryson H et al. ESEMeD/MHEDEA 2000 Investigators, European Study of the Epidemiology of Mental Disorders (ESEMeD) Project. Prevalence of mental disorders in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatr Scand* 2004, 104:21–27
19. Rehm J, Room R, van den Brink W, Jacobi F. Alcohol use disorders in EU countries and Norway: An overview of the epidemiology. *Eur Neuropsychopharmacol* 2006, 15:377–388
20. de Girolamo G. Polidori G, Morosini P, Scarpino V, Reda V, Serra G et al. Prevalence of common mental disorders in Italy. Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD). *Soc Psychiatry Psychiatr Epidemiol* 2006, 41:853-861
21. Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, Kovess V, Lepine JP et al. WHO World Mental Health Survey Consortium. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA* 2004, 291:2581–2590
22. Faravelli C, Abrardi L, Bartolozzi D, Cecchi C, Cosci F, D' Adamo D et al. The Sesto Fiorentino Study: Point and One-Year Prevalences of Psychiatric Disorders in an Italian Community Sample Using Clinical Interviewers. *Psychother Psychosom* 2004, 73:226–234
23. Ponzio M, Perotti PG, Monti MC, Montomoli C, San Bartolomeo P, Iannello G et al. Prevalence estimates of alcohol related problems in an area of northern Italy using the capture-recapture method. *Eur J Publ Health* 2010, 20:576–581
24. Garyfallos G, Adamopoulou A, Karastergiou A, Voikli M, Milis V, Donias S et al. Psychiatric comorbidity in Greek patients with generalized anxiety disorder. *Psychopathology* 1999, 32:308–318
25. Alonso J, Angermeyer MC, Bernert S, Bruffaerts R, Brugha TS, Bryson H et al. ESEMeD/MHEDEA 2000 Investigators, European Study of the Epidemiology of Mental Disorders (ESEMeD) Project. 12-Month comorbidity patterns and associated factors in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. *Acta Psychiatr Scand* 2004, 109:28–37
26. HaroJM, Palacvn C, Vilagut G, Martvnez M, Bernal M, Luque I et al. Grupo ESEMeD-Espapa. Prevalencia de los trastornos mentales y factores asociados: resultados del studio ESEMeD-Espapa. *Med Clin* 2006, 126:445–451

Corresponding author: S. Stylianidis, Associate Professor of Social Psychiatry, Department of Psychology, Panteion University of Social and Political Sciences, 61–63 Grammou street, GR-151 24 Athens, Greece
e-mail: epapsy@otenet.gr

Research article
Ερευνητική εργασία

Cognitive impairments and psychopathological parameters in patients of the schizophrenic spectrum

M.-I.V. Kontaxaki, E. Kattoulas, N. Smyrnis, N.C. Stefanis

1st Department of Psychiatry, Athens University Medical School, Eginition Hospital, Athens, Greece

Psychiatriki 2014, 25:27–38

Cognitive impairment is a core feature of schizophrenia and it is considered by many researchers as one of the dimensional components of the disorder. Cognitive dysfunction occurs in 85% of schizophrenic patients and it is negatively associated with the outcome of the disorder, the psychosocial functioning of the patients, and non-compliance with treatment. Many different cognitive domains are impaired in schizophrenia, such as attention, memory, executive functions and speech. Nowadays, it is argued that apart from clinical heterogeneity of schizophrenia, there is probable heterogeneity in the accompanying neurocognitive dysfunction. Recent studies for cognitive dysfunction in schizophrenia employ computerized assessment batteries of cognitive tests, designed to assess specific cognitive impairments. Computerized cognitive testing permits for more detailed data collection (e.g. precise timing scores of responses), eliminates researcher's measurement errors and bias, assists the manipulation of data collected, and improves reliability of measurements through standardized data collection methods. The aims of the present study are: the comparison of cognitive performance of our sample of patients and that of healthy controls, on different specific cognitive tests, and the testing for possible association between patients' psychopathological symptoms and specific cognitive impairments, using the Cogtest computerized cognitive assessment battery. 71 male inpatients diagnosed with schizophrenia or other psychotic spectrum disorders (mean=30.23±7.71 years of age), admitted in a psychiatric unit of the First Department of Psychiatry, Athens University Medical School, Eginition Hospital (continuous admissions) were studied. Patients were excluded from the study if they suffered from severe neurological conditions, severe visual or hearing impairment, mental retardation, or if they abused alcohol or drugs. The patients' diagnoses were based on the semi-structured diagnostic interview "Diagnostic Interview for Psychosis" (DIP) and were clinically confirmed by two independent expert psychiatrists, according to the criteria of DSM-IVTM. Our healthy control group consisted of 20 healthy male participants (mean=31.65±5.90 years of age), who met the same inclusion criteria for the study as the patient group, as well as the same exclusion criteria from the study, having no

history of psychiatric disorders. All statistical analyses were conducted using the statistical package SPSS.17. According to our results, healthy controls cognitively outperform our patient sample in all cognitive tests, with the differences between performances being statistically significant. Results concerning the association between psychotic symptoms and cognitive deficits of our patients indicated that hallucinations, highly organized delusions, persecutory delusions, agitation, catatonia and inappropriate affect did not associate with any subtype of cognitive deficit. Blunted affect associated significantly with response inhibition ("GoNoGo test", p=0.007), and poor speech associated significantly with declarative memory of faces ("FMT test", p=0.002). Moreover, psychomotor ability (non-dominant hand) associated significantly with generalized delusions ("TST test", p=0.033), and with constricted affect ("TST test", p=0.026). Furthermore, there was a tendency towards significance association between persecutory delusions and executive function ("CPT test", p=0.053), inappropriate affect and declarative face memory ("FMT test", p=0.056), and psychomotor ability and poor speech (p=0.086).

Key words: Schizophrenic spectrum, psychopathology, cognitive impairments.

Introduction

Schizophrenia is one of the most severe and chronic psychiatric disorders that affects 0.4–1.3% of the general population, throughout lifetime. In most cases (30–40%), the onset of the disorder occurs in early adult life (18–25 years of age). The incidence rate of schizophrenia is relatively equivalent for both sexes, with women demonstrating a later onset (3–4 years later), and an improved social functionality.[1–4]

Predisposing and precipitating factors for schizophrenia include genetic predisposition, toxic states relating to CNS dysfunction, pregnancy and childbirth complications, negative/stressful life events, and various environmental factors (e.g. prolonged stress, drug use, etc.). The interactions, as well as the additive effect of the above factors appear to trigger the onset of the disorder.[5,6]

It is widely accepted that the outcome of schizophrenia is varied.[7] Up to 50% of the patients experience social and functional decline after the first psychotic episode, whereas 16% to 40% of patients recover into their premorbid level of functioning. Nowadays, many researchers argue that schizophrenia is a heterogenic clinical manifestation.[8–10]

Cognitive impairment is a core feature of schizophrenia and it is considered by many researchers as one of the dimensional components of the disorder.[10,11] Findings from recent studies indicate that cognitive functioning in patients with schizophrenia is impaired compared to that of healthy controls; it is reported that the difference in performance of the two groups is one to two standard deviations, demonstrating statistical significance.[12–14] Cognitive dysfunction occurs in 85% of schizophrenic patients and it is negatively associated with the outcome of the disorder,[15] the psychosocial functioning of the patients, and non-compliance with treatment.[16,17] Many different cognitive domains are impaired in schizophrenia, such as attention, memory, executive functions and speech.[18,19] Different types of tests have been used to assess cognitive impairment, such as the "Wisconsin Card Sorting Test", the "Stroop Test", the "Verbal Fluency Test", the "Continuous Performance Test", or the "Tower of Hanoi Test". The great variety of assessment tools for cognitive dysfunction prevents the rise of conclusive findings often leading to contradictory results.[13,20]

Nowadays, it is argued that apart from clinical heterogeneity of schizophrenia, there is probable heterogeneity in the accompanying neurocognitive dysfunction.[21] Most association studies on the subject adopt the dimensional categorization of symptoms into positive, negative or disorganized symptoms. There are considerably fewer studies investigating the associations of cognitive deficits with more specific psychopathological manifestations.[22,23] Negative symptoms are frequently summarized into one variable, expressing many different psychopathological symptoms. Cognitive dysfunctions are also summarized, by some studies, into one variable, expressing performance in many different cognitive domains.

Recent studies for cognitive dysfunction in schizophrenia employ computerized assessment batteries of cognitive tests, designed to assess specific cognitive impairments.[24,25] Computerized cognitive testing permits for more detailed data collection (e.g. precise timing scores of responses), eliminates researcher's measurement errors and bias, assists the manipulation of data collected, and improves reliability of measurements through standardized data collection methods. Cogtest Console is a computerized cognitive assessment battery, specialized in testing cognitive domains that are frequently impaired in psychotic disorders, consisting of tests standardized in adequate sample sizes of patients and healthy controls.[24,26,27]

The aims of the present study are: (a) The comparison of cognitive performance of our sample of patients and that of healthy controls, on different specific cognitive tests, and (b) To test for possible association between patients' psychopathological symptoms and specific cognitive impairments.

Material and method

a. Participants

Seventy one male inpatients diagnosed with schizophrenia or other psychotic spectrum disorders, admitted in a psychiatric unit of the First Department of Psychiatry, Athens University Medical School, Eginition Hospital (continuous admissions) were studied. Patients' age varied from 18 to 51 years of age (mean=30.23±7.71 years of age). Patients were excluded from the study if they suffered from severe neurological conditions, severe visual or hearing impairment, mental retardation, or if they had abused alcohol or drugs during the past two months.

The patients' diagnoses were based on the semi-structured diagnostic interview "Diagnostic Interview for Psychosis" (DIP).[28] The diagnoses were clinically confirmed by two independent expert psychiatrists, according to the criteria of DSM-IV™.[29] 48 (67.6%) patients were diagnosed with "schizophrenia", 14 (19.8%) patients with "psychosis not otherwise specified", 5 (7.0%) patients with "schizoaffective disorder", and finally 4 (5.6%) patients with "schizophreniform disorder". The mean age of illness onset (positive psychotic symptoms) for our sample was 21.11 (±5.94) years of age. The mean age of first psychiatric assessment and psychiatric medication treatment for our sample was 22.89 (±5.86) years of age.

The patients were clinically stabilized with adequate antipsychotic medication treatment before the study. 52 (73.2%) patients received atypical antipsychotic treatment, 10 (14.1%) received typical antipsychotic treatment, and 9 (12.7%) received a combination of atypical and typical antipsychotic medication. Furthermore, 19 (26.7%) patients of our sample received clozapine, 12 (16.9%) received anticholinergics, 8 (11.3%) received mood stabilizers, and 8 (11.3%) received antidepressants (SSRIs). Patients were benzodiazepines free for a week before cognitive assessment.

We recruited a control group of 20 healthy male participants, who volunteered to participate in the study with no monetary reward. Our healthy control group consisted of students, hospital employees and members of the surrounding community. The participants' control group met the same inclusion criteria for the study as the patient group, as well as the same exclusion criteria from the study, having no history of psychiatric disorders. The age of healthy controls varied from 18 to 45 years of age (mean=31.65±5.90 years of age).

Participants in our control group were recruited according to frequency matching sampling design. The patient group and the control group were matched for sex (all males), age, education years, marital status, and handedness. All participants received detailed information about the purpose of the study and their written informed consent was obtained. The study received the approval of the Ethics Committee of Eginition Hospital. Table 1 shows the socio-demographic characteristics of our patients and control samples, as well as the statistics of our matching procedure. There were no statistically significant differences between patients and controls in all socio-demographic parameters.

b. Materials

The following instruments were administered:

1. A standardized questionnaire for the assessment of patients' demographic and clinical parameters (e.g. age, marital status, education years, age of symptomatology onset, age at first psychiatric medication treatment, etc.).
2. The diagnostic interview "Diagnostic Interview for Psychosis" (DIP).[28] This is a semi-structured inter-

Table 1. Comparison of patients and controls in socio-demographic parameters

Socio-demographic parameters		*Patients (n=71)*		*Controls (n=20)*		*Pearson x^2*	*Statistical Significance*
		n	*(%)*	*n*	*(%)*	*p*	
Age (years)	≤25	20	(28.2)	4	(20.0)	0.719	NS
	26–35	36	(50.7)	12	(60.0)		
	≥36	15	(21.1)	4	(20.0)		
Education (years)	≤6	3	(4.2)	0	(0.0)	0.346[1]	NS
	7–12	34	(47.9)	7	(35.0)		
	≥13	34	(47.9)	13	(65.0)		
Marital status	(Single)	62	(100.0)	18	(90.0)	0.057[2]	NS
Handedness	(Right)	68	(95.8)	18	(90.0)	0.582[2]	NS

1. Pearson x^2 Test (exact significance).
2. Fisher's Exact Test.

view consisting of 97 questions, reinforcing clinical diagnosis with detailed reporting of psychopathological parameters, chronicity and severity (e.g. depressive symptoms, manic symptoms, hallucinations, delusions, drug/alcohol abuse, subjective thought disorder, behavior and speech disturbances, illness course and duration). "DIP" also examines level of functioning, family psychiatric history, insight, and response to medication. "DIP" was administered by an expert psychiatrist. For the present study, we included the "DIP" information that concerned the presence of the following symptoms: hallucinations, generalized delusions, delusions highly organized, persecutory delusions, agitation, catatonia, constricted affect, blunted affect, inappropriate affect, and thought/speech disturbance.

3. The psychosis specialized cognitive assessment "Cogtest Console" battery, exhibiting standardized, computerized data collection and management.[24,26,27] We administered seven cognitive tests to our participants, assessing different cognitive domains. These cognitive domains were: sustained attention ("AX-CPT" test), declarative face memory ("FMT" test), response inhibition ("GoNoGo" test), working memory ("SWM" test), executive function ("CPT" test and "STDT" test), and psychomotor speed ("TST" test). Cognitive assessment for each participant lasted approximately 90 minutes with a 15-minute break, between the fourth and the fifth cognitive test. Cognitive tests were administered by an expert and especially trained psychologist (M-E.K.), in the same order every time.

The procedure, the goal and the scoring of each cognitive test is presented in detail below.

The "Spatial Working Memory Test" (SWM-test) is a working memory test. The overall goal of the task is to determine how accurately participants recall the spatial locations of briefly presented visual targets. The task involves showing the targets at various positions on a display device, and having subjects touch the screen at the location where they recall the target had appeared. Between presentation and recall of the target, a number of distracters of variable location appear, which need to be actively touched by the subject. Scoring on this test is the mean distance (number of "pixels"), between the initial target and the participants' answer.

The "Face Memory Test" (FMT-test) is a declarative face memory test. Participants are presented with a series of pictures of human faces (constructed using a computer algorithm that assembles individual features into composites). The study phase of the test involves viewing 20 faces for 3 seconds each, followed by the recognition phase of the test, where each one of the 20 original faces is paired with a distracter face, one randomly selected from a set that was not seen before. The participant has to choose the faces that he/she saw before. Then the procedure is repeated with new faces and new distracters, and the scoring on this test is the mean percentage of correct recognitions of all faces.

The "Competing Programs Test" (CPT-test) is an executive functions test. Participants should learn to respond to one contingency (by pressing a button on the same side as the stimulus), and then to a changed contingency (by pressing on the side

opposite to the stimulus). Participants should accomplish that solely from the trial-by-trial feedback, without any explicit instruction. The percentage of correct answers when the participant should imitate contingency and the percentage of correct answers when the participant should reverse their selection, are the two measurements of performance in this test. This test results in a strict measurement of executive function, since the test automatically terminates the procedure after a series of wrong answers, with a pass/fail scoring.

The "Strategic Target Detection Test" (STDT-test) is also an executive functions test. In this test, the participant touches the target stimuli (shapes) directly on the touch screen. The participant is not told in advance which of the stimuli is the "target", and should learn which the correct target is by choosing one of the stimuli and observing feedback that indicates whether the choice was right or wrong. The target stimulus changes after a number of consecutive correct responses. The scoring on this test is the percentage of correct choices out of the total choices of the participant.

The "Continuous Performance Test – AX Version" (AX-CPT-test) is a sustained attention test. The participant is instructed to respond with a right mouse press whenever the stimulus is an X that was preceded by an A (target stimuli). The left mouse button is pressed for all other stimuli, including an A, an X that was not preceded by an A, and any other letter (non-target stimuli). The test consists of 150 trial stimuli presented according to a randomization algorithm, and the procedure is especially cognitively demanding. The percentage of correct choices of target stimuli and the percentage of correct choices of non-target stimuli are the two measurements of performance in this test.

The "Go-No-Go Test" (GONOGO test) is a response inhibition test. Participants are asked to respond and pick the correct choice, based on which stimulus is filled with green color "go" stimulus, while the other stimulus is blank. In some trials, however, one of the stimuli is colored red, which is a signal not to respond at all ("no-go" stimulus). The frequency of "go" stimuli relative to "no-go" stimuli is 80%, which maintains a bias and tendency to respond on every trial. The percentage of correct non-choices when the stimuli should not have been chosen is the scoring of this test.

Finally, the "Tapping Speed Test" (TST-test) is a psychomotor speed test. 95,8% of our patients sample was right-handed. The mean reaction times, measured in msec, for each hand, are the two measurements of performance in this test. In the present study, we incorporated in our analysis only the reaction time of the non-dominant hand, since, in the literature on the subject, there were references of practice effects in the repetitive procedure of this test.[30]

c. Statistical analysis

Continuous and normally distributed variables are presented as mean±standard deviation (sd) while continuous variables with asymmetric distribution are reported as median and minimum-maximum (min-max) values. Categorical data are presented as counts and percentages. Testing of normality assumption was made using the Kolmogorov-Smirnov test.

The univariate associations between categorical variables were evaluated using Pearson x^2 test whether in cases where there were not enough data in the subcategories for testing, Fisher's exact test or Pearson x^2 test (exact significance) were employed for 2×2 or larger tables respectively.

Our first research hypothesis was that there is a statistically significant difference in performance between the group of psychotic patients and that of healthy controls, in every cognitive domain tested (e.g. sustained attention, declarative face memory, etc.). The primary research hypothesis of the study was to reveal the associations between different types of cognitive dysfunction and different psychopathological symptoms in our patient group.

For the comparison of cognitive functionality between cases and controls or considering the absence or the presence of the various psychotic symptoms, t-test or Mann-Whitney test were employed, depending on the data distribution each time. In cases that t-test was used but equality of variances of the two comparing groups could not be assumed, according to Levene's test, the adjusted p-value is reported. The cut-off point for statistical significance was set at 0.05 for all analyses.

All statistical analyses were conducted using the statistical package SPSS 17 (Statistical Package for the Social Sciences).

Results

The statistical comparison between the group of patients and healthy controls, for every cognitive test, are presented in table 2. Statistical analysis was conducted for more than one performance measure for each cognitive test (e.g. target stimuli response, non-target stimuli response, etc.), where this was possible. According to our results, healthy controls cognitively outperform our patient sample in all cognitive tests, with the differences between performances being statistically significant.

Results concerning the association between psychotic symptoms and cognitive deficits of our patients are presented in table 3. Table 3 includes only the psychotic symptoms that reveal significant associations, or a tendency towards significant associations with cognitive deficits.

Hallucinations, highly organized delusions, persecutory delusions, agitation, catatonia and inappropriate affect did not associate with any subtype of cognitive deficit. Blunted affect associated significantly with response inhibition ("GoNoGo test", p=0.007), and poor speech associated significantly with declarative memory of faces ("FMT test", p=0.002). Moreover, psychomotor ability (TST test) associated significantly with generalized delusions (p=0.033 for the non-dominant hand), and with constricted affect (p=0.026, for the non-dominant hand).

Furthermore, there was an indication of tendencies towards statistical significance between different psychotic symptoms and cognitive deficits. Specifically, there was a tendency towards significance association between persecutory delusions and executive function ("CPT test", p=0.053), inappropriate affect and declarative face memory ("FMT test", p=0.056), and psychomotor ability and poor speech (p=0.086, non-dominant hand).

Discussion

According to the findings of the present study, all different cognitive domains appear to be impaired in psychotic patients compared to healthy controls. Sustained attention, declarative memory of faces, spatial working memory, psychomotor speed, response inhibition and other executive functions, all appear to be significantly impaired in psychotic patients compared to our healthy participants.

Several meta-analytic studies, using different methodologies and instruments, have reported summarized findings of research investigating the role of cognitive impairment in psychotic patients versus healthy controls. Findings of early meta-analytic studies (1998–2008) focused on associations of verbal memory impairment among patients with psychotic disorders versus controls.[14,31–33] Furthermore, according to early meta-analytic studies there was evidence of an association between

Table 2. Comparison of performance on cognitive tests for the patients and the healthy controls.

Cognitive functionality	*Patients*			*Controls*			
	n	*mean (median)**	*sd (min-max)**	*n*	*mean (median)*	*sd (min-max)*	*t-test p*
AXCPT proportion correct target	66	0.73	0.22	20	0.92	0.10	<0.001[1]
AXCPT proportion correct non-target	66	(*0.96*)	(*0.36–1.00*)	20	(*0.98*)	(*0.93–1.00*)	0.001[2]
GONOGO proportion correct	65	(*1.00*)	(*0.78–1.00*)	20	(*1.00*)	(*0.98–1.00*)	0.006[2]
FMT proportion correct	71	0.68	0.13	20	0.82	0.09	<0.001
SWM mean pixels	68	83.9	45.4	20	46.3	13.4	<0.001[1]
STDT proportion correct	66	0.85	0.07	20	0.89	0.04	0.013
CPT reversal proportion correct	31	0.56	0.21	5	0.87	0.08	<0.001[1]
CPT imitation proportion correct	31	0.59	0.20	5	0.90	0.07	<0.001[1]
TST mean intertap right hand time (msec)	68	(*207*)	(*135–1062*)	20	(*155*)	(*141–179*)	<0.001[2]
TST mean intertap left hand time (msec)	68	(*208*)	(*133–696*)	20	(*166*)	(*141–217*)	<0.001[2]

1. t-test: equality of variances not assumed (Levene's Test for Equality of Variances).
2. Mann-Whitney Test.
* When data were normally distributed mean/sd are reported, when data were not normally distributed median/min-max values are reported.

Table 3. Comparison of performance on cognitive tests for the patients and the healthy controls.

		Symptom's presence						*Statistical significance*
		No			*Yes*			
Psychotic symptoms	*Cognitive functionality*	n	*mean (median or %)*	*sd (min-max)*	*n*	*mean (median or %)*	*sd (min-max)*	*p*
Delusions generalized	AXCPT	34	0.82	0.16	30	0.84	0.15	0.452[4]
	CPT (passed)	15	(*39.5%*)		15	(*48.4%*)		0.458[2]
	FMT	38	0.66	0.14	31	0.71	0.12	0.146[4]
	GONOGO	34	(*1.00*)	(*0.75–1.00*)	30	(*1.00*)	(*0.90–1.00*)	0.590[1]
	SWM	36	91.0	53.9	31	75.9	33.0	0.178[4]
	STDT	34	0.84	0.08	31	0.86	0.05	0.112[4]
	TST (non-dom)	36	(*230*)	(*154–696*)	31	(*199*)	(*133–307*)	**0.033**[1]
Delusions persecutory	AXCPT	36	0.80	0.18	28	0.86	0.11	0.110[3]
	CPT (passed)	13	(*33.3%*)		17	(56.7%)		0.053[2]
	FMT	39	0.68	0.15	30	0.69	0.11	0.650[4]
	GONOGO	35	(*1.00*)	(*0.90–1.00*)	29	(1.00)	(0.75–1.00)	0.931[1]
	SWM	38	85.0	53.5	29	82.8	33.8	0.848[4]
	STDT	36	0.85	0.08	29	0.85	0.05	0.922[4]
	TST (non-dom)	38	(*218*)	(*133–696*)	29	(*206*)	(*159–358*)	0.672[1]
Constricted affect	AXCPT	28	0.83	0.15	36	0.83	0.17	0.963[4]
	CPT (passed)	12	(*40.0%*)		18	(*46.2%*)		0.609[2]
	FMT	30	0.69	0.13	39	0.68	0.13	0.786[4]
	GONOGO	27	(*1.00*)	(*0.75–1.00*)	37	(*1.00*)	(*0.90–1.00*)	0.734[1]
	SWM	29	87.2	53.4	38	81.6	39.5	0.625[4]
	STDT	29	0.85	0.07	36	0.85	0.07	0.903[4]
	TST (non-dom)	29	(*237*)	(*172–696*)	38	(*200*)	(*133–485*)	**0.026**[1]
Blunted affect	AXCPT	30	0.85	0.12	34	0.81	0.18	0.279[3]
	CPT (passed)	16	(*51.6%*)		14	(*36.8%*)		0.218[2]
	FMT	31	0.71	0.13	38	0.67	0.14	0.212[4]
	GONOGO	31	(*1.00*)	(*0.95–1.00*)	33	(*1.00*)	(*0.75–1.00*)	**0.007**[1]
	SWM	31	75.8	32.3	36	91.1	54.2	0.175[4]
	STDT	30	0.86	0.06	35	0.84	0.07	0.355[4]
	TST (non-dom)	31	(*201*)	(*155–358*)	36	(*228*)	(*133–696*)	0.458[1]
Inappropriate affect	AXCPT	42	0.85	0.13	22	0.78	0.20	0.144[3]
	CPT (passed)	22	(*50.0%*)		8	(*32.0%*)		0.147[2]
	FMT	44	0.71	0.11	25	0.65	0.15	0.056[4]
	GONOGO	41	(*1.00*)	(*0.90–1.00*)	23	(*1.00*)	(*0.75–1.00*)	0.136[1]
	SWM	44	77.9	49.8	23	95.8	34.8	0.129[4]
	STDT	42	0.85	0.07	23	0.85	0.07	0.852[4]
	TST (non-dom)	44	(*208*)	(*133–696*)	23	(*227*)	(*162–358*)	0.822[1]
Poor speech	AXCPT	24	0.87	0.13	33	0.80	0.18	0.119[3]
	CPT (passed)	13	(*52.0%*)		15	(*41.7%*)		0.426[2]
	FMT	25	0.75	0.11	36	0.64	0.14	**0.002**[4]
	GONOGO	25	(*1.00*)	(*0.95–1.00*)	32	(*1.00*)	(*0.75–1.00*)	0.582[1]
	SWM	25	83.1	33.5	34	79.0	35.6	0.649[4]
	STDT	24	0.87	0.06	33	0.85	0.06	0.165[4]
	TST (non-dom)	25	205	36	34	229	63	0.086[4]

1. Mann-Whitney Test.
2. Pearson x^2 Test.
3. t-test: equality of variances not assumed (Levene's Test for Equality of Variances).
4. t-test.

both working memory and episodic memory to psychotic disorders.[14,34,35] Other early meta-analytic studies indicated the moderate association of psychotic disorders and other cognitive functions, like sustained attention and executive functions.[14] A couple of most recent meta-analytic studies confirm the association between psychotic disorders and general memory impairment.[13,36] Moreover, other recent studies report patients' impairment in declarative memory of faces, arguing that face recognition may be an independent endophenotype of schizophrenia.[37,38] Additionally, recent mela-analytic studies demonstrate that associations between psychotic disorders and attention or executive functions impairments are also important.[36]

According to the results of our study, psychotic patients are more cognitively impaired when they suffer from symptoms such as blunted affect and poor speech. Additionally, cognitively impaired patients tend to suffer more often from inappropriate affect (p=0.056); all symptoms relating to the negative or disorganization psychopathology. Our findings are in line with the previous literature on the subject. Patients with negative or disorganized psychotic symptoms have been reported to be more cognitively impaired compared to patients exhibiting positive psychotic symptoms.[13,39] Moreover, disorganized symptoms, as well as other negative symptoms of psychotic disorders, demonstrate stronger associations with neurocognitive functioning compared to symptoms of perceptual distortion.[40]

In a more detailed review of our findings, every cognitive domain should be thoroughly analyzed. In the present study, findings indicate that impairment in declarative memory of faces is associated significantly with the symptom of poor speech, and secondly –through a statistical tendency– with the symptom of inappropriate affect. Both these symptoms are considered to belong in the subcategory of negative/disorganized psychotic symptomatology. Other studies have also indicated that the poor speech symptom is associated mostly with declarative memory and to a lesser extent with working memory, as it is the case in the present study.[41]

Furthermore, schizophrenia is reported to associate with recognition memory impairment, as well as with declarative memory impairment.[42] The findings of the present study support that assumption. The face memory test used in the present study is also a test of recognition memory, not a free recall memory test, and face memory is considered part of the declarative memory construct.

Our findings suggest that patients who exhibit blunted affect symptomatology also exhibit response inhibition impairment. The response inhibition cognitive component has been theoretically incorporated into the executive functions cognitive domain by many researchers.[43] According to the literature on the subject, psychotic patients were found to be cognitively impaired considering the executive functions performance.[44] The presence of negative symptomatology in psychotic patients has been reported in the past as a prognostic factor of executive functions impairments.[45,46] Additionally, affective blunting has been found to correlate with cognitive flexibility, another executive function component.[47] Our findings also imply, in the form of a statistical tendency, that patients who exhibit persecutory delusions outperform all other psychotic patients on a cognitively demanding executive functions test (CPT). As it has been previously reported in the literature, persecutory delusions characterize the cognitively intact paranoid schizophrenia subtype.[48,49]

The results of the present study appear to be inconclusive considering the association of psychomotor speed and psychotic symptomatology. Patients who exhibit generalized delusions, as well as patients who exhibit constricted affect, were found to exhibit significantly more intact psychomotor skills. On the other hand, patients who exhibit speech/thought disturbances were found to also exhibit psychomotor impairment approaching statistical significance. The association between psychotic symptomatology and psychomotor speed has also revealed inconclusive evidence in the previous literature. Withdrawal-retardation symptoms were found to be correlated with performance on psychomotor speed tasks.[50,51] On the other hand, positive symptoms have also been reported to correlate significantly with psychomotor speed.[52]

According to the findings of the present study, working memory deficit does not correlate significantly with any specific psychotic symptom. The literature review on the subject reveals inconclusive findings. Some studies report that working memory deficits are generalized in patients with predominantly positive or predominantly negative psychotic

symptoms.[46] On the contrary, other studies indicate that working memory deficits associate mostly with the negative psychotic symptoms.[53,54]

According to the results of the present study, performance of our patient group in the sustained attention test does not correlate significantly with any specific psychotic symptom. It has been previously reported that negative psychotic symptoms associate with impaired performance in sustained attention,[42] although, this association between negative symptoms and sustained attention cannot be confirmed by our results. However, it is worth noting that our study focuses on specific symptoms and not on clusters of symptoms, as previous studies. Moreover, other studies used different instruments to assess attention performance.

Our study had some limitations. Our findings could not be generalized in both sexes, since our sample consists exclusively of male patients. A second limitation is that of the possible effects of the therapeutic antipsychotic dose medication of our patients' sample. However, it should be noted that all patients were on clinically stable condition and were free of benzodiazepines medication. Lastly, our sample size was relatively limited. A bigger sample size would allow to statistically investigate even more detailed symptomatology and might help strong statistical tendencies to convert to statistical significances.

Further investigation of the mechanisms and associations underlying cognitive dysfunction in schizophrenia spectrum disorders would be useful, since improved cognitive performance is reported to associate with improved functionality and clinical state for patients with schizophrenia, as well as for patients with schizoaffective disorder.[55] Moreover, cognitive dysfunction appears to affect functionality of psychotic patients in everyday life, social functionality, quality of life, as well as the outcome of disorders.[56] Many studies point out the importance of cognitive dysfunction in the understanding of neuroanatomical substrate of psychotic disorders,[57] as well as its importance as a therapeutic target.[58]

Υποκατηγορίες γνωσιακών ελλειμμάτων και ψυχοπαθολογικές παράμετροι σε ασθενείς του σχιζοφρενικού φάσματος

Μ.-Ε.Β. Κονταξάκη, Ε. Κάττουλας, Ν. Σμυρνής, Ν.Κ. Στεφανής

Α΄ Ψυχιατρική Κλινική Πανεπιστημίου Αθηνών, Αιγινήτειο Νοσοκομείο, Αθήνα

Ψυχιατρική 2014, 25:27–38

Η γνωσιακή δυσλειτουργία αποτελεί πυρηνικό χαρακτηριστικό της σχιζοφρενικής διαταραχής ενώ από πολλούς ερευνητές θεωρείται μια από τις διαστασιακές της συνιστώσες. Εμφανίζεται περίπου σε ποσοστό 85% των ασθενών και σχετίζεται αρνητικά με την έκβαση της διαταραχής, την ψυχοκοινωνική λειτουργικότητα του ασθενούς, όπως και τη μη συμμόρφωση στη θεραπεία. Στη σχιζοφρένεια διάφορες πλευρές της γνωσιακής λειτουργίας δυσλειτουργούν, όπως η προσοχή, η μνήμη, οι εκτελεστικές λειτουργίες, ο λόγος. Σήμερα υποστηρίζεται ότι εκτός από την κλινική ετερογένεια της σχιζοφρένειας υπάρχει και ετερογένεια όσον αφορά στη νευρογνωσιακή δυσλειτουργία. Οι σύγχρονες μελέτες για τη γνωσιακή δυσλειτουργία στη σχιζοφρένεια χρησιμοποιούν ηλεκτρονικές μπαταρίες δοκιμασιών των επιμέρους γνωσιακών λειτουργιών. Οι ηλεκτρονικές γνωσιακές δοκιμασίες παρουσιάζουν μεγαλύτερες δυνατότητες στη συλλογή λεπτομερών δεδο-

μένων, περιορίζουν την επιρροή και τα πιθανά λάθη του εξεταστή εφόσον είναι πλήρως τυποποιημένες και διευκολύνουν τη συλλογή και την επαλήθευση των ερευνητικών δεδομένων. Σκοποί της παρούσας μελέτης είναι: η σύγκριση σε επιμέρους γνωσιακές δοκιμασίες των ασθενών της μελέτης και υγιών μαρτύρων και, η αναζήτηση συσχετίσεων μεταξύ ειδικών ψυχοπαθολογικών συμπτωμάτων και υποκατηγοριών γνωσιακών ελλειμμάτων των ασθενών της μελέτης, χρησιμοποιώντας την ηλεκτρονική κονσόλα Cogtest. Στην έρευνα συμπεριελήφθησαν 71 άρρενες ασθενείς (μέση ηλικία 30,23±7,71 έτη) με διάγνωση «σχιζοφρένεια ή άλλες ψυχωσικές διαταραχές» που εισήχθησαν σε ένα ψυχιατρικό τμήμα της Α΄ Ψυχιατρικής Κλινικής του Πανεπιστημίου Αθηνών στο Αιγινήτειο Νοσοκομείο (συνεχείς εισαγωγές). Από τη μελέτη εξαιρέθηκαν ασθενείς με σοβαρές νευρολογικές παθήσεις, σοβαρά προβλήματα ακοής και όρασης, νοητική υστέρηση, κατάχρηση ουσιών ή/και οινοπνευματωδών. Οι κλινικές διαγνώσεις του δείγματος των ασθενών της μελέτης έγιναν στη βάση της δομημένης διαγνωστικής συνέντευξης "Diagnostic Interview for Psychosis" (DIP), και επιβεβαιώθηκαν μετά από κλινική εκτίμηση δύο ανεξάρτητων ψυχιάτρων στη βάση των διαγνωστικών κριτηρίων του DSM-IVTM. Στην έρευνα συμπεριλήφθηκε ομάδα 20 αρρένων υγιών μαρτύρων (μέση ηλικία 31,65±5,90 έτη), που πληρούσαν τα ίδια κριτήρια εισαγωγής στη μελέτη όπως κι η ομάδα των ασθενών, όπως και τα ίδια κριτήρια αποκλεισμού από αυτήν, έχοντας πλήρως ελεύθερο ψυχιατρικό ιστορικό. Για τη στατιστική επεξεργασία των δεδομένων της μελέτης χρησιμοποιήθηκε το στατιστικό πακέτο SPSS.17. Σύμφωνα με τα αποτελέσματα της μελέτης, τα υγιή άτομα της ομάδας ελέγχου διαφοροποιούνταν από τους ασθενείς σε στατιστικά σημαντικό βαθμό σε όλες τις γνωσιακές δοκιμασίες. Η διερεύνηση για πιθανές συσχετίσεις σχετικά με τα ψυχωτικά συμπτώματα και τις γνωσιακές δυσλειτουργίες ανέδειξε τα παρακάτω: οι ψευδαισθήσεις, οι παραληρητικές ιδέες υψηλής οργάνωσης, οι παραληρητικές ιδέες διωκτικού τύπου, η διέγερση, η κατατονία και το απρόσφορο συναίσθημα δεν συσχετίστηκαν με οποιαδήποτε υποκατηγορία γνωσιακής δυσλειτουργίας. Το αμβλύ συναίσθημα συσχετίστηκε σημαντικά με την παρεμπόδιση απάντησης ("GoNoGo test", p=0,007), ενώ ο πτωχός λόγος συσχετίστηκε σημαντικά με τη δηλωτική μνήμη προσώπων ("FMT test", p=0,002). Επιπροσθέτως, η ψυχοκινητική ικανότητα (μη-επικρατιτικό χέρι) συσχετίστηκε σημαντικά με τις γενικευμένες παραληρητικές ιδέες (“TST test”, p= 0,033) και με το περιεσφιγμένο συναίσθημα ("TST test", p=0,026). Εξάλλου, εντοπίστηκε μια τάση για στατιστική σημαντικότητα όσον αφορά στις συσχετίσεις ανάμεσα στις παραληρητικές ιδέες διωκτικού τύπου και στις εκτελεστικές λειτουργίες ("CPT test", p=0,053), ανάμεσα στο απρόσφορο συναίσθημα και στη δηλωτική μνήμη προσώπων ("FMT test", p=0,056), και τέλος ανάμεσα στην ψυχοκινητική ικανότητα και στον πτωχό λόγο ("TST test", p=0,086).

Λέξεις ευρετηρίου: Σχιζοφρενικό φάσμα, ψυχοπαθολογία, γνωσιακά ελλείμματα.

References

1. Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry* 1993, 50:85–94
2. Meltzer HY, Rabinowitz J, Lee MA, Cola P, Ranjan R, Findling RL et al. Age at onset and gender of schizophrenic patients in relation to neuroleptic resistance. *Am J Psychiatry* 1997, 154:475–482
3. Aleman A, Kahn RS, Selten JP. Sex differences in the risk of schizophrenia: Evidence from meta-analysis. *Arch Gen Psychiatry* 2003, 60:565–571
4. Seeman MV. Women and schizophrenia: new findings. *Neuropsychiatry* 2013, 3:423–431
5. Mura G, Petretto DR, Bhat KM, Carta MG. Schizophrenia: from Epidemiology to Rehabilitation. *Clin Pract Epidemiol Ment Hlth* 2012, 8:52–66
6. Vyas NS, Patel NH, Puri BK. Neurobiology and phenotypic expression in early onset schizophrenia. *Early Interv Psychiatry* 2011, 5:3–14
7. Ciompi L. The natural history of schizophrenia in the long-term. *Br J Psychiatry* 1980, 136:413–20
8. Harrison G, Hopper K, Craig T, Laska E, Siegel C, Wanderling J et al. Recovery from psychotic illness: a 15- and 25-year international follow-up study. *Br J Psychiatry* 2001, 178:506–517
9. Bertelsen M, Jeppesen P, Petersen L, Thorup A, Ohlenschlaeger J, Le Quach P et al. Course of illness in a sample of 265 patients with first-episode psychosis—five-year follow-up of the Danish OPUS trial. *Schizophr Res* 2009, 107:173–178

10. Silveira C, Marques-Teixeira J, de Bastos-Leite AJ. More than one century of schizophrenia: an evolving perspective. *J Nerv Ment Dis* 2012, 200:1054–1057
11. Kahn RS, Keefe RSE. Schizophrenia is a cognitive illness: Time for a change in focus. *JAMA Psychiatry* 2013, 70:1107–1112
12. Jolfaei AG, Moshki P, Asgharpour M, Moshki H. The relationship between attention/vigilance and symptom severity in schizophrenic patients. *Iran J Psychiatry* 2012, 7:22–25
13. Schaefer J, Giangrande E, Weinberger DR, Dickinson D. The global cognitive impairment in schizophrenia: Consistent over decades and around the world. *Schizophr Research* 2013, 150:42–50
14. Heinrichs RW, Zaczanis KK. Neurocognitive deficit in schizophrenia: a quantitative review of the evidence. *Neuropsychology* 1998, 12:426–445
15. Green MF, Kern RS, Heaton RK. Longitudinal studies of cognition and functional outcome in schizophrenia: implications for MATRICS. *Schizophr Res* 2004, 72:41–51
16. Kurtz MM, Wexler BE, Fujimoto M, Shagan DS, Seltzer JC. Symptoms versus neurocognition as predictors of change in life skills in schizophrenia after outpatient rehabilitation. *Schizophr Res* 2008, 102:303–311
17. Green MF, Kern RS, Braff DL, Mintz J. Neurocognitive deficits and functional outcome in schizophrenia: are we measuring the ''right stuff''? *Schizophr Bull* 2000, 26:119–136
18. Nuechterlein KH, Barch DM, Gold JM, Goldberg TE, Green MF, Heaton RK. Identification of separable cognitive factors in schizophrenia. *Schizophr Res* 2004, 72:29–39
19. Keefe RSE, Fenton WS. How should DSM-V criteria for schizophrenia include cognitive impairment? *Schizophr Bull* 2007, 33:912–920
20. Barnett JH, Robbins TW, Leeson VC, Sahakian BJ, Joyce EM, Blackwell AD. Assessing cognitive function in clinical trials of schizophrenia. *Neurosci Biobehav Rev* 2010, 34:1161–1177
21. Sachs G. Neurocognition and schizophrenia. In: Kasper S. Papadimitriou GN (eds) *Schizophrenia: Biopsychosocial approaches and current challenges*. Informa Healthcare UK Ltd, London, 2009
22. Pantelis C, Stuart GW, Nelson HE, Robbins TW, Barnes TR. Spatial working memory deficits in schizophrenia: relationship with tardive dyskinesia and negative symptoms. *Am J Psychiatry* 2001, 158:1276–85
23. Lesh TA, Niendam TA, Minzenberg MJ, Carter CS. Cognitive control deficits in schizophrenia: Mechanisms and meaning. *Neuropsychopharmacology* 2011, 36:316–338
24. Ventura J, Cienfuegos A, Boxer O, Bilder R. Clinical global impression of cognition in schizophrenia (CGI-CogS): Reliability and validity of a co-primary measure of cognition. *Schizophr Research* 2008, 106:59–69
25. Burton CZ, Vella L, Harvey PD, Patterson TL, Heaton RK, Twamley EW. Factor structure of the MATRICS Consensus Cognitive Battery (MCCB) in schizophrenia. *Schizophr Research* 2013, 146:244–248
26. Sharma T, Bilder R. Standardisation and cross validation study of Cogtest - an automated neurocognitive battery for use in clinical trials. European Neuropsychopharmacology. *J Eur Coll Neuropsychopharmacol* 2002, 14:S386
27. Maron L, Perry W, Bilder R, Sharma T. Assessing executive functioning in schizophrenia with the Cogtest. European Neuropsychopharmacology. *J Eur Coll Neuropsychopharmacol* 2002, 14: S285
28. Castle D, Jablensky A, McGrath J, Carr V, Morgan V, Waterreus A et al. The Diagnostic Interview for Psychoses (DIP): Development, Reliability and Applications. *Psychologic Med* 2006, 36:69–80
29. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4rth Edition. DSM-IVTM, Washington DC, 2004
30. Da Silva FN, Irani F, Richard J, Brensinger CM, Bilker WB, Gur RE et al. More than just tapping: Index finger-tapping measures procedural learning in schizophrenia. *Schizophr Research* 2012, 137:234–240
31. Henry J & Crawford J. A meta-analytic review of verbal fluency deficits in schizophrenia relative to other neurocognitive deficits, *Cogn Neuropsychiatry* 2005, 10:1–33
32. Dickinson D, Ramsey MB, Gold JM. Overlooking the obvious: A meta-analytic comparison of digit symbol coding tasks and other cognitive measures in schizophrenia. *Arch Gen Psychiatry* 2007, 64:532–542
33. Szoke A, Trandafir A, Dupont ME, Méary A, Schürhoff F, Leboyer M. Longitudinal studies of cognition in schizophrenia: meta-analysis. *Br J Psychiatry* 2008, 192:248–257
34. Lee J, Park S. Working memory impairments in schizophrenia: a meta-analysis. *J Abnorm Psychol* 2005, 114:599– 611
35. Reichenberg A, Harvey P. Neuropsychological impairments in schizophrenia: integration of performance-based and brain imaging findings. *Psycholog Bull* 2007, 133:833–858
36. Fioravanti M, Bianchi V, Cinti ME. Cognitive deficits in schizophrenia: an updated meta-analysis of the scientific evidence. *BMC Psychiatry* 2012, 12:64–84
37. Onitsuka T. Neuroanatomical and neurophysiological abnormalities in the neural correlates of face processing in schizophrenia. *Curr Psychiatry Rev* 2011, 7:322–328
38. Martin CD, Baudouin JY, Franck N, Guillaume F, Guillem G, Tiberghien G et al. Impairment not only in remembering but also in knowing previously seen faces and words in schizophrenia. *Psychiatry Res* 2011,188:18–23
39. Bora E, Yucel M, and Pantelis C. Cognitive impairment in schizophrenia and affective psychoses: implications for DSM-V criteria and beyond. *Schizophr Bull* 2010, 36:36–42
40. Ventura J, Wood R, Hellemann, GS. Symptom domains and neurocognitive functioning can help differentiate social cognitive processes in schizophrenia: A meta-analysis. *Schizophr Bull* 2013, 39:102–111
41. Berenbaum H, Kerns JG, Vernon LL, Gomez JJ. Cognitive correlates of schizophrenia signs and symptoms: I. Verbal communication disturbances. *Psychiatry Res* 2008, 159:147–156
42. Van der Werf M, Köhler S, Verkaaik M, Verhey F, Van Os J. Cognitive functioning and age at onset in non-affective psychotic disorder. *Acta Psychiatr Scand* 2012, 126:274–281
43. Westerhausen R, Kompus K, Hugdahl K. Impaired cognitive inhibition in schizophrenia: a meta-analysis of the Stroop interference effect. *Schizophr Res* 2011, 133:172–181
44. Wobrock T, Ecker UK, Scherk H, Schneider-Axmann T, Falkai P, Gruber O. Cognitive impairment of executive function as a core symptom of schizophrenia. *World J Biol Psychiatry* 2008, 29:1–10
45. Lewandowski KE, Cohen BM, Keshavan MS, Ongur D. Relationship of neurocognitive deficits to diagnosis and symptoms across affective and non-affective psychoses. *Schizophr Research* 2011, 133:212–217
46. Braw Y, Benozio A, Levkovitz Y. Executive functioning during full and partial remission (positive and negative symptomatic remission) of schizophrenia. *Schizophr Research* 2012, 142:122–128

47. Sanfilipo M, Lafargue T, Rusinek H, Arena L, Loneragan C, Lautin A et al. Cognitive performance in schizophrenia: relationship to regional brain volumes and psychiatric symptoms. *Psychiatry Res* 2002, 116:1–23
48. Kremen WS, Seidman LJ, Goldstein JM, Farone SV, Tsuang MT. Systematized delusions and neuropsychological function in paranoid and nonparanoid schizophrenia. *Schizophr Res* 1994, 12:223–236
49. Rosse RB, Schwanz BL, Mastropado J, Goldberg RL, Deutsch SI. Subtype diagnosis in schizophrenia and its relation to neuropsychological and computerized tomography measures. *Biol Psychiatry* 1991, 30:63–72
50. Mahurin RK, Velligan DI, Miller AL. Executive-frontal lobe cognitive dysfunction in schizophrenia: a symptom subtype analysis. *Psychiat Res* 1998, 79:139–149
51. Malla AK, Norman RM, Aguilar O, Carnahan H, Cortese L. Relationship between movement planning and psychopathology profiles in schizophrenia. *Br J Psychiatry* 1995, 167:211–215
52. Bozikas VP, Kosmidis MH, Kioperlidou K, Karavatos A. Relationship between psychopathology and cognitive functioning in schizophrenia. *Compr Psychiatry* 2004, 45:392–400
53. Park S, Puschel J, Sauter BH, Rentsch M, Hell D. Spatial working memory deficits and clinical symptoms in schizophrenia: A 4-month follow-up study. *Biol Psychiatry* 1999, 46:392–400
54. Carter CS, Robertson LC, Nordahl TE, Kraft L, Chaderjian M, Oshora-Celaya L. Spatial working memory deficits and their relationship to negative symptoms in unmedicated schizophrenia patients. *Biol Psychiatry* 1996, 40:930–932
55. Pandina G, Bilder R, Turkoz I, Alphs L. Identification of clinically meaningful relationships among cognition, functionality, and symptoms in subjects with schizophrenia or schizoaffective disorder. *Schizophr Research* 2013, 143:312–318
56. Llorca PM, Blanc O, Samalin L, Bosia M, Cavallaro R. Factors involved in the level of functioning of patients with schizophrenia according to latent variable modeling. *Eur Psychiatry* 2012, 27:396–400
57. Kurnianingsih YA, Kuswanto CN, McIntyre RS, Qiu A, Ho BC, Sim K. Neurocognitive-genetic and neuroimaging-genetic research paradigms in schizophrenia and bipolar disorder. *J Neural Transmiss* 2011, 118:1621–1639
58. Eissa AM, Hassan GAM, Hwedi D, Khalil AH. Cognitive profile in late-onset schizophrenia: A comparative study with early-onset schizophrenia. *Middle East Curr Psychiatry* 2013, 20:6–13.

Corresponding author: M.-I.V. Kontaxaki, Psychologist, Research Fellow, 1st Department of Psychiatry, Athens University Medical School, Eginition Hospital, 74 Vas. Sophias Ave., GR-115 28, Athens, Greece
e-mail: melkont@yahoo.com

Research article
Ερευνητική εργασία

Assessment of the Greek worry-related metacognitions: The Greek version of the Metacognitions Questionnaire (MCQ-30)

G.M. Typaldou,[1] G. Konstantakopoulos,[1,2] I. Roxanis,[1] A. Nidos,[1] N. Vaidakis,[1] G.N. Papadimitriou,[1] A. Wells[3]

[1]First Department of Psychiatry, Athens University Medical School, Eginition Hospital, Athens, Greece,
[2]Section of Cognitive Neuropsychiatry, Department of Psychosis Studies, King's College London,
[3]Department of Clinical Psychology, University of Manchester, UK

Psychiatriki 2014, 25:39–47

The Metacognitions Questionnaire-30 (MCQ-30), developed by Wells and Cartwright-Hatton (2004), represents a multidimensional measure of metacognitive factors considered to be important in the metacognitive model of psychological disorders. The primary aim of the present study was to examine internal consistency, test-retest reliability, convergent validity and the factor structure of the Greek version of the MCQ-30. Moreover, we investigated the associations of the extracted factors with trait anxiety in a Greek sample. The study sample consisted of 547 non-clinical participants (213 males and 334 females). All participants completed the Greek version of the MCQ-30. A subsample of 157 participants also completed the Trait Anxiety subscale of the State –Trait Anxiety Inventory and the Meta-worry subscale of the Anxious Thought Inventory. Thirty participants were retested with the MCQ-30 over a retest interval ranging from three to five weeks. The results confirmed the dimensionality of the MCQ-30 and five factors were extracted consistent with the original English version: (1) positive beliefs about worry, (2) negative beliefs about worry concerning uncontrollability and danger, (3) cognitive confidence, (4) beliefs about the need to control thoughts and the negative consequences of not controlling them, and (5) cognitive self-consciousness. The MCQ-30 showed high levels of internal consistency and test-retest reliability. The correlation between MCQ-30 total score and AnTI-MW was strong, indicating high level of convergent validity. Moreover, all correlations between MCQ-30 total and subscale scores and STAI-T were significant apart from the correlation between 'cognitive confidence' and trait anxiety. The Greek

sample scored higher in the MCQ-30 and its subscales than the English sample in the original study. Women scored significantly higher than men in the overall MCQ-30 and the "uncontrollability and danger" and "need to control thoughts" subscales, whereas no significant differences between genders had been found in the original study. The assumption that the differences in score levels and the gender effect might reflect cultural differences warrants further investigation. The findings of the present study indicate that the Greek version of the MCQ-30 is a comprehensible and psychometrically adequate instrument, as well as a reliable tool in assessing a range of dimensions of worry-related metacognitions in the Greek population. The Greek version of this scale facilitates cross-cultural research in metacognition and wider testing of the metacognitive approach to emotional vulnerability, psychological disturbances and mental disorders

Key words: Metacognitions questionnaire, psychometric properties, metacognitive beliefs, worrying, psychological disorders.

Introduction

Metacognition is a complex concept referring to the cognitive control and regulation of many types of cognitive processes. Theory and research in metacognition initially appeared in the areas of developmental and cognitive psychology.[1,2] In the field of clinical psychology the self-regulatory executive function (S-REF) theory[3,4] was the first to conceptualize metacognitive factors as components of information processing that affect the development and persistence of psychological disorders.[3,5,6] A basic hypothesis of this approach is that metacognition contributes to response styles that lead to the development and persistence of disorder. In particular, people have positive and negative beliefs about their thoughts (metacognitions), e.g., "I must worry in order to be prepared"; "I cannot control my thoughts", that influence appraisal and also have implicit procedural metacognitions that form plans for guiding cognition and action. These metacognitive components direct the individuals towards maladaptive forms of coping strategies and affect the development and the persistence of psychological disorders.[3,7] Consistent with this assumption metacognitions have been found to be associated with psychopathological conditions, such as pathological worry and obsessive-compulsive symptoms,[8,9] generalized anxiety disorder,[10] depression[11] and psychosis.[12]

Following the conceptual analysis offered by the S-REF theory,[3,4] Cartwright-Hatton and Wells[13] developed the Metacognitions Questionnaire (MCQ), a 65-item scale designed to assess several dimensions of metacognition, thought to be relevant to psychopathology. The scale was further revised into a 30-item shorter form (MCQ-30).[14] Two studies[14,15] confirmed that the MCQ-30 is composed of five correlated but conceptually distinct factors, consistent with the initial MCQ form: (1) positive beliefs about worry, which measures the extent to which a person believes that worrying is useful, (2) negative beliefs about worry concerning uncontrollability and danger, which assesses the extent to which a person thinks that worrying is uncontrollable and dangerous, (3) cognitive confidence, which assesses confidence in attention and memory, (4) beliefs about the need to control thoughts and the negative consequences of not controlling them, and (5) cognitive self-consciousness, which measures the tendency to monitor one's own thoughts and focus attention inwards. The five-factor structure of the MCQ-30 in non-clinical populations has been further assessed in two studies in Turkey[16,17] and two more recent studies in Poland[18] and South Korea.[19]

The primary aim of the present study was to examine internal consistency, test-retest reliability, convergent validity and the factor structure of the Greek version of the MCQ-30. Moreover, we investigated the associations of the extracted factors with trait anxiety in a Greek sample.

Material and method

Participants

Five hundred and forty seven (547) individuals participated in the study. The sample consisted of 390 undergraduate and postgraduate students from different Departments of the University of Athens and 157 University and health service employees. The

whole sample was composed of 213 males (37.1%) and 334 females (58.2%). The mean age of the sample was 27.5 years (±8.30) ranging from 18 to 66 years and the mean years of education 15.78 (±2.11).

Measures

1. The Metacognition Questionnaire-30 (MCQ-30).[14] The MCQ-30 assesses individual differences in metacognitive beliefs, judgments and monitoring tendencies. It consists of five subscales assessed by 30-items in total. Each item on MCQ-30 is rated on a 4-point Likert scale. Scores range from 30 to 120 points and higher scores indicate greater pathological metacognitive activity.
2. The Meta-worry subscale of the Anxious Thoughts Inventory (AnTI-MW).[20] The Anxious Thoughts Inventory (AnTI) is a multidimensional measure of generalized worry, that comprises of three basic dimensions: social worry, health worry, and meta-worry (worry about worry). The meta-worry subscale of AnTI-MW consists of 7 items, which are answered on a 4-point Likert scale. Previous research has demonstrated that the AnTI-MW is reliable in terms of internal consistency and test-retest stability.[20]
3. The Trait Anxiety scale of the State-Trait Anxiety Inventory (STAI-T).21 The STAI-T is a 20 items measure used to assess anxiety proneness. Each item is rated on a 4-point Likert scale; almost never (1) to almost always (4). Higher scores indicate more anxiety. The Greek adaptation of the scale was assessed by Fountoulakis et al.[22]

Procedure

Three of the study authors, fluent in both languages, translated the MCQ-30 and the AnTI-MW independently into Greek. After the translation team agreed on the best translations, the measures were independently blindly back-translated by another person, who holds an English Language Degree from the University of Athens and an MA in English Studies from the University of London. The author of the original scales, Prof. Adrian Wells, compared the back-translated versions to the originals and made suggestions on 3 MCQ items which were applied on the scale. Prof. Wells was satisfied with the new translations and the Greek versions were consequently formed (available upon request).

All participants completed the MCQ-30. Moreover, a subsample of 157 participants (63 males and 94 females) completed also the STAI-T and the AnTI-MW. The mean age of the sub-sample was 36.97 (±8.42), ranging from 21 to 66 years. Thirty participants were retested with the MCQ-30 over a retest interval ranging from three to five weeks. Participation in the project was entirely voluntary and anonym. Ethical approval for the study was granted by the ethical committee of the Eginition Hospital.

Statistical analysis

A multivariate analysis of variance (MANOVA) and t-test were used to assess the effect of gender on MCQ-30 subscales and total score, respectively. In order to investigate the factor structure of the Greek version of the MCQ-30, scores obtained from the scale were subjected to an exploratory factor analysis using principal components analysis and rotation of extracted factors to achieve simple structure. The Scree plot was examined as the criterion for determining the number of factors to extract. Pearson's product moment coefficients (r) were computed to determine inter-item correlations, correlations between each item and the total score minus that item as well as between the subscales of MCQ-30. Cronbach's alpha and Guttman split-half coefficients were estimated in order to examine the internal consistency of the scale and its subscales. Test-retest reliability was evaluated using Pearson's correlation coefficients for the total and subscale scores. The convergent validity of the MCQ-30 and its associations with trait anxiety were examined through the Pearson's correlation coefficients between MCQ-30 total and subscale scores, AnTI-MW and STAI-T, respectively. For the statistical evaluation the SPSS.[19] package was used.

Results

Descriptive statistics and gender effect

Means and Standard Deviations for the total MCQ-30 scale and its subscales are presented in table 1. The total and subscale means in the Greek sample tended, as a whole, to be higher than those in the original study.[14] All subscales were found to be positively inter-correlated with the exception of cognitive confidence and cognitive self-consciousness. The inter-correlation matrix appears in table 2.

Table 1. Mean MCQ-30 total and subscale scores for men and women.

MCQ-30	*Total sample (n=547) Mean (SD)*	*Men (n=213) Mean (SD)*	*Women (n=334) Mean (SD)*
Cognitive confidence	10.19 (3.65)	10.03 (3.51)	10.30 (3.79)
Positive beliefs	11.52 (3.82)	11.48 (4.02)	11.52 (3.73)
Cognitive self-consciousness	15.64 (3.62)	15.64 (3.68)	15.62 (3.76)
Uncontrollability and danger	11.96 (4.19)	11.20 (3.80)	12.39 (4.33)
Need to control thoughts	12.00 (3.67)	11.53 (3.70)	12.23 (3.63)
Total score	61.27 (12.59)	59.71 (12.87)	62.12 (12.45)

Table 2. MInter-correlation matrix of the MCQ-30 and its subscales (n=547).

Scale	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*	*MCQ Total*
Cognitive confidence (1)	–	0.10*	–0.05	0.35**	0.19**	0.46**
Positive beliefs (2)		–	0.33**	0.31**	0.42**	0.65**
Cognitive self-consciousness (3)			–	0.29**	0.53**	0.62**
Uncontrollability and danger (4)				–	0.52**	0.76**
Need to control thoughts (5)					–	0.80**
MCQ Total						–-

*p<0.05, **p<0.01

Gender differences in the five metacognitive factors were assessed using multivariate analysis of variance (MANOVA). Wilk's λ was significant (F=3.16, p<0.05, η^2=0.03). A significant main effect of gender was found on factors "uncontrollability and danger" ($F^{1,520}$=11.90, p=0.001) and "need to control thoughts", (F1, 520=5.05, p<0.05). Women scored significantly higher than men on both these factors. Moreover, women scored higher than men in total metacognitions (62.12±12.45 versus 59.72±12.87, t=–2.10, p<0.05).

Factor structure

An exploratory factor analysis was conducted on the Greek version of the MCQ-30 using principal components factoring. The Kaiser-Meyer-Olkin measure of sampling adequacy was found to be 0.89, and Bartlett's test of sphericity was significant (df=435, p<0.001). Scree plot and eigenvalues indicated five factors with eigenvalues of 7.19, 3.92, 2.46, 1.84 and 1.19 for extraction. These factors were subjected to an oblique rotation since previous research with the MCQ and MCQ-30 demonstrated that dimensions of the MCQ are inter-correlated. The variances explained by these five factors were 23.97%, 13.07%, 8.21%, 6.15% and 3.99%. Total variance accounted for by these five factors was 55.41%. The lower limit for a salient item loading was set at 0.30.[23]

The rotated loadings of the MCQ- 30 items for each of the extracted factors are presented in table 3. On a total of 30 items 26 loaded highly on their respective factors. A number of cross-loadings have been observed with item 3 loading on factors "cognitive self-consciousness" (0.40) and "uncontrollability and danger" (0.61), and item 6 loading on factors "uncontrollability and danger" (0.43) and "need to control thoughts" (0.33). Nevertheless, these cross-loadings do not pose a serious problem to the factorial solution presented here, as items load more highly on their respective factor. Finally, items 13 and 22 loaded closely on two factors, namely on factors "cognitive self-consciousness" (0.46) and "need to control thoughts" (0.45) and on factors "uncontrollability and danger" (0.37) and 'need to control thoughts' (0.33), respectively. In these cases, items can be permitted to contribute to the factor that it fits best, depending on what it means and what it measures.[24,25] Therefore, both items remained under the factor "need to control thoughts" as in the original scale.

Table 3. Rotated loadings of the MCQ-30 items (structure matrix).

Item/Scale	*Loadings on factors*				
	1	*2*	*3*	*4*	*5*
Factor 1: Cognitive confidence					
I have little confidence in my memory for words and names (8)	**0.78**	0.08	–0.03	0.03	–0.05
My memory can mislead me at times (14)	**0.66**	–0.01	–0.08	0.07	0.10
I have a poor memory (17)	**0.80**	0.00	–0.11	0.13	0.01
I have little confidence in my memory for places (24)	**0.60**	–0.02	–0.04	0.14	0.19
I do not trust my memory (26)	**0.83**	–0.01	–0.06	0.18	0.02
I have little confidence in my memory for actions (29)	**0.64**	0.09	–0.01	0.12	0.02
Factor 2: Positive beliefs					
Worrying helps me to avoid problems in the future (1)	0.05	**0.69**	0.10	0.00	0.02
I need to worry in order to remain organized (7)	0.02	**0.70**	0.11	0.16	0.20
Worrying helps me to get things sorted out in my mind (10)	–0.01	**0.74**	0.18	0.14	0.03
Worrying helps me cope (19)	0.08	**0.80**	009	0.13	0.14
Worrying helps me to solve problems (23)	0.02	**0.82**	0,03	0.04	0.19
I need to worry, in order to work well (28)	0.00	**0.76**	0.04	0.10	0.17
Factor 3: Cognitive self-consciousness					
I think a lot about my thoughts (3)	0.10	0.20	0,40	**0.61**	0.04
I am aware of the way my mind works when I am thinking through a problem (5)	–0.21	0.00	**0.63**	–0.04	–0.04
I monitor my thoughts (12)	–0.09	0.16	0.72	0.02	0.07
I am constantly aware of my thinking (16)	–0.09	0.02	0.71	–0.10	0.13
I pay close attention to the way my mind works (18)	–0.03	0.09	**0.68**	0.15	0.16
I constantly examine my thoughts (30)	0.05	0.18	**0.61**	0.23	0.37
Factor 4: Uncontrollability and danger					
My worrying is dangerous for me (2)	0.11	–0.15	0.01	**0.51**	0.15
I could make myself sick with worrying (4)	0.07	0.00	–0.07	**0.74**	0.17
My worrying thoughts persist, no matter how I try to stop them (9)	0.18	0.23	0.11	**0.75**	0.03
I cannot ignore my worrying thoughts (11)	0.14	0.29	0.17	**0.68**	0.14
My worrying could make me go mad (15)	0.17	0.08	–0.08	**0.73**	0.26
When I start worrying, I cannot stop (21)	0.21	0.19	0.06	**0.71**	0.23
Factor 5: Need to control thoughts					
If I did not control a worrying thought, and then it happened, it would be my fault (6)	0.05	0.25	0.19	**0.43**	0.33
I should be in control of my thoughts all the time (13)	0.12	0.09	**0.46**	0.21	**0.45**
Not being able to control my thoughts is a sign of weakness (20)	0.05	0.10	0.36	0.12	**0.69**
I will be punished for not controlling certain thoughts (22)	0.20	0.25	–0.06	0.33	**0.37**
It is bad to think certain thoughts (25)	0.01	0.07	–0.10	0.15	**0.67**
If I could not control my thoughts, I would not be able to function (27)	0.00	0.14	0.32	0.02	**0.67**

Internal consistency and test-retest reliability

For the total MCQ-30 corrected item–total correlation coefficients ranged from 0.27 to 0.67 with the exception of item 5. For the individual subscales, the coefficients ranged from 0.49 to 0.74 for cognitive confidence, 0.56 to 0.74 for positive beliefs, 0.36 to 0.60 for cognitive self-consciousness, 0.38 to 0.70 for uncontrollability and danger, and 0.34 to 0.59 for need to control thoughts, indicating that all items were associated with their respective subscales. Item 5, whose relationship with the total score was lower (0.17) than the con-

ventional level of 0.20, was not excluded from the MCQ-30 since it was correlated sufficiently with its corresponding subscale (0.40) and had a high loading on this subscale (0.63). In addition, examination of the alpha statistics demonstrated that deletion of this item would not make any significant contribution in terms of the reliability of the factor (Cronbach's alpha for cognitive self-consciousness subscale was initially 0.76 and 0.75 if item 5 deleted).

Cronbach's alpha coefficients for the full MCQ-30 and its factors indicated high internal consistency (see table 4). The Guttman split-half coefficient for the total MCQ-30 was also high, and Cronbach's alpha coefficients were 0.79 and 0.78 for the first and the second halves, each including 15 items, respectively. The Guttman split-half coefficients and the test-retest correlation coefficients of the MCQ-30 factors are displayed in table 4. Test-retest correlations for all the MCQ-30 factors and the total score were significant ($p<0.01$).

Convergent validity

Since MCQ-30 is mainly a measure of positive and negative beliefs and judgments about worry, we used the AnTi-MW as convergent validator, which is a measure of concerns about worry and has been found to be associated with vulnerability to pathological worry.[20] As shown in table 5 significant positive correlations were found between MCQ-30 total and subscale scores and AnTi-MW. However, the correlations of AnTi-MW with "cognitive self-consciousness" and "cognitive confidence" subscales were weak ($r\leq0.30$), whereas its correlations with all other factors ranged from medium ($0.30<r\leq0.50$) to strong ($r>0.50$). The correlation between MCQ-30 total score and AnTi-MW was strong, indicating high level of convergent validity.

Table 5. Correlations of the MCQ-30 subscales with meta-worry and trait anxiety (n=157)

MCQ-30	*AnTi-MW*	*STAI-T*
Cognitive confidence	0.30*	0.14
Positive beliefs	0.38*	0.27*
Cognitive self-consciousness	0.22*	0.21*
Uncontrollability and danger	0.61*	0.39*
Need to control thoughts	0.47*	0.32*
Total scale	0.60*	0.40*

*p<0.01
MCQ-30=Metacognitions Questionnaire-30.
AnTi-MW=Meta-worry subscale of the Anxious Thoughts Inventory.
STAI-T=State Trait Anxiety Inventory-Trait form.

Association between metacognitions and trait anxiety

The correlations between MCQ-30 total and subscale scores and STAI-T are displayed in table 5. All of these correlations were significant apart from the correlation between "cognitive confidence" and trait anxiety. However, "positive beliefs" and "cognitive self-consciousness" were weakly associated with trait anxiety.

Discussion

The results of the present study provide empirical evidence for the dimensionality of the Greek version of the MCQ-30. In accordance with the original scale, the Greek version has been found to be composed of five factors. Reliability analyses of the instrument and its subscales indicated high internal consistency and stability across time. In addition, the significant correlation between MCQ-30 and the related construct of meta-worry indicated high convergent validity. Our results are consistent with the findings of previous studies on the reliability and validity of the MCQ-30.[14,16–19]

Table 4. Internal consistency and test-retest reliability of MCQ-30.

MCQ-30	*Cronbach's Alpha*	*Guttman split-half coefficient*	*Test-retest correlations*
Cognitive confidence	0.83	0.78	0.87
Positive beliefs	0.87	0.88	0.69
Cognitive self-consciousness	0.76	0.79	0.79
Uncontrollability and danger	0.84	0.86	0.72
Need to control thoughts	0.71	0.70	0.62
Total score	0.88	0.87	0.80

The factorial solution in the present study approaches the factor structure of the original sample.[14] However, a few subtle differences have been observed in the Greek sample. For example, items "I think a lot about my thoughts" and "If I did not control a worrying thought, and then it happened, it would be my fault" seem to be more a component of uncontrollability and danger than of cognitive self-consciousness, a finding that could point to negative beliefs about thoughts being more closely linked to metacognitive monitoring and self-blame in this version of the scale/population. Cross-loading of a single variable may be due to that variable being ambiguous, or genuinely applicable to both factors.[26] A cross-loading that should be mentioned is that in the Greek sample "I should be in control of my thoughts all the time" is a component of both cognitive self-consciousness and need to control thoughts", whereas in the English sample it is only a matter of need for control, a finding that has been observed in a previous study conducted in Turkey.[17].

The Greek sample scored higher in the MCQ-30 and its subscales than the English sample in the original study.[14] For example, the mean of the total MCQ-30 in the original version was 48.41 (±13.31) and in the present study 61.27 (±12.59). The same tendency has been found in a previous study with a Turkish non-clinical sample,[16] whereas the means in the Korean study ranged between those in our study and in the original one.[19] The question arising is whether these differences and similarities between the studies are chance findings or whether they reflect cultural differences, an issue that would be interesting to investigate further.

On the other hand, only in the present study women scored significantly higher than men in the overall MCQ-30 and the "uncontrollability and danger" and "need to control thoughts" subscales. Gender differences in MCQ-30 scores have been tested in two previous studies. In the original study, no significant difference between genders was found in the MCQ-30 total score and any of its subscales.[14] In a more recent Turkish study, men scored significantly higher than women in all MCQ-30 subscales apart from "uncontrollability and danger" and "cognitive confidence".[16] It would be of clinical interest to explore whether gender differences in metacognitions are associated with respective differences in the prevalence of emotional distress between men and women.

In the present study, worry-related metacognitive activity was significantly associated with trait anxiety. Specifically, negative beliefs about uncontrollability and danger of thoughts were more strongly correlated with trait anxiety than all the other metacognitive belief categories, consistent with the findings of two preceding studies.[14,27] Moreover, positive beliefs about worry and cognitive self-consciousness were weakly associated with trait anxiety in our study, as was previously found.[14,16,19] In contrast to previous studies, we found no significant correlation between cognitive confidence and trait anxiety. This could reflect cultural differences in the association between metacognitive beliefs and anxiety in non-clinical groups. Besides, previous studies in different countries also revealed partially inconsistent results regarding the associations between the MCQ-30 factors and trait anxiety.

The MCQ-30 has already proven useful in the research on the development of psychopathological symptoms and syndromes. It has been shown that worry-related metacognitions is a predictor of anxiety symptoms and depressive symptoms,[15,28] and alcohol abuse[29] in non-clinical populations. These metacognitions might also be mediators between anxiety and other psychopathological condition, such as nicotine dependence[30] and obsessive-compulsive symptomatology.[27] Moreover, the role of metacognitions in the course and the prognosis of mental disorders warrants further investigation. Recent studies using MCQ-30 found specific associations between metacognitions and symptom severity in chronic fatigue syndrome,[31] poor insight in OCD[32] as well as the outcome of exposure therapy in OCD patients.[33]

In conclusion, the findings of the present study indicate that the Greek version of the MCQ-30 is a comprehensible and psychometrically adequate instrument, as well as a reliable tool in assessing a range of dimensions of metacognitions in a Greek non-clinical population. The Greek version of this scale facilitates cross-cultural research in metacognition and wider testing of the metacognitive approach to emotional vulnerability, psychological disturbances and mental disorders.

Εκτίμηση των σχετιζόμενων με την ανησυχία μεταγνωσιών: Η ελληνική εκδοχή του Ερωτηματολογίου Μεταγνωσιών (MCQ-30)

Μ. Τυπάλδου,[1] Γ. Κωνσταντακόπουλος,[1,2] Ι. Ροξάνης,[1] Α. Νίντος,[1] Ν. Βαϊδάκης,[1] Γ.Ν. Παπαδημητρίου,[1] A. Wells[3]

[1]Α΄ Ψυχιατρική Κλινική Πανεπιστημίου Αθηνών, Αιγινήτειο Νοσοκομείο, Αθήνα,
[2]Section of Cognitive Neuropsychiatry, Department of Psychosis Studies, King's College London,
[3]Department of Clinical Psychology, University of Manchester, UK

Ψυχιατρική 2014, 25:39–47

Το Ερωτηματολόγιο Μεταγνωσιών (Metacognitions Questionnaire-30, MCQ-30), που εκπονήθηκε από τους Wells και Cartwright-Hatton (2004), συνιστά ένα εργαλείο πολυδιαστασιακής εκτίμησης των μεταγνωσιακών παραγόντων που θεωρούνται σημαντικοί σύμφωνα με το μεταγνωσιακό μοντέλο των ψυχολογικών διαταραχών. Η παρούσα μελέτη είχε ως πρωταρχικό της στόχο να εξετάσει την εσωτερική συνοχή, την αξιοπιστία χορήγησης-επαναχορήγησης, τη συγκλίνουσα εγκυρότητα και την παραγοντική δομή της ελληνικής εκδοχής του ερωτηματολογίου MCQ-30. Επιπλέον, διερευνήσαμε τις συσχετίσεις των εξαγόμενων παραγόντων με το σταθερό άγχος σε ένα δείγμα του ελληνικού πληθυσμού. Το δείγμα της μελέτης ήταν μη-κλινικό, αποτελούμενο από 547 συμμετέχοντες (213 άνδρες και 334 γυναίκες), που συμπλήρωσαν την ελληνική εκδοχή του ερωτηματολογίου MCQ-30. Ένα μέρος του συνολικού δείγματος, αποτελούμενο από 157 συμμετέχοντες, συμπλήρωσε επίσης την υποκλίμακα Trait Anxiety του ερωτηματολογίου State-Trait Anxiety Inventory (STAI-T) και την υποκλίμακα Meta-worry του ερωτηματολογίου Anxious Thought Inventory (AnTi-MW). Σε τριάντα συμμετέχοντες επαναχορηγήθηκε το MCQ-30 εντός χρονικού διαστήματος τριών έως πέντε εβδομάδων. Από τα αποτελέσματα της μελέτης επιβεβαιώθηκε η διαστασιακότητα του MCQ-30 και οι πέντε παράγοντες που εξήχθησαν, ήταν συμβατοί με αυτούς της αρχικής, αγγλικής εκδοχής του ερωτηματολογίου: (1) θετικές πεποιθήσεις για την ανησυχία, (2) αρνητικές πεποιθήσεις για την ανησυχία, που αφορούν στην αδυναμία ελέγχου και τον συνεπαγόμενο κίνδυνο, (3) νοητική αυτοπεποίθηση, (4) πεποιθήσεις για την ανάγκη ελέγχου των σκέψεων και τις αρνητικές επιπτώσεις από τη μη άσκηση ελέγχου επ' αυτών και (5) νοητική αυτοσυνείδηση. Το ερωτηματολόγιο MCQ-30 επέδειξε υψηλό επίπεδο εσωτερικής συνοχής και αξιοπιστίας χορήγησης-επαναχορήγησης. Η ισχυρή συσχέτιση μεταξύ της συνολικής βαθμολογίας στο MCQ-30 και αυτής στο AnTI-MW αποτελεί ένδειξη υψηλού επιπέδου συγκλίνουσας εγκυρότητας. Επιπλέον, σημαντικές ήταν όλες οι συσχετίσεις μεταξύ της συνολικής βαθμολογίας στο MCQ-30 και στις υποκλίμακές του και του STAI-T, με μόνη εξαίρεση τη συσχέτιση μεταξύ «νοητικής αυτοπεποίθησης» και σταθερού άγχους. Το ελληνικό δείγμα παρουσίασε υψηλότερες μέσες βαθμολογίες στο συνολικό MCQ-30 και τις υποκλίμακές του σε σύγκριση με το αγγλικό δείγμα της αρχικής μελέτης. Επίσης βρέθηκε ότι οι γυναίκες είχαν σημαντικά υψηλότερες βαθμολογίες από τους άνδρες στο συνολικό ερωτηματολόγιο και στις υποκλίμακες «αδυναμία ελέγχου και κίνδυνο» και «ανάγκη ελέγχου των σκέψεων», ενώ στην αρχική μελέτη δεν παρατηρήθηκαν σημαντικές διαφορές μεταξύ των δύο φύλων. Πρέπει να διερευνηθεί περαιτέρω αν οι παρατηρούμενες διαφορές στα επίπεδα βαθμολογίας στο MCQ-30 και στην επίδραση του φύλου αντανακλούν πολιτισμικές διαφορές. Τα ευρήματα της παρούσας μελέτης δείχνουν ότι η ελληνική εκδοχή του MCQ-30 αποτελεί ένα εύχρηστο και ψυχομετρικά έγκυρο και αξιόπιστο εργαλείο για την εκτίμηση μεταγνωσιών σχετιζόμενων με την ανησυχία στον ελληνικό πληθυσμό.

Λέξεις ευρετηρίου: Ερωτηματολόγιο μεταγνωσιών, ψυχομετρικές ιδιότητες, μεταγνωσιακές πεποιθήσεις, ανησυχία, ψυχολογικές διαταραχές.

References

1. Flavell JH. Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *Am Psychol* 1979, 34:906–911
2. Nelson TO, Narens L. Metamemory: A theoretical framework and some new findings. *Psychology of learning and motivation* 1990, 26:125–332
3. Wells A, Matthews G. *Attention and emotion: A clinical perspective*. Lawrence Erlbaum, Hove, 1994
4. Wells A, Matthews G. Modelling cognition in emotional disorder: The S-REF model. *Behav Res Ther* 1996, 34:881–888
5. Wells A. *Emotional disorders and metacognition: Innovative cognitive therapy*. Wiley, Chichester, 2000
6. Wells A. *Metacognitive therapy for anxiety and depression*. Guilford Press, New York, 2009
7. Wells A. *Cognitive therapy of anxiety disorders: a practice manual and conceptual guide*. Wiley, Chichester, 1997
8. Wells A, Papageorgiou C. Relationships between worry and obsessive-compulsive symptoms and meta-cognitive beliefs. *Behav Res Ther* 1998, 36:899–913
9. Gwilliam P, Wells A, Cartwright-Hatton S. Does meta-cognition or responsibility predict obsessive-compulsive symptoms: A test of the metacognitive model. *Clin Psychol Psychother* 2004, 11:137–144
10. Wells A, Carter K. Further tests of a cognitive model of generalized anxiety disorder: Metacognitions and worry in GAD, panic disorder, social phobia, depression, and nonpatients. *Behav Ther* 2001, 32:85–102
11. Papageorgiou C, Wells A. An empirical test of a clinical metacognitive model of rumination and depression. *Cogn Ther Res* 2003, 27:261–273
12. Morrison AP, French P, Wells A. Metacognitive beliefs across the continuum of psychosis: Comparisons between patients with psychotic disorders, patients at ultra-high risk and non-patients. *Behav Res Ther* 2007, 45:2241–2246
13. Cartwright-Hatton S, Wells A. Beliefs about worry and intrusions: the Meta-Cognitions Questionnaire and its correlates. *J Anxiety Disord* 1997, 11:279–296
14. Wells A, Cartwright-Hatton S. A short form of the metacognitions questionnaire: properties of the MCQ-30. *Behav Res Ther* 2004, 42:385–396
15. Spada MM, Mohiyeddini C, Wells A. Measuring metacognitions associated with emotional distress: Factor structure and predictive validity of the metacognitions questionnaire-30. *Person Individ Diff* 2008, 45:238–242
16. Yilmaz AE, Gençöz T, Wells A. Psychometric characteristics of the Penn State Worry Questionnaire and Metacognitions Questionnaire-30 and metacognitive predictors of worry and obsessive-compulsive symptoms in a Turkish sample. *Clin Psychol Psychother* 2008, 15:424–439
17. Tosun A, Irak M. Adaptation, validity, and reliability of the Metacognitions Questionaire-30 for the turkish population and its relationship to anxiety and Obsessive-Compulsive Symptoms. *Turk J Psychiatry* 2008,19:67–80
18. Dragan M, Dragan WL. Psychometric properties of the Polish version of the Metacognitions Questionnaire-30. *Psychiatria Polska* 2011, 4:545–553 (Article in Polish)
19. Cho Y, Jahng S, Chai S. The factor structure and concurrent validity of the Korean version of the Metacognitions Questionnaire 30 (K-MCQ-30). *J Clin Psychol* 2012, 68:349–361
20. Wells A. A multi-dimensional measure of worry: Development and preliminary validation of the anxious thoughts inventory. *Anx Stress Cop Intern J* 1994, 6:289–299
21. Spielberger CD, Gorsuch RL, Lushene R, Vagg P, Jacobs GA. *Manual for the state-trait anxiety inventory STAI* (*Form Y*): *Self-evaluation questionnaire*. Consulting Psychologists Press, Palo Alto, CA, 1983
22. 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
23. Tabachnick BG, Fidell LS. *Using multivariate statistics*. 4th ed. Allyn and Bacon, Needham Heights, MA, 2001
24. Kim J, Mueller CW. *Factor analysis: statistical methods and practical issues*. Sage Publications, Beverly Hills, California, 1978
25. Stevens J. Applied Multivariate Statistics for the Social Sciences (4th ed). Lawrence Erlbaum Associates, Mahwah, NJ, 2002
26. Miller RL, Acton C, Fullerton DA, Maltby J. Factor Analysis. In: Campling J (ed) *SPSS for Social Scientists*. Pelgrave Macmillan, New York, 2002
27. Irak M, Tosun A. Exploring the role of metacognition in obsessive-compulsive and anxiety symptoms. *J Anxiety Disord* 2008, 22:1316–1325
28. Yilmaz AE, Gencöz T, Wells A. The temporal precedence of metacognition in the development of anxiety and depression symptoms in the context of life-stress: A prospective study. *J Anxiety Disord* 2011, 25:389–396
29. Spada MM, Zandvoort M, Wells A. Metacognitions in problem drinkers. *Cogn Ther Res* 2007, 31:709–716
30. Spada MM, Nikčević AV, Moneta GB, Wells A. Metacognition as a mediator of the relationship between emotion and smoking dependence. *Addict Behav* 2007, 32:2120–2129
31. Maher-Edwards L, Fernie B, Murphy G, Wells A, Spada M. Metacognitions and negative emotions as predictors of symptom severity in chronic fatigue syndrome. *J Psychosom Res* 2011, 70:311–317
32. Φnen S, Uğurlub GK, Hayköylü A. The relationship between metacognitions and insight in obsessive-compulsive disorder. *Compr Psychiatry* 2013, Epub ahead of print, doi: 10.1016/j.comppsych.2012.11.006
33. Solem S, Håland AT, Vogel PA, Hansen B, Wells A. Change in metacognitions predicts outcome in obsessive-compulsive disorder patients undergoing treatment with exposure and response prevention. *Behav Res Ther* 2009, 47:301–307

Corresponding author: M. Typaldou, Psychologist. 1st Department of Psychiatry, University of Athens, Eginition Hospital, 72 Vas. Sophias Ave, GR-115 28 Athens, Greece
Tel: (+30) 210-72 89 151, Fax: (+30) 210-72 42 020
e-mail: mtypaldou@med.uoa.g

Research article
Ερευνητική εργασία

Management in child and adolescent psychiatry: How does it look in the Balkans?

M. Pejovic-Milovancevic,[1,2] V. Miletic,[3] D. Anagnostopoulos,[4] M. Raleva,[5] V. Stancheva,[6] M. Burgic-Radmanovic,[7] Z. Barac-Otasevic,[8] V. Ispanovic[9]

[1]School of medicine, University of Belgrade, [2]Institute of Mental Health, Belgrade,
[3]Association for Mental Health Promotion, Belgrade, Serbia,
[4]Associate Professor of Child Psychiatry, University of Athens, Athens, Greece,
[5]University Clinic of Psychiatry, Skopje, Former Yugoslav Republic of Macedonia,
[6]Faculty of Public Health and Sport South-West University "Neofit Rilski" Blagoevgrad, Bulgaria,
[7]Clinic for Psychiatry, Clinical Center of Banja Luka, Bosnia and Herzegovina,
[8]Medical Clinical Center of Montenegro, Psychiatric Clinic Podgorica, Montenegro,
[9]Faculty for Special Education and Rehabilitation, University of Belgrade, Serbia

Psychiatriki 2014, 25:48–54

This paper examines the situation of child and adolescent psychiatry in the following Balkan countries: Greece, Serbia, Bulgaria, Romania, Bosnia and Herzegovina, FYROM, and Montenegro. With the exception of Greece, these countries are new democracies, with their mental health services in a transitional stage of organization. Overall, they have initiated programmes to move psychiatric care towards deinstitutionalization, developing outpatient infrastructures to handle psychiatric disorders. Child psychiatry as a specialization is still less developed than adult psychiatry at a significant, albeit different degree among these countries. The number of mental health services offered to children and adolescents is deemed insufficient, and the type of services limited and lacking. This situation is also reflected in the small number of child psychiatrists and other mental health specialists for children and adolescents, as well as in the complete lack (Montenegro) or deficiency of special programmes and actions for children and adolescents. The same also applies to mental health legislation. Greece is the exception in the development of the entire spectrum of services, the number of specialists, and the establishment of an adequate legislation framework reinforced by the incorporation of all international treaties on children's rights; although the recent economic crisis has affected the country negatively, threatening with regression to pre-reformational practices. Children and adolescents in need of mental health care have been increasing in all countries. The effect of violent and sudden changes taking place in most countries is a major factor for the emergence of increased and stress-related psychopathology and psychosocial problems in children and families. In all countries, there is a significant development of non-governmental organizations undertaking a large part of reformation work. There is also the disconcerting phenomenon of professional exhaustion and the migration of experts from their countries. Finally, there is the common need to develop educational programmes and related clinical practices in all degrees of prevention, promoting interdisciplinary cooperation, the biopsychosocial approach to understanding and dealing with mental health issues, as well as the development of

cooperation among all institutions concerning children (education, health, etc.). All this should be reflected in a national plan to promote child mental health as the foundation upon which the necessary cooperation among Balkan countries would be established in order to promote research, the exchange of experiences, common practices, mutual understanding, and common interests.

Key words: Child psychiatry, services, mental health, Balkans countries.

Introduction

The Balkans represents a mixture of developed and developing regions, with contrasting modern and traditional parts. All, except Greece, of the Balkan countries are post-communist countries with a complex history in the past 20 years that includes wars, violent regime changes, and extensive population migration. In the past decade, Balkan countries have witnessed rapid change in the form of social, political and economic transition, which led to high unemployment rates, as well as to drastic social and societal changes leading to an unsatisfactory situation regarding human rights, problems with corruption and abuse of power, as well as malfunctioning of government-provided services along with their ongoing reform.[1] The percentage of state budgets for mental healthcare from the gross national income is very low in most of the countries of the region, but differs significantly from country to country, mainly due to differences in gross national income per capital, which show great variability in the region.[2]

Due to the above described factors, healthcare systems have deteriorated and are facing specific problems such as the "brain drain". Mental healthcare reform is under way, but it is a difficult and time-consuming task.[1,3] At the same time, psychiatric services are in a high demand in the region, because of an increase of the prevalence of mood and anxiety disorders.[3] The reform of psychiatric services is facing serious challenges due to economic difficulties, political instability in the region, and because of marginalization of psychiatry in the society, with high levels of stigmatization of psychiatric patients as well as psychiatrists.[1,2,4]

Child and adolescent psychiatry is a relatively new medical specialty in the region, and as such faces additional challenges to those already described. Some of the challenges are the same ones faced by specialists everywhere, such as lack of research and evidence-based procedures or limited resources, as well as the lack of an adequate number of specialists even in the developed countries. In the region, there is a general lack of trust in government institutions in the adolescent population, as well as growing rates of youth unemployment, community disorganization, increasingly registered high risk behaviors (alcohol abuse, drug addiction); all of which lead to a greater need for well-organized and accessible child and adolescent psychiatric services.[1,3]

Even in the developed countries, only a minority of youth and children with mental health problems receive the necessary treatment, even though virtually all of them are included in the educational system and many are seen on a regular basis in the primary healthcare setting.[5–7] The picture of child and adolescent psychiatry in the Balkans is currently unclear. Differing approaches in different countries along with a lack of adequate financial support of the services create difficulties to the users as well as to medical professionals to utilize all the available resources.[7]

A study has shown that there are two crucial points in beginning the proper treatment in the child and adolescent population: problem recognition and adequate, timely referral from primary care physicians.[8] So there is a need for specific well educated medical professionals who practice in a healthcare system designed to be user – friendly and accessible, which could easily be reached. However, even in the developed countries no strictly defined linear pathway exists for reaching CAMH services.[9] In order to create new strategies for the development of child and adolescent mental healthcare, short-term and long-term goals have to be defined, and that can only be done if current resources and shortcomings are properly evaluated.

Study design

In this study, we sought to evaluate the current state of child and adolescent psychiatric services in the region by assessing its major aspects. First, we examined the percentage of children and adolescents who receive the necessary help. Our second goal was to

assess national policies and legislation in the region, and to compare types of services offered in different countries.

This paper was designed as a descriptive, comparative study of the organization and resources available to mental health professionals in the Balkans who work with children and adolescents. For information gathering, we used a specifically designed questionnaire that covers demographic information, the percentage of children and adolescents who receive the necessary help, a survey of legislation and national policies, services offered in the private and the public sector, the type of training for mental health workers, special educational services offered, types of outpatient and inpatient care, and different treatment modalities used in everyday practice.

Results

Seven countries have participated in this study, and following people provided us with the information Bosnia and Herzegovina (only Republica Srpsla as an informer), Bulgaria, Former Yugoslav Republic of Macedonia (FYROM), Greece, Montenegro, Romania and Serbia.

Demographic information about the countries which have participated in this survey, including the number of children and adolescents in respective populations, are shown in table 1.

The percentage of children and adolescents who receive help was available for FYROM, Greece, and Romania only, 20–25% of FYROM children and adolescents require some kind of psychiatric assistance, but only 10–15% receives help. In Greece, 10% need help, but 20–30% of them receive it. In Romania, 880, 709 children and adolescents require the use of mental healthcare system, but only 120,000 receive help.

CAMH policies and legislation

In The Republic of Srpska, CAMH issues are covered by the Law for the Protection of People with Mental Health Disorders. In Bulgaria, there is a National Strategy for Child Protections (2008–2018) and Child Protection Act against Abuse and Exploitation by Adults (2000). FYROM CAMH is protected and planned by several documents: National Policy on Mental Health (2006–2010), National Strategy on Adolescent Health, Standards of Early Learning and Development (2009), Programme for Active Health Promotion for Mothers and Children, and Programme for Systematic Examinations.

Greek CAMH services are regulated under the National Health and Welfare Policy. A large-scale reform aiming at re-organization and modernization of an outdated mental health provision system has been in progress since the mid-1980s in Greece.[10,11] The above aims of psychiatric reform were supported by the following legislation:

- Law 1397 of 1983 provided the basic legal framework
- Law 2071 of 1992 introduced the principle of "sectorisation"
- Law 2444 of 1996 dealt with the legal guarantees for persons under court protection orders
- Law 2716 of 1999 set the basic principles of mental health practice in Greece, identified the "units of mental health" and introduced the concept of "social cooperative units" (ΚΟΙΣΠΕ) which would, hopefully, provide persons with mental illness the opportunity to work and ideally live on this work.

In FYROM, there is only an action plan titled Strategy for the Improvement of Mental Health. In Montenegro, there is no legislation specifically aimed at children and adolescents. Romanian CAMH policies and legal regulations are more numerous: Protection of Persons with Mental Illness, Mental Health Law 487/2002, National strategy for the Mental Health of Children, Law Integrated Healthcare, Education and Social services from 2010, and Law for the Protection and Promotion of Child's Rights 272/2004.

Serbia is, along with other countries in the region, at the very beginning of the reforms of the mental health protection system. These reforms include a complex set of measures with the fundamental goal of improving mental health protection, ensuring bet-

Table 1. Demographic data regarding the countries participated in the survey.

Country	*Total population*	*Population under 18*
Republic of Srpska	1,400,000	n/a
Bulgaria	7,504,868	1,117,52
FYROM	2,052,722	402,387
Greece	11,500,500	2,500,000
Montenegro	672,656	125,764
Romania	21,500,000	4,403,542
Serbia	7,498,001	1,654,421

n/a=no data available

ter prevention of mental disorders as well as better strategies for mental health improvement, for the improvement of service quality, availability, equality, and destigmatization. These are some of the goals set in the National Policy and the Action Plan for the protection of mental health made by the National Commission for Mental Health of the Republic of Serbia, founded in December of 2003 by the Republic of Serbia's Ministry of Health. Serbian CAMH is covered by the National Strategy for Youth, National strategy for Mental Health, and mental health legislation.

CAMH services

Child and adolescent mental health programs, as separate residential programs at Medical Schools, exist in Serbia, FYROM, and Greece.

Over 50% of all CAMH services are provided by public, government-owned facilities. In FYROM, joint ventures between the public and the private sectors also significantly contribute to the overall number of services provided, with up to 40%. Most private services are offered and provided in Romania, and they make up one third of all the services provided.

The percentage of services offered by psychiatrists varies between 20% and 90% in different countries in the region. The lowest percentage is in Montenegro, around 20%. In FYROM, 60% of services are provided by psychiatrists, in Bulgaria 70%, 75% in Serbia, and 90% in Greece.

Pediatricians participate in providing services with 5% and 10% in Bulgaria and Serbia respectively, with 30% in Montenegro and FYROM, whereas in Greece the percentage is 70%.

There is no information available for Republic of Srpska or the entire Bosnia and Herzegovina.

Special educational services are provided for children and adolescents with learning disabilities, speech/ language development problems, mental retardation, and socialization difficulties in all countries except for Bulgaria and Romania, where special education in social skills is provided instead. No information was available for FYROM.

The number of child and adolescent psychiatrists (CAPs) varies greatly in the region. There is no exact data for the number of CAPs in Romania and FYROM, and in Montenegro there aren't any at all. In Serbia there are 25 CAPs, in Bulgaria 21, in Republic of Srpska only 4. In Greece, however, there are almost 300. Psychologists, social workers, speech therapists, and psychiatric nurses are available in all the surveyed countries.

There are specific training modules for children and adolescents incorporated in the education and training of psychiatrists, psychologists, pediatricians, social workers, speech therapists, and nurses in all countries.

Montenegro has no organized community-based outpatient care, while organization and services offered differ in other countries. Some or all of the following services are offered in all countries except for Montenegro: outpatient departments, private offices, outreach services, day patient programs, group homes and foster care.

In the Republic of Srpska, there are only outpatient departments and private offices. This part of Bosnia and Herzegovina lacks day hospitals, outreach services, group homes, and organized foster care. Bulgaria lacks only day patient programs, while Serbia and FYROM also offer every type of outpatient service except for outreach services, which are yet to be developed.

Greece is the only country that has all the services in operation although nowadays the financial crisis has had a very negative impact on child psychiatric provision of services.[12]

The profile of inpatient mental healthcare facilities is shown in table 2.

The types of psychopharmacological treatment used in each of the countries studied here are listed in table 3. Other treatment modalities are also available in some or all of the mentioned countries, and they include: herbal medicine (not available in Greece, Serbia, and Republic of Srpska), behavioral modification, learning assistance, speech training, social skills training, parental training and foster care (no data available for Montenegro)

Discussion

Almost all the surveyed countries have developed national plans and strategies regarding child and adolescent mental health. All countries have relatively low percentage of institutionalized patients at the onset of the mental health care reform and a relatively short time period from referral to CAP appointment and examination. In some countries, there are a number of psychosocial programs created by a variety of non-governmental organizations.

However, almost all the countries, except Greece, have an insufficient number of professionals engaged in children and adolescents mental health care protection and promotion; the principle of community mental health care is not promoted, and the cooperation between institutions is not always well developed as it should be. Another possible danger of the chronic lack of specialized professionals is the work overload of working specialists that can lead to emotional exhaustion and burnout, with consequently lowered work efficiency. Burnout syndrome is not uncommon among child psychiatrists even in countries with better developed mental health-care systems.[13] In countries where child health-care protection is insufficiently developed, burnout should be taken into consideration as a serious problem that can reduce the overall quality of care.

A study from USA has shown that an efficient way to reduce emotional exhaustion of professionals working with children is to implement evidence-based procedures.[14] Unfortunately, at this time, there is a lack of epidemiological studies and relative scientific research that could help point the way in which child and adolescent psychiatric services in the region should develop. In order to reform and improve the system, it is first necessary to epidemiologically estimate current needs. A possible reason for this is that there are no well-developed computerized systems for registering and monitoring the incidence and prevalence of mental disorders.

CAMH promotion

In some countries, CAMH is promoted through Children and Adolescent Mental Health Centers; these are good examples of practice. By increasing the number of patients treated in primary healthcare centers, the pressure on CAP services should be decreased. Also, this enables a greater number of children and adolescents to be screened for possible mental health problems. The development of mobile educative teams for mental health of children and adolescents within primary health-care centers would enhance a more proactive approach to CAMH promotion.

Developing anti-stigma strategies and programs, as well as psychological support and assistance within

Table 2. Inpatient mental healthcare facilities in the countries participated in the survey.

Country	*General hospitals*	*Pediatric hospitals*	*Beds (n)*	*Hospital treatment duration*	*Time from referral*
Republic of Srpska	n/a	n/a	9	15	n/a
Bulgaria	n/a	n/a	3 (50)	10–15	
FYROM	n/a	n/a	n/a	7	5–7 days
Greece	200/50	500/200	50	50	–8 months
Montenegro	n/a	n/a	None	n/a	n/a
Romania					7–14 days
Serbia			50	20	1 month

n/a=no data available

Table 3. Pharmacological treatments used in the countries studied.

Country	*Type of medication*	*Provisions for medication*
Republic of Srpska	All, except for psychostimulants, newer antidepressants and antipsychotics	No
Bulgaria	All, except for newer antidepressants and antipsychotics	No
FYROM	All recommended drugs	Yes
Greece	All known	Yes
Montenegro	No data	n/a
Romania	All known	Yes
Serbia	All recommended, except for newer antidepressants and antipsychotics	No

n/a=no data available

different services offered to children and adolescents (e.g. schools, kindergartens) are possible forms of actions that could be taken along with establishing peer groups and development of youth clubs and preventive work through schools and mass media.

CAMH policy in new democracies – How to invest in basic modern principles

Promotion and prevention needs to be based on strengthening the resilience of children and parents, and not on stigmatizing them after a problem is identified. A balance within the biopsychosocial paradigm needs to be restored and a debate is needed with evidence-based arguments. Management of each case needs to be based on empowerment, nurturing protective factors, individual strength, family and community, instead of looking only for individual pathology and its cure. CAMH field is too complicated to be dominated by a narrow biomedical model. Coalition of "willing" individuals and organizations needs to be formed, including professionals, service users, and relatives, politicians, mass media, and the emerging NGO sector.

Conclusion

All CAMH professionals from Balkan countries believe that a combination of "top-down" and "bottom-up" approach is needed in developing CAP in the region. A combination of passion (enthusiasm) and rational (evidence-based) decisions is necessary. On the other hand, a combination of biopsychosocial paradigm with modern public health approaches which are promoting the open debate and reasonable compromises with opponents of reforms, without losing the main direction. Consensus on common goals and on the best way to reach them, in combination with involvement and motivation of main stakeholders may result in improving services, legislation and approach to children and adolescents. We need to look at the process of transition, not as a risk, but as an opportunity for success.

Παιδική και εφηβική Ψυχιατρική: Η κατάσταση στα Βαλκάνια

M. Pejovic-Milovancevic,[1,2] V. Miletic,[3] D. Anagnostopoulos,[4] M. Raleva,[5] V. Stancheva,[6] M. Burgic-Radmanovic,[7] Z. Barac-Otasevic,[8] V. Ispanovic[9]

[1]School of medicine, University of Belgrade, [2]Institute of Mental Health, Belgrade,
[3]Association for Mental Health Promotion, Belgrade, Serbia,
[4]Associate Professor of Child Psychiatry, University of Athens, Athens, Greece,
[5]University Clinic of Psychiatry, Skopje, Former Yugoslav Republic of Macedonia,
[6]Faculty of Public Health and Sport South-West University "Neofit Rilski" Blagoevgrad, Bulgaria,
[7]Clinic for Psychiatry, Clinical Center of Banja Luka, Bosnia and Herzegovina,
[8]Medical Clinical Center of Montenegro, Psychiatric Clinic Podgorica, Montenegro,
[9]Faculty for Special Education and Rehabilitation, University of Belgrade, Serbia

Ψυχιατρική 2014, 25:48–54

Στην παρούσα εργασία εξετάζεται η κατάσταση της παιδικής και εφηβικής Ψυχιατρικής στις ακόλουθες βαλκανικές χώρες, Ελλάδα, Σερβία, Βουλγαρία, Ρουμανία, Βοσνία και Ερζεγοβίνη, ΠΓΔΜ και Μαυροβούνιο. Αυτές οι χώρες είναι νέες δημοκρατίες, εκτός της Ελλάδας, και βρίσκονται σε μεταβατικό στάδιο οργάνωσης των υπηρεσιών ψυχικής υγείας. Στο σύνολό τους έχουν ενεργοποιήσει προγράμματα αλλαγής της ψυχιατρικής περίθαλψης στη κατεύθυνση της αποασυλοποίησης και της ανάπτυξης εξωνοσοκομειακών δομών αντιμετώπισης των ψυχικών διαταραχών. Η Παιδοψυχιατρική ειδικότητα εξακολουθεί να υπολείπεται σε ανάπτυξη της Ψυχιατρικής των ενηλίκων σε πολύ

σημαντικό, αν και διαφορετικό, βαθμό μεταξύ αυτών των χωρών. Ο αριθμός των προσφερόμενων υπηρεσιών ψυχικής υγείας για παιδιά και εφήβους κρίνεται ανεπαρκής και το είδος των υπηρεσιών περιορισμένο και ελλιπές. Η κατάσταση αυτή αντανακλάται και στον περιορισμένο αριθμό των παιδοψυχιάτρων και των άλλων ειδικών ψυχικής υγείας για παιδιά και εφήβους. Καθώς και στην παντελή απουσία (Μαυροβούνιο) ή την ανεπάρκεια ειδικών προγραμμάτων και δράσεων για τα παιδιά και τους εφήβους. Το ίδιο ισχύει και για τη νομοθεσία για την ψυχική υγεία. Η Ελλάδα αποτελεί την εξαίρεση τόσο στην ανάπτυξη όλου του φάσματος των υπηρεσιών, του αριθμού των ειδικών, όσο και στη διαμόρφωση επαρκούς νομοθετικού πλαισίου με την επιπρόσθετη ενίσχυση τού από την υιοθέτηση όλων των διεθνών συμβάσεων για τα δικαιώματα του παιδιού. Σ' όλες τις χώρες παρατηρείται μεγάλη αύξηση των παιδιών και εφήβων που έχουν ανάγκες ψυχικής υγείας. Ιδιαίτερη σημασία δίνεται στην επίδραση των βίαιων και απότομων αλλαγών, που συνέβησαν στις περισσότερες χώρες, στην εμφάνιση αυξημένης και συνδεόμενης με το στρες ψυχοπαθολογίας και ψυχοκοινωνικών προβλημάτων στα παιδιά και τις οικογένειες. Παρατηρείται ιδιαίτερη ανάπτυξη των Μη Κυβερνητικών Οργανώσεων σε όλες τις χώρες, οι οποίες αναλαμβάνουν να πραγματοποιήσουν σημαντικό μέρος του μεταρρυθμιστικού έργου. Επισημαίνεται η ανησυχητική παρουσία του φαινομένου της επαγγελματικής εξουθένωσης και της μετανάστευσης των ειδικών από τις χώρες τους. Τέλος υπογραμμίζεται η κοινή ανάγκη για την ανάπτυξη εκπαιδευτικών προγραμμάτων και αντίστοιχων κλινικών πρακτικών στο σύνολο των βαθμών πρόληψης που να ευνοούν τη διεπιστημονική συνεργασία, τη βιοψυχοκοινωνική προσέγγιση στην κατανόηση και την αντιμετώπιση των ζητημάτων ψυχικής υγείας καθώς και η ανάπτυξη της συνεργασίας όλων των θεσμών γύρω από το παιδί (εκπαίδευση, υγεία κ.λπ.). Όλα αυτά κρίνεται σκόπιμο να αποτυπώνονται σε ένα εθνικό σχέδιο προαγωγής της ψυχικής υγείας των παιδιών, στη βάση του οποίου θα μπορούσε να αναπτυχθεί η απαραίτητη διακρατική συνεργασία των βαλκανικών χωρών για την προαγωγή της έρευνας, της ανταλλαγής εμπειριών, των κοινών πρακτικών, της αλληλοκατανόησης και του αμοιβαίου οφέλους.

Λέξεις ευρετηρίου: Παιδοψυχιατρική, υπηρεσίες, ψυχική υγεία, βαλκανικές χώρες.

References

1. Lecic-Tosevski D, Christodoulou N, Kontaxakis V, Christodoulou GN. Provision of psychiatric services and mental healthcare reform in Eastern Europe and the Balkans. *Eur Psychiatr Rev* 2008, 1:9–11
2. Priebe S, Bogic M, Ajdukovic D, Franciskovic T, Galeazzi GM, Kucukalic A et al. Mental disorders following war in the Balkans – A study in five countries. *Arch Gen Psychiatry* 2010, 67:518–528
4. Marotic V, Miletic V, Pejovic Milovancevic M. Adolescents' Attitude towards Mental Health Problems. *Psychiatr Tod* 2010, 42:17–25
5. Aarons GA, Hurlburt M, Horwitz SM. Advancing a conceptual model of evidence-based practice implementation in child welfare. *Administr Pol Ment Hlth* 2011, 38:4–23
6. Horowitz McCue S, Landsverk J. Methodological issues in child welfare and children's mental health implementation research. *Administr Pol Ment Hlth* 2011, 38:1–3
7. Reid GJ, Cunningham CE, Tobon JI. Help-Seeking for Children with Mental Health Problems: Parents' Efforts and Experiences. *Administr Pol Ment Hlth* 2011, 38:384–397.
8. Sayal K. Annotation: Pathways to care for children with mental health problems. *J Child Psychol Psychiatry* 2006, 47:649–659.
9. Lecic-Tosevski D, Draganic Gajic S, Pejovic-Milovancevic M. State of psychiatry in Serbia-problems, advances and perspectives. *Int Rev Psychiatry* 2012, 24:341–346
10. Madianos MG, Christodoulou GN. Reform of the mental health care system in Greece. *Int Psychiatry* 2007, 4:6–9
11. Christodoulou G, Ploumpidis D, Christodoulou N, Anagnostopoulos D. Mental Health Profile of Greece. *Int Psychiatry* 2010, 7:64–67
12. Anagnostopoulos DK, Soumaki E. The impact of socio-economic crisis on mental health of children and adolescents. *Psychiatriki* 2012, 23:15–16
13. Korkeila JA, Töyry S, Kumpulainen K, Toivola JM, Räsänen K, Kalimo R. Burnout and self-perceived health among Finnish psychiatrists and child psychiatrists: a national survey. *Scand J Public Hlth* 2003, 31:85–91
14. Aarons GA, Fettes DL, Flores LE, Sommerfeld DH. Evidence-based practice implementation and staff emotional exhaustion in children's services. *Behav Research Ther* 2009, 47:954–960

Corresponding author: M. Pejovic-Milovancevic, Associate Professor of Child Psychiatry, School of Medicine, University of Belgrade, Institute of Mental Health, Belgrade, Serbia
e-mail: mpejovic@eunet.rs

Psychiatry training in the United Kingdom - Part 1: A general overview

K. Kasiakogia,[1] N. Christodoulou[2,3]

[1]C1ST6 Forensic Psychiatry, West of Scotland,
[2]United Kingdom Division of the Hellenic Psychiatric Association,
[3]University of Nottingham, United Kingdom

Psychiatriki 2014, 25:55–60

In recent years there has been a strong trend of emigration of Greek medical doctors. The reason for this phenomenon is certainly multifactorial, but it has been greatly exacerbated due to the latest financial crisis. The United Kingdom is one of the most popular destinations amongst emigrating Greek psychiatric doctors, as reflected by official data and by the sheer volume of requests for information received by the United Kingdom Division of the Hellenic Psychiatric Association. There are many systemic and practical differences between the Greek and the United Kingdom health systems, which complicate training and further career decisions. These complex differences make it hard for psychiatric doctors to decide which steps to take, and often result in them making the "wrong" decision. These "wrong" decisions are very often the result of poor information or misinformation. For instance many doctors are confused about the equivalence of training and service grades between Greece and the United Kingdom, what a good portfolio means, or the significance of the MRCPsych exam. This information exists, sometimes in comprehensive ways on the internet, but for doctors who are not familiar with the system, finding this information can be a time-consuming and laborious task. Therefore, providing a starting point with realistic and useful information about psychiatric training and generally career progression in the United Kingdom to Greek psychiatric doctors has become very important. The United Kingdom Division of the Hellenic Psychiatric Association has decided to pick up the role of providing exactly that information. The first part of this two-piece paper provides a starting point for Greek doctors considering the move to the United Kingdom for training and/or work in psychiatry. Firstly, it gives a general overview of psychiatric training in the United Kingdom, and explains that the pragmatic equivalence between training stages between Greece and the United Kingdom often differs from the formal equivalence. It also explains the salient differences between the Greek and the United Kingdom's health systems and highlights some common pitfalls. Furthermore, it explains some career options psychiatric trainees and specialists can follow in the UK, including clinical and academic training and service posts. The second part of this paper explores in more detail the structure and inner workings of psychiatric training, again emphasising the important differences between the Greek and the United Kingdom's training systems, and highlighting those differences that may be useful to a transitioning doctor. This diptych is meant to be informative, not advisory, and thus is not meant to either encourage or discourage the migration of interested parties.

Key words: Psychiatric training, Greece, United Kingdom, specialisation, migration

Introduction

Recent years have seen a significant number of Greek doctors emigrate from Greece to the United Kingdom in search of training and employment in Psychiatry. This forms part of a significant increase in rates of emigration of medical professionals out of Greece (5-fold over the past 5 years, 2.5-fold in 2012 alone).[1] Despite hopes for harmonisation in psychiatric training systems across Europe,[2] significant differences have been evident,[3] and still exist.[4] Therefore it is expected for Greek doctors to feel perplexed when faced with the prospect of emigrating to the UK for training. This major decision is not necessarily the right one for everyone and therefore it would make sense for interested parties to have enough information in order to make an informed choice. Providing this information is exactly the purpose of this two-part paper, which is commissioned and prepared by the United Kingdom Division of the Hellenic Psychiatric Association:

Part one offers a general overview of psychiatry training in the United Kingdom, and specific advice for Greek doctors wanting to train or practice abroad.

Part two will focus on the particulars of psychiatry training in the United Kingdom and offer tips for career success from an insider's perspective.

The information provided in these two articles is to our knowledge correct and accurate at the point of writing (September 2013). However, we have by no means explored all career options and things are ever-changing (τα πάντα ρει), therefore the reader is advised to complement these articles with their own research. Also, all opinions expressed here are those of the authors and not the official position of the Hellenic Psychiatric Association. Finally, these two papers are by no means an attempt either to encourage or discourage Greek doctors who may be thinking about emigrating to the UK, and are only meant as a helpful source of information.

An overview of psychiatric training in the United Kingdom

In 2005 there was a massive (and messy[5,6]) reorganisation of training in the United Kingdom, called "Modernising Medical Careers" (MMC). Through its website.[7] The MMC now offers support to doctors applying for training posts and provides information on changes to the recruitment and training process. Roughly, post-MMC postgraduate psychiatric training in the United Kingdom can be thought of as a three-part process:

- Foundation Years (2 years)
- Core Training (3 years)
- Higher Training (3 years).

Foundation years: Post-graduation, pre-core training

The foundation programme[8] in the United Kingdom comprises of two years (FY1 & FY2). The scope of these two years is for newly qualified doctors to rotate between jobs in various medical and surgical specialties every 4–6 months and thus get generic clinical experience, which will allow them to operate safely in their chosen specialty. These years can be labour-intensive but offer invaluable field experience.

In view of the fact that in Greece medical training takes six years –as opposed to five years in the United Kingdom– Greek medical school graduates often argue that FY1 competencies are covered by the penultimate medical school year and therefore apply straight to FY2 posts. Some have even gone as far as to argue that their time working in αγροτικό (=rural medical service) was equivalent to FY2 and thus would be eligible to apply straight to core psychiatry training. In our view such an argument is rarely tenable, and by-passing foundation training is absolutely not advisable for those without at least equivalent clinical experience.

Core psychiatry training: Post foundation, pre-MRCPsych

Core training (CT 1–3) in Psychiatry involves a three-year job rotation through different psychiatric sub-specialties. Broadly speaking, it serves as the equivalent of the 3 ½ years of psychiatric training in the Greek training system. Within those three years, trainees are expected to pass the various parts of the MRCPsych exam, and by the end of their core training become members of the Royal College of Psychiatrists.

Core training posts are awarded after competitive interviews. Applications for core training posts are currently exclusively coordinated by the Royal College of Psychiatrists.[9] The applications are run within strict deadlines, so prospective applicants are very strongly advised to pay close attention to deadlines for application submission well in advance in order to avoid crushing disappointment. One needs to score over the "shortlisting threshold" to be called for an interview. The process is clear and transparent. The shortlisting framework offers invaluable advice on where to focus your CV building efforts prior to application. More information on the Royal College of Psychiatrists website.[7]

Although completion of a core psychiatry rotation is the norm for entry into higher specialty training, it is not absolutely necessary. It is theoretically possible (but practically difficult and generally not advisable) to complete core training/achieve membership by working on a series on Fixed Term Specialty Training Appointments (FTSTA).

Higher psychiatry training: Post-MRCPsych

Higher specialist training (ST4–6) in Psychiatry is a three-year programme in one psychiatric subspecialty. For example, higher trainees in Old Age Psychiatry will normally only work in Old Age Psychiatry, or trainees in Psychotherapy will normally only work in Psychotherapy for three years. There is no equivalent of Higher Training in the Greek specialisation system. At the end of the three years a Certificate of Completion of Training (CCT) is awarded without exit exams, but subject to satisfactory progression.

The particulars of higher training applications are largely the same as per core training. A Greek trained doctor, without MRCPsych (i.e. Royal College membership) and without proof of having attained core training competencies would find it hard applying for higher training.

Some common misconceptions

It is a common Greek misconception that the more "publications" one has under their belt, the more likely they are to be successful in securing a training post. Alas, this is not the case. Once a candidate is called for an interview the slate is wiped clean and all candidates have an equal chance to impress the interviewing panel (i.e. the shortlisting score is not carried forward and in ordinary situations will not influence final candidate selection).

As a general rule being experienced is valued and appreciated, however for the purpose of allowing all doctors to compete on an equal footing experience caps apply to specialty training in the United Kingdom (this is not specific to psychiatry; it applies to all medical specialties). Experience caps are absolute limits on length of past psychiatry experience (in any grade, in any country) that render a candidate ineligible to apply to posts for which they are overqualified. What this means in practice is, that someone who has worked in psychiatry in Greece for over 18 months may find themselves disadvantaged during the application/interview process. It used to be an absolute requirement that doctors applying to CT1 psychiatry had less than 18 months experience in the field (whether they worked in the United Kingdom or abroad) however in the 2013 person specification this appears to have been downgraded simply to "desirable". Greek doctors hoping to train in psychiatry in the United Kingdom would be strongly advised to apply earlier in their career rather than later.

In theory an experienced Greek psychiatry trainee could apply to CT2 or 3. Although this appears to be an attractive option, and could certainly be used as a loophole to top up Greek training for the purpose of speeding up the process for the award of the Greek equivalent of the Certificate of Completion of Training (τίτλος ειδικότητας), this career path would not lead to the award of a CCT in the United Kingdom as Greek training is not prospectively approved by the RCPsych.

The clinical academic path

In the United Kingdom you have an option to train in academic psychiatry in parallel with clinical training. The Clinical Academic path broadly follows the same principles as clinical training, but progression to higher levels of training in addition requires competencies in academic fields. Entry in clinical academic posts is generally considered more difficult and requires some academic background (publications, presentations, masters, doctorate etc.), but

the process and application procedures are essentially the same as with pure clinical training.

At CT1-3 level, clinical academic trainees are called Academic Clinical Fellows (ACF) and spend roughly a third of their time in academic activities. The latter is typically composed of research, teaching and studying towards a higher degree (MSc, MPhil, PhD etc.).

Normally (although there are exceptions), ACFs will only progress to ST 4–6 level and become Clinical Lecturers once they prove all clinical and academic competencies for CT 1–3 level, pass the MRCPsych exam and complete their PhD (or other higher degree). One can apply to become a Clinical Lecturer even if they have not completed ACF, provided that they fulfil these competencies.

Clinical Lecturers have a dual role: In their academic capacity they are entry level academics (=λέκτορας) and University staff (=μέλος ΔΕΠ), and in their clinical capacity are ST 4–6 (Specialist Registrars/ Higher Trainees). They work 50% for the University (lecturing medical students, doing research etc.) and 50% in clinical settings (as an ST 4–6). At the end of their 3 years they get a CCT, and may apply for a regular consultant post or an academic post (Senior Lecturer/ Associate Professor etc.).

For more on Clinical Lectureships (and the clinical academic path in general) refer to the National Institute for Health Research.[10]

Greek training and Health Service comparison with the UK

It is very important for doctors moving between Greece and the United Kingdom to understand the many differences between the two systems as there is no direct equivalence between the Greek and the United Kingdom training and service grades.

Training

In Greece, psychiatric training is not necessarily preceded by general medical practice, is 5 years long and structured as time spent in general medicine (6 months), neurology (1 year) and psychiatry (3 ½ years). In the United Kingdom training is preceded by 2 foundation years, is 6 years long and structured around competencies and levels (core CT 1–3 and higher ST 4–6). For example, by the end of their CT1 year trainees are expected to have achieved certain competencies. Only if they have will they then progress to CT2. In addition, trainees at CT3 level also have to pass the MRCPsych exam before they can continue to higher training. The MRCPsych exam is a four-stage exam which grants membership to the Royal College of Psychiatrists. More on the MRCPsych and progression in training in the second part of this paper.

Post-training

After completion of their training, United Kingdom trainees can become Consultant Psychiatrists. A UK Consultant is expected to function clinically and operationally at the level of a Greek «Διευθυντής Κλινικής».

Even though the Greek grade of επιμελητής "epimelitis A&B" is formally considered "consultant equivalent" (they have a CCT equivalent=τίτλος ειδικότητας, and can be registered as specialists), psychiatrists at this grade in Greece are not likely to secure or survive a United Kingdom consultant job easily. The disparity arises not so much due to the lack of formal qualifications (for instance MRCPsych), but mostly due to a gap in competencies: United Kingdom consultants are expected to have a high level of clinical autonomy and an enhanced role (teaching, management, clinical governance, leadership etc) compared to a Greek επιμελητή. Practically, the «επιμελητής A&B» grade would be equivalent to ST4-6/associate specialists/staff grades in the United Kingdom.

Other United Kingdom doctors' grades

In the United Kingdom opportunities are available for doctors to work within the NHS in non-training or "service" posts. These posts offer a temporary interlude until the doctor chooses to re-join training, or they maybe a permanent career choice. Non-training posts such as staff grade/trust grade/"specialty doctor" (not to be confused with "specialty trainee", which is a training grade!) and the now defunct associate specialist grade can be permanent or fixed term posts. Often doctors working in such posts are very experienced, some even have MRCPsych or a CCT. Non-training posts offer doctors the opportunity to gain extra experience, or the chance to work in a more clinical role, without the bur-

den of the management and other duties that come with a consultant appointment. It is not unusual for CCT/«τίτλος ειδικότητας» holders (not only in psychiatry but all specialties) to spend some time working in staff grade posts before reconsidering their options for consultant employment.

Conclusion

The present paper presents an overview of the options offered to psychiatric doctors considering the move from Greece to the United Kingdom. In the second part we will explore the inner workings of psychiatric training in the United Kingdom.

Η Ψυχιατρική εκπαίδευση στο Ηνωμένο Βασίλειο - Μέρος 1ο: Μια γενική θεώρηση

K. Kasiakogia,[1] N. Christodoulou[2,3]

[1]C1ST6 Forensic Psychiatry, West of Scotland,
[2]United Kingdom Division of the Hellenic Psychiatric Association,
[3]Clinical Lecturer in Psychiatry, University of Nottingham, United Kingdom

Ψυχιατρική 2014, 25:55–60

Είναι γνωστό πως τα τελευταία χρόνια παρατηρείται μια ισχυρή τάση μετανάστευσης Ελλήνων ιατρών προς το εξωτερικό. Οι αιτίες αυτού του φαινομένου είναι σίγουρα πολυπαραγοντικές, αλλά έχει ενταθεί σημαντικά λόγω της πρόσφατης οικονομικής κρίσης. Το Ηνωμένο Βασίλειο είναι ένας από τους πιο δημοφιλείς προορισμούς μεταξύ αυτών που επιλέγουν οι Έλληνες ειδικοί και ειδικευόμενοι ψυχίατροι, όπως αυτό προκύπτει από επίσημα στοιχεία και από τον μεγάλο αριθμό ερωτήσεων που δέχεται τελευταία το περιφερειακό τμήμα Ηνωμένου Βασιλείου της Ελληνικής Ψυχιατρικής Εταιρείας. Οι συστημικές και πρακτικές διαφορές μεταξύ του ελληνικού και του βρετανικού συστήματος υγείας είναι πολλές, και μπορούν δυνητικά να περιπλέξουν τη λήψη αποφάσεων σταδιοδρομίας. Αυτές οι πολύπλοκες διαφορές καθιστούν δύσκολη τη λήψη αποφάσεων για τους ψυχιάτρους, με αποτέλεσμα συχνά να κάνουν «λάθος». Αυτές οι «λανθασμένες» αποφάσεις είναι πολύ συχνά αποτέλεσμα ελλιπούς πληροφόρησης ή παραπληροφόρησης. Για παράδειγμα, μεταξύ των ιατρών επικρατεί σύγχυση για την αντιστοιχία των βαθμών της κλινικής ιεραρχίας και της ειδίκευσης ανάμεσα στην Ελλάδα και το Ηνωμένο Βασίλειο, για το τι σημαίνει ένα καλό χαρτοφυλάκιο, ή για τη σημασία των εξετάσεων για το MRCPsych. Αν και υπάρχουν εκτενείς πληροφορίες για αυτά τα ζητήματα στο διαδίκτυο, η εύρεσή τους μπορεί να γίνει μια χρονοβόρα και επίπονη διαδικασία, ειδικά για κάποιον που δεν έχει οικειότητα με το θέμα. Ως εκ τούτου, υπάρχει ανάγκη παροχής ρεαλιστικών και χρήσιμων πληροφοριών στους Έλληνες ειδικούς και ειδικευόμενους ψυχιάτρους σχετικά με την ψυχιατρική εκπαίδευση και γενικότερα για τη σταδιοδρομία στην Ψυχιατρική στο Ηνωμένο Βασίλειο. Το περιφερειακό τμήμα Ηνωμένου Βασιλείου της Ελληνικής Ψυχιατρικής Εταιρείας αποφάσισε να καλύψει ακριβώς αυτήν την ανάγκη. Το πρώτο μέρος αυτού του δίπτυχου άρθρου παρέχει ένα σημείο εκκίνησης για τους Έλληνες ιατρούς που εξετάζουν τη μετάβασή τους στο Ηνωμένο Βασίλειο για εκπαίδευση ή/και εργασία στην Ψυχιατρική. Πρώτον, επιχειρεί μια γενική επισκόπηση της ψυχιατρικής εκπαίδευσης στο Ηνωμένο Βασίλειο, και εξηγεί πως η πραγματική αντιστοιχία μεταξύ των σταδίων εκπαίδευσης στην Ελλάδα και το Ηνωμένο Βασίλειο συχνά απέχει από την επίσημη αντιστοιχία. Επίσης, εξηγεί τις ειδοποιούς διαφορές μεταξύ των συστημάτων υγείας της Ελλάδας και του Ηνωμένου Βασιλείου και επισημαίνει ορισμένες κοινές παγίδες. Επιπλέον, εξηγεί ορισμένες από τις επιλογές σταδιοδρομίας που μπορούν να ακολουθήσουν οι εκπαιδευόμενοι και ειδικοί ψυχίατροι στο Ηνωμένο Βασίλειο, συμπεριλαμβανομένων των κλινικών, ακαδημαϊκών και λειτουργικών θέσεων.

Το δεύτερο μέρος του άρθρου διερευνά πιο λεπτομερώς τη δομή και τους μηχανισμούς της ψυχιατρικής εκπαίδευσης, με έμφαση και πάλι στις σημαντικές διαφορές μεταξύ των εκπαιδευτικών συστημάτων της Ελλάδας και του Ηνωμένου Βασιλείου, και επισημαίνει τις διαφορές αυτές που ενδέχεται να φανούν χρήσιμες σε αυτούς τους ιατρούς που βρίσκονται σε μεταβατικό στάδιο. Το δίπτυχο αυτό άρθρο έχει ενημερωτικό και όχι συμβουλευτικό σκοπό, ως εκ τούτου δεν σκοπεύει να ενθαρρύνει ή να αποθαρρύνει τη μετανάστευση των ενδιαφερομένων.

Λέξεις ευρετηρίου: Ψυχιατρική εκπαίδευση, Ελλάδα, Ηνωμένο Βασίλειο, ειδικότητα, μετανάστευση.

References

1. Athens Medical Association. Announcement 30/5/2013. www.isathens.gr (accessed 18/9/2013)
2. Margariti MM, Kontaxakis VP, Christodoulou GN. Toward a European harmonization of psychiatric training: the prospects of residency training in Greece. *Acad Psychiatry* 2002, 26:117–124
3. Margariti MM, Kontaxakis VP, Madianos M, Feretopoulos G, Kollias K, Paplos K et al. Psychiatric education: a survey of Greek trainee psychiatrists. *Med Educ* 2002, 36:622–625
4. Oakley C, Malik A. Psychiatric Training in Europe. *Psychiatrist* 2010, 34:447–450
5. Delamothe T. Modernising medical careers laid bare. *BMJ* 2007, 335:733–734
6. Tooke J. *Aspiring to excellence: findings and recommendations of the independent inquiry into Modernising Medical Careers*. MMC Inquiry, London, 2007
7. Modernising Medical Careers: http://www.mmc.nhs.uk/
8. Foundation Programme: http://www.foundationprogramme.nhs.uk
9. www.rcpsych.ac.uk.
   Psychiatry training structure in the United Kingdom: http://www.rcpsych.ac.uk/PDF/Make%20a%20difference.%20Improve%20lives.%20A%20career%20in%20psychiatry.pdf
   Details of the application process: http://www.rcpsych.ac.uk/traininpsychiatry/nationalrecruitment.aspx. http://www.rcpsych.ac.uk/pdf/Shortlisting%20framework-Feb2013-CT1.pdf
10. National Institute for Health Research: http://www.nihrtcc.nhs.uk/intetacatrain/cl

Corresponding author: N. Christodoulou, Clinical Lecturer in Psychiatry, Room B08, Institute of Mental Health, University of Nottingham Innovation Park, Jubilee Campus, Triumph Road, Nottingham, NG7 2TU
e-mail: nikoschristodoulou@gmail.com

Obituary
Νεκρολογία

Λευτέρης Λύκουρας

(1945–2013)

Καθηγητής Ψυχιατρικής Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών

Στις 11 Δεκεμβρίου 2013, λίγες ημέρες πριν από την ονομαστική του εορτή, έφυγε από τη ζωή ο Καθηγητής της Ψυχιατρικής Λευτέρης Λύκουρας.

Πιστεύω ότι είναι πολύ δύσκολο για κάποιον να αποχαιρετήσει με λόγια έναν συνάδελφο και συνεργάτη. Η δυσκολία αυτή μεγαλώνει όταν ο άνθρωπος που έφυγε ήταν και ένας πραγματικός φίλος.

Γνώρισα τον Λευτέρη πριν από 37 χρόνια στο Αιγινήτειο Νοσοκομείο όπου συνέχισα την ειδικότητά μου στην Ψυχιατρική. Έκτοτε, είχαμε μια κοινή πορεία στον χώρο της ακαδημαϊκής ψυχιατρικής και αξιωθήκαμε να φθάσουμε να διευθύνουμε τις δύο Πανεπιστημιακές Ψυχιατρικές Κλινικές στο Αιγινήτειο και στο Αττικό Νοσοκομείο διαδεχόμενοι τους δασκάλους μας. Η συνεργασία μας όλα αυτά τα χρόνια, που βασιζόταν σε αμοιβαία βαθιά εκτίμηση, ήταν όχι μόνο εποικοδομητική, αλλά θα έλεγα πραγματικά υποδειγματική, αφού οι δύο κλινικές μετείχαν από κοινού στα προγράμματα εκπαίδευσης των φοιτητών της Ιατρικής και των ειδικευόμενων στην Ψυχιατρική, στο μεταπτυχιακό πρόγραμμα «Προαγωγή Ψυχικής Υγείας – Πρόληψη Ψυχιατρικών Διαταραχών» και σε άλλα μετεκπαιδευτικά προγράμματα και σεμινάρια, καθώς και σε συμπόσια σε διάφορα συνέδρια ψυχιατρικής και άλλων ειδικοτήτων. Επίσης, ιδρύσαμε το «Κολέγιο Εκπαίδευσης, Έρευνας, Πρόληψης και Θεραπείας των Ψυχιατρικών Διαταραχών» στο οποίο ήταν ο Πρόεδρος.

Όσοι είχαν την τύχη να γνωρίσουν τον Καθηγητή, αλλά και τον άνθρωπο Λευτέρη Λύκουρα και να συνεργαστούν μαζί του θα θυμούνται τη σοβαρότητά του, την ευθύτητα της γνώμης του, το υψηλό αίσθημα ευθύνης που τον διέκρινε, το ακαδημαϊκό του ήθος και τον σεβασμό προς τους δασκάλους του, αλλά και προς τους συνεργάτες του. Είχε ένα ιδιαίτερο πάθος για τη διδασκαλία και την έρευνα, καθώς και για την έκδοση βιβλίων που θα βοηθούσαν στην πληρέστερη εκπαίδευση. Αγωνίστηκε με χαρακτηριστική συνέπεια για την πρόοδο της Ελληνικής Ψυχιατρικής, αλλά και ιδιαίτερα για την πρόοδο της Β' Πανεπιστημιακής Ψυχιατρικής Κλινικής στο Αττικό Νοσοκομείο στην οποία υπηρέτησε ως διευθυντής της από το 2004 μέχρι το 2012 που αφυπηρέτησε και στην οποία αφιέρωσε σχεδόν όλη τη δραστηριότητά του.

Αισθανθήκαμε μεγάλη θλίψη όταν ζήσαμε από κοντά την έναρξη και στη συνέχεια την επιβεβαίωση της σοβαρότητας του προβλήματος υγείας που αντιμετώπισε. Ο Λευτέρης έδειξε σθένος και μεγάλη καρτερικότητα μέχρι το τέλος της ζωής του. Δεν θα ξεχάσουμε τη σκηνή που του δείξαμε πριν λίγους μήνες το βιβλίο μας «Σύγχρονη Ψυχιατρική», που εκδόσαμε μαζί με τον Καθηγητή Γιάννη Λιάππα, στο οποίο ο ρόλος του στη δομή και έκδοσή του ήταν καθοριστικός. Το βιβλίο αυτό αποτελεί το επιστέγασμα της μακροχρόνιας συνεργασίας μας και το εκτιμήσαμε ως έργο ζωής, ως σημαντικό βοήθημα στο πλαίσιο της συνεχιζόμενης εκπαίδευσης στην Ψυχιατρική και ως κληρονομιά για τους διαδόχους μας.

Η περιπέτεια αυτή της υγείας του με έφερε πλησιέστερα με τη γυναίκα του τη Νίτσα και τα δύο του παιδιά τον Παναγιώτη και την Εύη για τα οποία ήταν υπερήφανος, όπως και εκείνα πρέπει να είναι υπερήφανα για τον πατέρα τους.

Ο Λευτέρης Λύκουρας υπήρξε υπόδειγμα ακαδημαϊκού δασκάλου και άφησε ανεξίτηλα τα ίχνη του στην Ελληνική Ψυχιατρική. Είμαι σίγουρος ότι οι άξιοι μαθητές και συνεργάτες του θα συνεχίσουν με τον ίδιο ζήλο το πολύπλευρο έργο του και την παρακαταθήκη που άφησε.

Γιώργος Ν. Παπαδημητρίου
Καθηγητής Ψυχιατρικής

Future scientific meetings
Προσεχείς επιστημονικές εκδηλώσεις

22ο Πανελλήνιο Συνέδριο Ψυχιατρικής
Ξενοδοχείο Du Lac, Ιωάννινα
10–13 Απριλίου 2014

Οργάνωση: Ελληνική Ψυχιατρική Εταιρεία (ΕΨΕ)
Γραμματεία Συνεδρίου: ERA Ltd, Ασκληπιού 17, 106 80 Αθήνα
Τηλ: (+30) 210-36 34 944, Fax: (+30) 210-36 31 690, E-mail: info@era.gr, Website: www.era.gr/www.22psychiatric2014.gr
Επιστημονική Γραμματεία: ΕΨΕ, Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
Τηλ.: (+30) 210-72 14 148, Fax: (+30) 210-72 42 032, E-mail: psych@psych.gr, Website: www.psych.gr

- **6th International Congress on Brain and Behaviour and 19th Thessaloniki Conference, Thessaloniki, Greece**
  6–8 February 2014
  Organizer: International Society on Brain and Behaviour
  Tel: (+30) 2310-460682, Fax: (+30) 2310-435064
  E-mail: info@praxicon.gr, Website: www.praxicon.gr
- **2014 WPA Regional Congress, Ljubljana Slovenia**
  9–12 April 2014
  Organizer: World Psychiatric Association
  Congress Secretariat: Guarant International
  Tel: (+420) 284 001 444
  E-mail: www.paljubljana2014@guarant.cz
- **22ο Πανελλήνιο Συνέδριο Ψυχιατρικής, Ξενοδοχείο Du Lac, Ιωάννινα**
  10–13 Απριλίου 2014
  Οργάνωση: Ελληνική Ψυχιατρική Εταιρεία (ΕΨΕ)
  Γραμματεία Συνεδρίου: ERA Ltd, Ασκληπιού 17, 106 80 Αθήνα
  Τηλ: (+30) 210-36 34 944, Fax: (+30) 210-36 31 690
  E-mail: info@era.gr
  Website: www.era.gr/www.22psychiatric2014.gr
  Επιστημονική Γραμματεία: ΕΨΕ, Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
  Τηλ.: (+30) 210-72 14 148, Fax: (+30) 210-72 42 032
  E-mail: psych@psych.gr, Website: www.psych.gr
- **3ο Πανελλήνιο Συνέδριο Κλινικής Ψυχοφαρμακολογίας, Χαλκιδική, Ελλάδα**
  24–27 Απριλίου 2014
  Οργάνωση: Ελληνική Εταιρεία Κλινικής Ψυχοφαρμακολογίας (ΕΛΕΨΥ)
  Τηλ. (+30) 210-72 54 383, (+30) 210-72 54 385, Fax: (+30) 210-72 54 384
  E-mail: one2one@ath.forthnet.gr
- **National Association on Dual Diagnosis (NADD) International Congress, Miami, Florida, US**
  7–9 May 2014
  Organizers: NADD (National Association on Dual Diagnosis)
  Collaboration: WPA Section Psychiatry of Intellectual Disability (SPID)
  Contact: (a) Dr Robert J. Fletcher, (b) Dr Marco Bertelli
  E-mail: (a) RFletcher@thenadd.org, (b) bertelli.fi@tiscali.it
  Website: www.thenadd.org
- **International Review of Psychosis and Bipolarity. Athens, Greece**
  9–13 May 2014
  Organizer: International Forum of Psychosis and Bipolarity (IFPB)
  Contact: Prof K.N. Fountoulakis, Tel: (+30) 2310-994 622
  Website: http://www.irbd.org/
- **40ό Πανελλήνιο Ιατρικό Συνέδριο, Αθήνα**
  14–17 Μαΐου 2014
  Οργάνωση: Ιατρική Εταιρεία Αθηνών
  Μαιάνδρου 23, 115 28 Αθήνα
  Τηλ.: (+30) 210-72 11 845, (+30) 210-72 43 161, Fax: (+30) 210-72 15 082
  E-mail: lea@mednet.gr, mednet@mednet.gr
  Website: www.mednet.gr
- **WPA Thematic Conference "Neurobiology and Complex Treatment of Mental Disorders and Addiction", Warsaw, Poland**
  5–7 June 2014
  Organizer: World Psychiatric Association
  Conference Secretariat: Guarant International
  Na Pankraci 17, 14021, Prague 4, Czech Republic
  Tel: (+420) 284 001 444, Fax: (+420) 284 001 448
  E-mail: wpatcwarsaw2014@guarant.cz
  Website: wpatcwasaw2014.com
- **16th International Conference for Philosophy, Psychiatry and Psychology with the title: "Neuroscience, Logics and Mental Development", Varna, Bulgaria**
  26–29 June 2014
  Organizers: (a) International Network for Philosophy and Psychiatry, Balkan, Academy for PPP "Athena Pallada",
  (b) Medical University of Plovdiv, Faculty of Medicine, Plovdiv, University "Paisii Hilendarski"
  Collaboration: Royal College of Psychiatrists (Philosophy Special Interest Group)
  Contact: Prof Drozdstoj Stoyanov
  E-mail: drozdstoj@uni-plovdiv.bg
  Website: www.inpp2014.com/index/.htm
- **International Congress of the World Federation, for Mental Health and the Hellenic Psychiatric Association "Living with schizophrenia", Athens,Greece**
  9–11 October 2014
  Organizers: (a) World Federation for Mental Health, (b) Hellenic Psychiatric Association
  Scientific Secretariat: Hellenic Psychiatric Association, 11 Papadiamantopoulou street, GR-115 28 Athens, Greece
  Tel. (+30) 210-72 14 148, Fax: (+30) 210-72 42 032
  E-mail: psych@psych.gr, Website: www.psych.gr
  Congress Secretariat: ERA Ltd, 17 Asklipiou street, GR-106 80 Athens, Greece
  Tel. (+30) 210-36 34 944, Fax: (+30) 210-36 31 690
  E-mail: info@era.gr, Website: www.era.gr
- **World Psychiatric Association Thematic Conference on Intersectional Collaboration, 5th European Congress of the International Neuropsychiatric Association & 2nd Interdisciplinary Congress on Psychiatry and Related Sciences, Athens, Greece**
  30 October–2 November 2014
  Information: Prof C. Soldatos
  Website: www.psych-relatedsciences.org

PSYCHIATRIKI

Published Quarterly by the Hellenic Psychiatric Association

VOLUME 24

JANUARY–DECEMBER 2013

Subjects intex
Ευρετήριο θεμάτων

Authors index
Ευρετήριο συγγραφέων

ΨΥΧΙΑΤΡΙΚΗ

Τριμηνιαία έκδοση της Ελληνικής Ψυχιατρικής Εταιρείας

ΤΟΜΟΣ 24

ΙΑΝΟΥΑΡΙΟΣ–ΔΕΚΕΜΒΡΙΟΣ 2013

Ευρετήριο θεμάτων
Subjects index

Ευρετήριο συγγραφέων
Authors index

"PSYCHIATRIKI"

INSTRUCTIONS TO CONTRIBUTORS*

PSYCHIATRIKI is the official journal of the Hellenic Psychiatric Association. It is published quarterly and has the same scope as the Hellenic Psychiatric Association, namely the advancement of Psychiatry. The journal invite contributions in the fields of Epidemiology, Psychopathology, Social Psychiatry, Biological Psychiatry, Psychopharmacology, Psychotherapy, Preventive Psychiatry. The journal follows the standards approved by the International Council of Scientific Publishers. For a detailed description of the specifications see "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (www.CouncilScienceEditors.gr). Other sources: *Br Med J* 1991, 302:338–341/*Can Med Assoc J* 1995, 152:1459–1465.

Apart from the printed edition, the journal is freely available in electronic version at the websites: www.psych.gr or www.betamedarts.gr

The journal "PSYCHIATRIKI" accepts manuscripts for consideration with the understanding that they represent original material not previously published (except in abstract form) or submitted for publication elsewhere. All authors of a paper submitted must sign the submission form and declare that they agree with the text of the paper, the publication in the journal and the transfer of the copyright to the publishers. The authors also declare that: (a) there was no source of financial support (if any should be stated), (b) there were no conflicting interests concerning the material submitted, (c) the protocol of the research project has been approved by the Ethics Committee of the Hospital or the Institution within the work was undertaken according to the ethical standards laid down in the Declaration of Helsinki (1995) as revised in Edinburgh (2000) and (d) that the patients gave their informed consent prior to their inclusion in the study.

The acceptance criteria for all papers are the quality and originality of the research and its significance to the journal readership. All papers submitted are first screened by the Editor or members of the Editorial Board for suitability and quality.

If suitable, papers are then reviewed by two reviewers expert in the field. Reviewers are blinded as to the contributors of each paper. The reviewers remain anonymous for contributors. The comments of the reviewers along with proposed revisions or corrections are sent to the authors. The authors are informed of the final decision of the Editorial Board after the procedure of review is over. The names of the reviewers for the past year appear in a list in the first issue of the next year. The Editorial Board reserve the right to modify typescripts to eliminate ambiguity and repetition and improve communication between authors and readers.

* Instructions to contributors and the "submission form" can be found in the first issue of each year of the journal as well as in the website of the HPA: www.psych.gr.

The Journal "PSYCHIATRIKI" is Indexed and included in MEDLINE/PubMed, Index Copernicus, Google Scholar, EMBASE/Excerpta Medica, GFMER, CIRRIE, SCIRUS for Scientific Inf., EBSCOhost™ and in Iatrotek

TYPES OF ARTICLES

1. **Editorials:** Short articles in both English and Greek language covering topics of particular importance, written by members of the Editorial Board by members of International Advisory Board and by invited authors (up to 700 words and 7–8 references).

2. **Review articles:** Should be written by one or two authors. They should not exceed 4,000 words.

3. **Research papers:** These articles must be based on a research protocol. Statistical evaluation of the findings is essential. They should not exceed 3,000 words.

4. **Brief communications:** This section includes research reports which can be accommodated in a small space. They should not exceed 1,500 words.

5. **Special articles:** Invited articles concerning topics of special interest (up to 4,000 words).

6. **Case reports:** This section includes interesting case reports and descriptions of cases where new diagnostic or/and therapeutic methods have been applied (up to 1500 words).

7. **General articles:** These articles may reflect opinions on the theory and practice of Psychiatry, on the systems of provision of psychiatric services, on matters concerning the borderland between Psychiatry and other specialties or disciplines, etc. They should not exceed 2,000 words. The Editorial Board may suggest shortening of these articles in order to be included in the «Letters to the Editor» section.

8. **Letters to the editor:** Brief letters (maximum 400 words) will be considered for publication. These may include comments or criticisms of articles published in *PSYCHIATRIKI*, comments on current psychiatric topics of importance, preliminary research reports (along with a short abstract in Greek).

9. **Book review:** Presentation and critical review of selected books is carried out by the editorial board or by persons invited by it (up to 600 words along with a short abstract in Greek).

10. **Issues in English:** The issues of *PSYCHIATRIKI* will be published in Greek always with an abstract in English. Twice a year the issues will be published in English (with extensive abstract in Greek, about 400 words). In this issue, papers by foreign and Greek writers will be published. Papers by Greek writers could be submitted in Greek or in English. Papers submitted in Greek that have been chosen to publication in English will be translated with the cooperation of the Editorial Board and the writers.

SUBMISSION

Papers either in English or in Greek are considered for publication and should be sent to:

Journal PSYCHIATRIKI
Hellenic Psychiatric Association,
11, Papadiamantopoulou str., GR-115 28 Athens, Greece
e-mail: editor@psych.gr

The original manuscript, three copies as well as a copy on a diskette or an electronic copy by e-mail should be submitted. The text must be written with a word processor compatible with any Windows program, or with any program for a Macintosh computer.

The submitted manuscripts should be accompanied by the "Submission form" accurately filled in.

A code number to be used in further correspondence will be assigned to all papers submitted. Manuscripts should be typewritten, double-spaced on one side of the paper with a margin of at least 3.5 cm. On the right upper corner of the first page a characterization on the article should appear (e.g., Brief Communication, Research Article).

ARRANGEMENT

All pages must be numbered, starting with the title page.

Title page: It indicates the title (which should not exceed 12 words), the names and surnames of the authors, the Institute, Hospital, University, etc. where the work was conducted and the address, telephone number and e-mail of the author who will be responsible for the correspondence. In the same page appreciation for those who have contributed to the presented work can also be included.

Abstract: The second page must include an informative abstract (400–500 words) as well as 4–6 key words.

Main part: Must be divided in sections (e.g., for the Research Papers: Introduction, Material and method, Results, Discussion). Results appearing in the tables should not be reported again in detail in the text.

References: They must be identified in the text by arabic numbers (in brackets) and must be numbered in the order in which they are first mentioned in the text (Vancouver system), e.g. *Birley*[1] *found that... but Alford*[2] *disagreed*. Cite the names of the first six authors. The list of references should include only those publications which are cited in the text.

References should not exceed 100 in the Review articles and the Special articles, 50 in the General articles, 15 in the Brief Communications and in Case reports, and 8 in the Editorials and the Letters to the Editor.

The following paradigms illustrate the various reference categories:

1. Birley JLT, Adear P, Singer D, Rosenberg M. Electrogastrographic studies in elderly patients. *Gastroenterology* 1980, 79:311–314 (Journal Article).
2. Alford J, Nemiah J. Peptic ulcer in childhood. In: Sodeman WA (ed) *Pathologic Physiology*. Saunders, Philadelphia, 1970:457–472 (Chapter in Book).
3. Kinden A. *Stress and emotion*. Springer, Berlin, 1990 (Book).
4. Larsen E, Elliot B. Fatigue in major depression. *Psychiatriki* 2007, (Suppl 1):S143–S144 (Journal Supplement)
5. Silverstone A, Leman H, Stark J. *Attempted suicide by drug-overdose*. Paper presented at 2nd Congress on Suicide behaviour, 4–6 May 2002, Rome, Abstracts Book, pp 212–213 (Conference Presentation - Abstract Book)
6. Henry A, Andrews B. *Critical issues for parents with mental illness*. N.Y. Centre for Mental Health Services 2001 (Cited 2 June 2005) Available from www. mentalorg/publications (Website)

Abbreviations of journals should conform to the style used in *Index Medicus;* journals not indexed there should not be abbreviated.

Tables: They must appear in a separate page, double-spaced. They must be numbered in the order in which they are mentioned on the text, with arabic numbers (table 1). A descriptive concise title should be included. Avoid vertical lines.

Figures: They must be professionally prepared glossy or other camera-ready prints. They must be numbered with arabic numbers (figure 1) in the order in which they appear in the text. The figure number, the authors' names, the title on the paper and the figure title should be written with soft pencil on the back of each figure (or on a label affixed to it). A copy of each table and figure must be included with each copy of the manuscript.

Symbols and abbreviations: Spell out all abbreviations (other than those for units of measure) the first time they are used. Follow Iatriki 1980, 37:139 (in Greek) or «Units, Symbols and Abbreviations: a Guide for Biological and Medical Editors and Authors» (3rd ed, 1977) available from the Royal Society of Medicine of the United Kingdom.

Proofs: Proofs will be sent to the first author of each article. Extensive changes are not allowed in proof.

"ΨΥΧΙΑΤΡΙΚΗ"

ΟΔΗΓΙΕΣ ΓΙΑ ΤΟΥΣ ΣΥΓΓΡΑΦΕΙΣ*

Η *ΨΥΧΙΑΤΡΙΚΗ* είναι το επίσημο όργανο της Ελληνικής Ψυχιατρικής Εταιρείας, εκδίδεται τέσσερεις φορές τον χρόνο και έχει τον ίδιο σκοπό με την Εταιρεία, δηλαδή την προαγωγή της Ψυχιατρικής Επιστήμης. Το περιοδικό δημοσιεύει εργασίες που αναφέρονται στους τομείς της Επιδημιολογίας, Ψυχοπαθολογίας, Κοινωνικής Ψυχιατρικής, Βιολογικής Ψυχιατρικής, Ψυχοφαρμακολογίας, Ψυχοθεραπείας, Προληπτικής Ψυχιατρικής. Οι προδιαγραφές του περιοδικού ταυτίζονται με τις οδηγίες του Διεθνούς Επιστημονικού Συμβουλίου Εκδοτών. Για την αναλυτική περιγραφή των προδιαγραφών βλ. "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (www.CouncilScienceEditors.gr). Άλλες πηγές: *Br Med J* 1991, 302:338–341/*Can Med Assoc J* 1995, 152:1459–1465.

Εκτός από την έντυπη έκδοσή του, το περιοδικό διατίθεται ελεύθερα στην ηλεκτρονική του έκδοση από τις ιστοσελίδες: www.psych.gr ή www.betamedarts.gr

Το περιοδικό "ΨΥΧΙΑΤΡΙΚΗ" δέχεται προς δημοσίευση εργασίες που αφορούν σε πρωτότυπο υλικό που δεν έχει δημοσιευθεί προηγουμένως (εκτός σε μορφή περίληψης) ή δεν έχει υποβληθεί για δημοσίευση κάπου αλλού.

Κατά την υποβολή της εργασίας όλοι οι συγγραφείς πρέπει να υπογράψουν στο τυποποιημένο έντυπο υποβολής ότι συμφωνούν με το περιεχόμενο και αποδέχονται την υποβαλλόμενη προς δημοσίευση εργασία και μεταβιβάζουν τα συγγραφικά δικαιώματα στο περιοδικό "ΨΥΧΙΑΤΡΙΚΗ". Οι συγγραφείς ακόμη, δηλώνουν ότι: (α) δεν υπήρξε οικονομική υποστήριξη από διάφορες πηγές (εάν υπήρξε πρέπει να δηλωθεί), (β) δεν υπήρξαν αντικρουόμενα συμφέροντα σχετικά με το υλικό της έρευνας που υπεβλήθη προς δημοσίευση, (γ) το πρωτόκολλο της έρευνας εγκρίθηκε από την Επιτροπή Βιοηθικής του Νοσοκομείου ή του Ιδρύματος όπου πραγματοποιήθηκε η έρευνα σύμφωνα με τις προδιαγραφές της Διακήρυξης του Ελσίνκι (1995) όπως αναθεωρήθηκαν στο Εδιμβούργο (2000) και (δ) ότι όλοι οι ασθενείς έδωσαν τη συγκατάθεσή τους πριν συμπεριληφθούν στην έρευνα αφού προηγουμένως ενημερώθηκαν για την ερευνητική διαδικασία.

Τα κριτήρια αποδοχής των εργασιών περιλαμβάνουν την ποιότητα και την πρωτοτυπία της έρευνας, όπως επίσης τη σημαντικότητα και χρησιμότητα των δεδομένων στους αναγνώστες του περιοδικού.

Όλες οι εργασίες υπόκεινται σε μια αρχική εκτίμηση από τον Εκδότη ή μέλη της Συντακτικής Επιτροπής του περιοδικού προκειμένου να εκτιμηθεί η καταλληλότητα και η ποιότητά τους. Εάν η εργασία κριθεί καταρχήν κατάλληλη για δημοσίευση στο περιοδικό, εκτιμάται από δύο ανεξάρτητους κριτές, ειδικούς στο αντικείμενο της έρευνας. Οι κριτές δεν γνωρίζουν τους συγγραφείς της εργασίας και παραμένουν ανώνυμοι για τους συγγραφείς.

Τα σχόλια των κριτών μαζί με τις υποδείξεις και διορθώσεις τους αποστέλλονται στους συγγραφείς. Οι συγγραφείς ενημερώνονται εγγράφως για την τελική απόφαση της Συντακτικής Επιτροπής του περιοδικού όταν η διαδικασία αξιολόγησης ολοκληρωθεί. Τα ονόματα των κριτών του προηγούμενου έτους εμφανίζονται στο πρώτο τεύχος του επομένου έτους. Η Συντακτική Επιτροπή διατηρεί το δικαίωμα να κάνει φραστικές διορθώσεις στα κείμενα προκειμένου να μειώσει ασάφειες και επαναλήψεις και να βελτιώσει τη δυνατότητα επικοινωνίας ανάμεσα στους συγγραφείς και τους αναγνώστες του περιοδικού.

* Οι οδηγίες προς τους συγγραφείς και το «συνοδευτικό έντυπο υποβολής» υπάρχουν στο 1ο τεύχος κάθε έτους του περιοδικού και στο website της ΕΨΕ: www.psych.gr.

Το περιοδικό «ΨΥΧΙΑΤΡΙΚΗ» καταχωρείται και περιλαμβάνεται στα MEDLINE/PubMed, Index Copernicus, Google Scholar, EMBASE/Excerpta Medica, GFMER, CIRRIE, SCIRUS for Scientific Inf., EBSCOhost™ και στο Iatrotek

ΕΙΔΗ ΑΡΘΡΩΝ

1. **Άρθρα Σύνταξης**: Σύντομα άρθρα γραμμένα ταυτόχρονα στην ελληνική και αγγλική γλώσσα που αναφέρονται σε επίκαιρα θέματα ιδιαίτερης σημασίας. Γράφονται από τη Συντακτική Επιτροπή ή από μέλη της Διεθνούς Συμβουλευτικής Επιτροπής ή μετά από πρόσκληση της Συντακτικής Επιτροπής (μέχρι 700 λέξεις και 7–8 βιβλιογραφικές αναφορές).
2. **Ανασκοπήσεις:** Ενημερωτικά άρθρα που αφορούν σε κριτική ανάλυση ψυχιατρικών θεμάτων ή θεμάτων συγγενών προς την Ψυχιατρική Επιστήμη. Οι ανασκοπήσεις γράφονται από έναν ή δύο συγγραφείς. Η έκτασή τους δεν πρέπει να υπερβαίνει τις 4.000 λέξεις.
3. **Ερευνητικές εργασίες:** Προοπτικές ή αναδρομικές εργασίες που βασίζονται σε ερευνητικό πρωτόκολλο. Πρέπει οπωσδήποτε να έχει γίνει στατιστική επεξεργασία των αποτελεσμάτων. Οι ερευνητικές εργασίες δεν πρέπει να υπερβαίνουν τις 3.000 λέξεις.
4. **Σύντομα άρθρα:** Στην κατηγορία αυτή υπάγονται ερευνητικές εργασίες που μπορούν να καταχωρηθούν σε περιορισμένο χώρο. Η έκταση των άρθρων αυτών δεν πρέπει να υπερβαίνει τις 1.500 λέξεις.
5. **Ειδικά άρθρα:** Γράφονται μετά από πρόσκληση της Συντακτικής Επιτροπής και αναφέρονται σε θέματα, με τα οποία έχει ιδιαίτερα ασχοληθεί ο συγγραφέας π.χ. θεραπεία συμπεριφοράς, παθολογική ζηλοτυπία, ψυχοθεραπεία μεταιχμιακών καταστάσεων (μέχρι 4.000 λέξεις).
6. **Ενδιαφέρουσες περιπτώσεις:** Η κατηγορία αυτή περιλαμβάνει ενδιαφέρουσες αναφορές περιπτώσεων και περιγραφές περιπτώσεων όπου εφαρμόσθηκαν νέες διαγνωστικές ή/και θεραπευτικές μέθοδοι (μέχρι 1500 λέξεις).
7. **Γενικά άρθρα:** Η *ΨΥΧΙΑΤΡΙΚΗ* δέχεται και άρθρα που εκφράζουν θεωρητικές απόψεις στον χώρο της Ψυχιατρικής, γνώμες για τα συστήματα παροχής ψυχιατρικής περίθαλψης, απόψεις για τους χώρους επαλληλίας μεταξύ Ψυχιατρικής και άλλων επιστημών και άλλα άρθρα ανάλογου περιεχομένου. Τα άρθρα αυτά δεν πρέπει να υπερβαίνουν τις 2.000 λέξεις. Η Συντακτική Επιτροπή μπορεί να προτείνει τη συντόμευση των άρθρων αυτών προκειμένου να δημοσιευθούν ως «Επιστολές προς τη Σύνταξη».
8. **Επιστολές προς τη Σύνταξη:** Περιλαμβάνουν σχόλια και κρίσεις πάνω σε ήδη δημοσιευμένες εργασίες, παρατηρήσεις σε επίκαιρα ψυχιατρικά θέματα, πρόδρομα ερευνητικά αποτελέσματα, κ.λπ. Δεν πρέπει να υπερβαίνουν τις 400 λέξεις (συνοδεύεται από σύντομη αγγλική περίληψη).
9. **Βιβλιοκριτική:** Η παρουσίαση και κριτική βιβλίων γίνεται μετά από πρόσκληση της Συντακτικής Επιτροπής (μέχρι 600 λέξεις - συνοδεύεται από σύντομη αγγλική περίληψη).
10. **Άρθρα στην αγγλική γλώσσα:** Η *ΨΥΧΙΑΤΡΙΚΗ* θα κυκλοφορεί στην ελληνική γλώσσα πάντα με αγγλική περίληψη των εργασιών. Δύο τεύχη ετησίως θα κυκλοφορούν εξ ολοκλήρου στην αγγλική (με εκτεταμένη ελληνική περίληψη, περίπου 400 λέξεις). Στα τεύχη αυτά θα δημοσιεύονται εργασίες ξένων συναδέλφων, αλλά και Ελλήνων. Οι εργασίες Ελλήνων συναδέλφων μπορούν να υποβάλλονται στην ελληνική ή την αγγλική γλώσσα. Όσες εργασίες προκρίνονται για δημοσίευση και έχουν υποβληθεί στην ελληνική γλώσσα θα μεταφράζονται μετά από συνεργασία του περιοδικού με τους συγγραφείς.

ΥΠΟΒΟΛΗ ΕΡΓΑΣΙΩΝ

Οι εργασίες υποβάλλονται στο πρωτότυπο και σε τρία φωτοαντίγραφα, στη διεύθυνση:

Περιοδικό ΨΥΧΙΑΤΡΙΚΗ
Ελληνική Ψυχιατρική Εταιρεία,
Παπαδιαμαντοπούλου 11, 115 28 Αθήνα
e-mail: editor@psych.gr

Το δακτυλογραφημένο κείμενο πρέπει να συνοδεύεται από CD με το κείμενο της εργασίας ή να αποστέλλεται ηλεκτρονικό αντίγραφο με e-mail. Το κείμενο πρέπει να έχει γραφεί με επεξεργαστή συμβατό με πρόγραμμα Windows ή με οποιοδήποτε πρόγραμμα για υπολογιστή Macintosh.

Μαζί με τα υποβαλλόμενα άρθρα πρέπει να υποβάλλεται συμπληρωμένο το «Συνοδευτικό έντυπο υποβολής εργασίας». Οι υποβαλλόμενες εργασίες χαρακτηρίζονται με κωδικό αριθμό, που γνωστοποιείται στους συγγραφείς και ο οποίος χρησιμοποιείται σε κάθε επικοινωνία με το περιοδικό. Τα άρθρα γράφονται στη δημοτική γλώσσα. Η δακτυλογράφηση γίνεται στη μία όψη του φύλλου, με διπλό διάστημα και περιθώριο τουλάχιστον 3,5 cm.

Στην άνω δεξιά πλευρά της πρώτης σελίδας πρέπει να υπάρχει ο χαρακτηρισμός κάθε άρθρου (π.χ. Ανασκόπηση, Ερευνητική εργασία κ.λπ.).

ΔΙΑΤΑΞΗ ΤΗΣ ΥΛΗΣ

Όλες οι σελίδες αριθμούνται, αρχίζοντας από τη σελίδα τίτλου.

Σελίδα τίτλου: Περιλαμβάνει τον τίτλο του άρθρου (μέχρι 12 λέξεις), τα ονόματα των συγγραφέων στην ονομαστική, το κέντρο προέλευσης, τη διεύθυνση και το τηλέφωνο του συγγραφέα που θα επικοινωνεί με το περιοδικό. Στην ίδια σελίδα αναφέρονται επίσης άτομα, οργανισμοί, ιδρύματα κ.λπ., που ενδεχομένως συνέβαλαν στην πραγματοποίηση της εργασίας.

Περίληψη: Στη δεύτερη σελίδα γράφεται η ελληνική περίληψη, (περίπου 400 λέξεις). Στην περίληψη ανακεφαλαιώνονται τα κύρια μέρη της εργασίας. Φράσεις όπως «τα ευρήματα συζητούνται» πρέπει να αποφεύγονται. Στο τέλος της περίληψης αναγράφονται 4–6 λέξεις ευρετηρίου.

Αγγλική περίληψη: Στην τρίτη σελίδα γράφεται η αγγλική περίληψη, που πρέπει να έχει έκταση περίπου 400 λέξεων, ο τίτλος του άρθρου τα ονόματα των συγγραφέων και η προέλευση του άρθρου (ίδρυμα). Στο τέλος της περίληψης αναγράφονται 4–6 λέξεις ευρετηρίου. Η περίληψη πρέπει να δίνει ουσιαστικές πληροφορίες.

Κείμενο: Χωρίζεται σε κεφάλαια. Για τις ερευνητικές εργασίες είναι: Εισαγωγή, Υλικό και μέθοδος, Αποτελέσματα, Συζήτηση. Όσα αποτελέσματα παρατίθενται στους πίνακες δεν επαναλαμβάνονται λεπτομερώς στο κείμενο.

Βιβλιογραφικές παραπομπές: Αριθμούνται με αύξοντα αριθμό, ανάλογα με τη σειρά εμφάνισής τους στο κείμενο (σύστημα Vancouver). Π.χ. *Ο Birley*[1] *βρήκε ότι..., αλλά ο Afford*[2] *διαφώνησε...* Αναφέρονται τα ονόματα των έξι πρώτων συγγραφέων. Στον βιβλιογραφικό πίνακα περιλαμβάνονται μόνον οι βιβλιογραφικές παραπομπές που υπάρχουν στο κείμενο. Στα άρθρα ανασκόπησης και τα ειδικά άρθρα οι βιβλιογραφικές παραπομπές δεν πρέπει να υπερβαίνουν τις 100, στις ερευνητικές εργασίες και τα γενικά άρθρα τις 50, στα σύντομα άρθρα και τις ενδιαφέρουσες περιπτώσεις τις 15 και στα άρθρα σύνταξης και τις επιστολές προς τη σύνταξη τις 8. Ο βιβλιογραφικός κατάλογος συντάσσεται με αύξοντα αριθμό, που αντιστοιχεί στη σειρά εμφάνισης των βιβλιογραφικών παραπομπών στο κείμενο, όπως στα ακόλουθα παραδείγματα:

1. Birley JLT, Adear P, Singer D, Rosenberg M. Electrogastrographic studies in elderly patients. *Gastroenterology* 1980, 79:311–314 (Περιοδικό)

2. Alford J, Nemiah J. Peptic ulcer in childhood. In: Sodeman WA (ed) *Pathologic Physiology.* Saunders, Philadelphia, 1970:457–472 (Κεφάλαιο βιβλίου)

3. Kinden A. *Stress and emotion*. Springer, Berlin, 1990 (Βιβλίο)

4. Larsen E, Elliot B. Fatigue in major depression. *Psychiatriki* 2007, (Suppl 1):S143–S144 (Παράρτημα περιοδικού)

5. Silverstone A, Leman H, Stark J. *Attempted suicide by drug-overdose*. Paper presented at 2nd Congress on Suicide behaviour, 4–6 May 2002. Rome, Abstracts Book, pp 212–213 (Παρουσίαση σε Συνέδριο - Τόμος Πρακτικών)

6. Henry A, Andrews B. *Critical issues for parents with mental illness*. N.Y. Centre for Mental Health Services 2001 (Cited 2 June 2005) Available from www. mentalorg/publications (Ιστοσελίδα)

Οι συντμήσεις των περιοδικών πρέπει να γίνονται με βάση το *Index Medicus*.

Πίνακες: Γράφονται με διπλό διάστημα σε ξεχωριστή σελίδα. Αριθμούνται ανάλογα με τη σειρά εμφάνισής τους στο κείμενο, με αραβικούς αριθμούς (πίνακας 1), ακολουθεί σύντομη κατατοπιστική λεζάντα (π.χ. Ασθενείς που νοσηλεύθηκαν για ψευδοκύηση στο Νοσοκομείο «Αλεξάνδρα» κατά το 1988) και σε κάθε στήλη υπάρχει κατατοπιστική επικεφαλίδα. Αποφεύγονται οι κάθετες γραμμές.

Εικόνες: Πρέπει να στέλνονται είτε τα πρωτότυπα των σχεδίων (με σινική μελάνη) είτε φωτογραφίες. Στο πίσω μέρος πρέπει να αναγράφεται με μολύβι ο αριθμός της εικόνας, οι συγγραφείς και ο τίτλος της εικόνας. Όλες οι εικόνες πρέπει να αναφέρονται στο κείμενο και να αριθμούνται με αραβικούς αριθμούς.

Ονοματολογία και μονάδες μέτρησης: Για λεπτομέρειες, βλ. Ιατρική 1980, 37:139.

Διόρθωση τυπογραφικών δοκιμίων: Οι συγγραφείς είναι υποχρεωμένοι να κάνουν μία διόρθωση των τυπογραφικών δοκιμίων. Εκτεταμένες μεταβολές δεν επιτρέπονται.

SUBMISSION FORM TO THE JOURNAL "*PSYCHIATRIKI*"

(Should be submitted along with the original manuscript, three copies, a copy on a diskette or an electronic copy by e-mail, and the complementary next page of authorship responsibility, financial disclosure and acknowledgments)

- Please check (with X) and complete the following
- Type of the article:

❑ REVIEW ARTICLE ❑ RESEARCH PAPER ❑ BRIEF COMMUNICATION

❑ SPECIAL ARTICLE ❑ GENERAL ARTICLE ❑ CASE REPORT

- Title of the paper .....

.....

.....

- Names and surnames of the authors .....

.....

.....

.....

- Institute where the work was conducted .....

.....

.....

- Author responsible for the correspondence .....

Name and surname .....

Address .....

Tel:..... Fax: ..... E-mail: .....

- Please confirm and check (with X) all the following points regarding the submission of your paper:

❑ Abstract according to instructions to contributors

❑ 4–5 key words

❑ Correspondence of the text's references to the reference list

❑ Recording of the references according to instructions to contributors of the journal "Psychiatriki"

The authors agree with the text of the paper the publication in the journal "Psychiatriki" and transfer the copyright to the publisher. The same paper did not publish or submitted for publication elsewhere. The authors do not have conflicting interests concerning the material submitted and state that the protocol of the research project has been approved by the Ethics Committee of the Institution within the work was under taken. All persons gave their informed consent prior to their inclusion in the study. The authors also declare that there are no sources of financial support (if any should be stated).

Authors' signature Date

PSYCHIATRIKI: AUTHORSHIP RESPONSIBILITY, FINANCIAL DISCLOSURE AND ACKNOWLEDGMENT FORM

By completing and signing this form, the corresponding author acknowledges and accepts full responsibility on behalf of all contributing authors, if any, regarding the statements on Authorship Responsibility, Financial Disclosure and Funding Support.

AUTHORSHIP RESPONSIBILITY

By signing this form and clicking the appropriate boxes, the corresponding author certifies that each author has met all criteria below (A and B) and hereunder indicates each author's general and specific contributions by listing his or her name next to the relevant section.

❑ A. This corresponding author certifies that:

- the manuscript represents original and valid work and that neither this manuscript nor one with substantially similar content under my authorship has been published or is being considered for publication elsewhere, except as described in an attachment, and copies of closely related manuscripts are provided. If requested, this corresponding author will provide the data or will cooperate fully in obtaining and providing the data on which the manuscript is based for examination by the editors or their assignees. Every author has agreed to allow the corresponding author to serve as the primary correspondent with the editorial office, to review the edited typescript and proof.

❑ B. Each author has given final approval of the submitted manuscript, has participated sufficiently in the work to take public responsibility for all of the content and qualifies for authorship by listing his or her name on the appropriate line of the categories of contributions listed below.

The authors listed below have made substantial contributions to the intellectual content of the paper in the various sections described below.

(list appropriate author next to each section – each author must be listed in at least 1 field. More than 1 author can be listed in each field.)

– conception and design .....
– acquisition of data .....
– analysis and interpretation of data .....
– drafting of the manuscript .....
–critical revision of the manuscript for .....
– important intellectual content .....
– statistical analysis .....
– obtaining funding .....
– administrative, technical, or .....
– material support .....
– supervision .....

FINANCIAL DISCLOSURE

❑ None of the contributing authors have any conflicts of interest, including specific financial interests and relationships and affiliations relevant to the subject matter or materials discussed in the manuscript.

or

❑ I certify that all conflicts of interest, including specific financial interests and relationships and affiliations relevant to the subject matter or materials discussed in the manuscript (eg, employment/affiliation, grants or funding, consultancies, honoraria, stock ownership or options, expert testimony, royalties, or patents filed, received, or pending), are the following:

FUNDING SUPPORT AND ROLE OF THE SPONSOR

No funding or other financial support was received.

or

❑ I certify that all funding, other financial support, and material support for this research and/or work are clearly identified in the manuscript.

or

The name of the organization or organizations which had a role in sponsoring the data and material in the study are also listed below:

ACKNOWLEDGMENT STATEMENT

This corresponding author certifies that:

- all persons who have made substantial contributions to the work reported in this manuscript (eg, data collection, analysis, or writing or editing assistance) but who do not fulfil the authorship criteria are named with their specific contributions in an Acknowledgment in the manuscript. All persons named in the Acknowledgment have provided written permission to be named.

After completing all the required fields above, this form must be sent via fax or e-mail with the submission form and the manuscript at the time of electronic submission.

ΣΥΝΟΔΕΥΤΙΚΟ ΕΝΤΥΠΟ ΥΠΟΒΟΛΗΣ ΕΡΓΑΣΙΑΣ ΣΤΟ ΠΕΡΙΟΔΙΚΟ *"ΨΥΧΙΑΤΡΙΚΗ"*

(Υποβάλλεται μαζί με την εργασία, τρία φωτοαντίγραφα της εργασίας και την αντίστοιχη δισκέτα ή με την αποστολή ηλεκτρονικού αντιγράφου με e-mail, και τη συμπληρωματική της επόμενης σελίδας συγγραφικής ευθύνης, οικονομικής γνωστοποίησης και ευχαριστιών)

- Παρακαλώ συμπληρώστε/τσεκάρετε όλα τα σημεία του εντύπου
- Είδος εργασίας (σημειώστε με Χ):

❑ ΑΝΑΣΚΟΠΗΣΗ ❑ ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ ❑ ΣΥΝΤΟΜΟ ΑΡΘΡΟ

❑ ΕΙΔΙΚΟ ΑΡΘΡΟ ❑ ΓΕΝΙΚΟ ΑΡΘΡΟ ❑ ΠΑΡΟΥΣΙΑΣΗ ΠΕΡΙΠΤΩΣΕΩΣ

- Τίτλος εργασίας .....

.....

- Ονοματεπώνυμα συγγραφέων .....

.....

.....

.....

- Φορέας ή Κέντρο (α), από το οποίο προέρχεται η εργασία .....

.....

.....

- Υπεύθυνος συγγραφέας για την αλληλογραφία .....

Ονοματεπώνυμο .....

Διεύθυνση .....

Τηλέφωνο ..... Fax: ..... E-mail: .....

- Επιβεβαιώστε (σημειώστε με Χ) όλα τα παρακάτω σημεία της εργασίας σας:

❑ Περίληψη της εργασίας στα ελληνικά και αγγλικά, σύμφωνα με τις προδιαγραφές του περιοδικού

❑ 4–5 λέξεις ευρετηρίου στα ελληνικά και στα αγγλικά

❑ Αντιστοιχία των βιβλιογραφικών αναφορών του κειμένου με τον κατάλογο της βιβλιογραφίας, που παρατίθεται στο τέλος του άρθρου

❑ Καταγραφή των βιβλιογραφικών αναφορών σύμφωνα με τις προδιαγραφές της *«Ψυχιατρικής»*

Οι συγγραφείς της εργασίας συμφωνούν με το περιεχόμενό της, τη δημοσίευσή της στο περιοδικό "Ψυχιατρική" και τη μεταβίβαση των συγγραφικών δικαιωμάτων στο περιοδικό. Το ίδιο κείμενο δεν έχει δημοσιευθεί ούτε έχει υποβληθεί για δημοσίευση σε άλλο περιοδικό. Οι συγγραφείς δεν έχουν αντικρουόμενα συμφέροντα σε σχέση με το περιεχόμενο της εργασίας και δηλώνουν ότι το πρωτόκολλο της έρευνας εγκρίθηκε από την Επιτροπή Βιοηθικής του Ιδρύματος όπου πραγματοποιήθηκε η έρευνα. Όλα τα άτομα που συμμετείχαν έδωσαν τη συγκατάθεσή τους πριν συμπεριληφθούν στην έρευνα. Οι συγγραφείς ακόμη δηλώνουν ότι δεν υπήρξε πηγή οικονομικής υποστήριξης (εάν υπήρξε πρέπει να δηλωθεί).

Υπογραφές συγγραφέων Ημερομηνία

ΨΥΧΙΑΤΡΙΚΗ: ΣΥΓΓΡΑΦΙΚΗ ΕΥΘΥΝΗ, ΟΙΚΟΝΟΜΙΚΗ ΓΝΩΣΤΟΠΟΙΗΣΗ ΚΑΙ ΕΥΧΑΡΙΣΤΙΕΣ

Με τη συμπλήρωση και υπογραφή του παρόντος εντύπου, ο συγγραφέας αλληλογραφίας αναγνωρίζει και αποδέχεται πλήρως την ευθύνη εκ μέρους όλων των συγγραφέων που συνεισέφεραν, των δηλώσεων σχετικά με την Συγγραφική Ευθύνη, την Οικονομική Γνωστοποίηση, και την Υποστήριξη Χρηματοδότησης.

ΣΥΓΓΡΑΦΙΚΗ ΕΥΘΥΝΗ

Με την υπογραφή του παρόντος εντύπου και υπογράφοντας στα αντίστοιχα πεδία, ο συγγραφέας αλληλογραφίας πιστοποιεί ότι κάθε συγγραφέας πληροί όλα τα παρακάτω κριτήρια (Α και Β) και στην συνέχεια προσδιορίζει τη συνεισφορά τού κάθε συγγραφέως, σημειώνοντας το όνομά του/της, δίπλα στο αντίστοιχο πεδίο.

❑ Α. Ο συγγραφέας αλληλογραφίας πιστοποιεί ότι:

- Η υποβληθείσα εργασία αποτελεί πρωτότυπη και έγκυρη εργασία και το κείμενό της ή άλλο με παρεμφερές περιεχόμενο στα πλαίσια της συγγραφής μου δεν έχει δημοσιευθεί ή υποβληθεί για δημοσίευση κάπου αλλού, εκτός της περίπτωσης όπου μαζί με την εργασία περιγράφεται και επισυνάπτεται το σχετικό κείμενο. Εφόσον ζητηθεί, ο συγγραφέας αλληλογραφίας, θα παρέχει τα δεδομένα ή θα συνεργαστεί πλήρως στη συγκέντρωση και παροχή των δεδομένων στα οποία βασίζεται η εργασία. Κάθε συγγραφέας έχει εξουσιοδοτήσει τον συγγραφέα αλληλογραφίας να λειτουργεί ως ο κύριος εκπρόσωπος της συγγραφικής ομάδας, και να προβαίνει σε βελτιώσεις της εργασίας με βάση τις υποδείξεις των κριτών του περιοδικού.

❑ Β. Κάθε συγγραφέας έχει δώσει την τελική έγκριση για να γίνει η υποβολή τής εργασίας, έχει συμμετάσχει επαρκώς στην εργασία και αναλαμβάνει δημόσια την ευθύνη για όλο το περιεχόμενο και πληροί τις προϋποθέσεις για συγγραφή, εφόσον υπάρχει το όνομά του/της στην αντίστοιχη γραμμή των πεδίων των συνεισφορών που αναφέρονται παρακάτω.

Οι συγγραφείς που αναφέρονται παρακάτω έχουν συνεισφέρει σημαντικά στην εργασία στα διάφορα πεδία που αναφέρονται παρακάτω.

(ανέφερε τον αντίστοιχο συγγραφέα δίπλα στο κάθε πεδίο- κάθε συγγραφέας πρέπει να περιλαμβάνεται τουλάχιστον σε ένα πεδίο. Περισσότεροι από ένας συγγραφείς μπορεί να αναφέρονται σε κάθε πεδίο)

– Ιδέα και σχεδιασμός .....
– Συγκέντρωση δεδομένων .....
– Ανάλυση και ερμηνεία των δεδομένων .....
– Σύνταξη του κειμένου .....
– Επανεξέταση του κειμένου .....
– Στατιστική ανάλυση .....
– Χορήγηση χρηματοδότησης .....
– Διοικητική, τεχνική ή υλική υποστήριξη .....
– Εποπτεία .....

ΟΙΚΟΝΟΜΙΚΗ ΓΝΩΣΤΟΠΟΙΗΣΗ

❑ Από όλους τους συγγραφείς που έχουν συνεισφέρει στην εργασία δεν υπάρχει σύγκρουση συμφερόντων, συμπεριλαμβάνοντας ειδικά οικονομικά συμφέροντα, σχέσεις και συνεργασίες σχετικές με το αντικείμενο της υποβληθείσας εργασίας.

ή

❑ Βεβαιώνω ότι όλες οι συγκρούσεις συμφερόντων, συμπεριλαμβανομένων ειδικών οικονομικών συμφερόντων, σχέσεις και συνεργασίες σχετικές με το αντικείμενο της υποβληθείσας εργασίας είναι οι ακόλουθες:

Χορήγηση Χρηματοδότησης και ο Ρόλος του Χορηγού

❑ Δεν έλαβα χρηματοδότηση ή άλλη οικονομική ενίσχυση.

ή

❑ Βεβαιώνω ότι όλη η χρηματοδότηση, άλλη οικονομική ενίσχυση, και υλική υποστήριξη για την έρευνα και/ή την εργασία προσδιορίζονται σαφώς στη δήλωση συμφερόντων στο τέλος της εργασίας

ή

Η χρηματοδότηση ή άλλη οικονομική ενίσχυση και υλική υποστήριξη για την έρευνα και/ή την εργασία προσδιορίζονται ευκρινώς παρακάτω:

ΕΥΧΑΡΙΣΤΙΕΣ

Ο συγγραφέας αλληλογραφίας βεβαιώνει ότι:

Όλα τα άτομα που έχουν συνεισφέρει σημαντικά στην εργασία (π.χ. συλλογή δεδομένων, ανάλυση, γραφή ή συμβολή στην έκδοση) αλλά δεν πληρούν τα κριτήρια συγγραφής ονοματίζονται με την συγκεκριμένη συνεισφορά τους στο κείμενο της εργασίας στις Ευχαριστίες. Όλα τα άτομα που ονοματίζονται στις Ευχαριστίες έχουν δώσει γραπτή συγκατάθεση προκειμένου να αναφερθεί το όνομά τους.

Αφού ολοκληρώσετε όλα τα παραπάνω απαιτούμενα πεδία, αυτή η φόρμα θα πρέπει να σταλεί μέσω φαξ ή e-mail ηλεκτρονικά μαζί με το συνοδευτικό έντυπο υποβολής και την υποβληθείσα εργασία.