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Editorial
Άρθρο Σύνταξης

Global mental health

The projection is that by 2030 the three leading causes of the burden of disease are expected to be HIV/AIDS, depression and ischemic heart disease.[1] The actual burden of mental disorders is likely to have been underestimated because of inadequate appreciation of the link between mental illness and physical health conditions. The interaction of mental and physical health conditions confirms that there can be no health without mental health.[2]

Mental health service developments are in transition at this point of time in may countries of the World with emphasis on community care. There is still a remarkable variation internationally in existing provision of services. In the USA, paradoxically, the prisons are supporting the mental-health-care system. Almost a third and half of all the homeless people in American cities suffer from mental illness. Furthermore a widespread stigma of mental illness prevails across the Globe.

Government spending on mental health in most of low-income and middle-income countries is far lower than is needed. There is an almost total reliance on mental hospitals, where quality of treatment and care is generally poor and there are very few community mental health services. There is a serious shortage of skilled mental health professionals and lack of legislative protections. Poor facilities and lack of skilled mental health workers too often result in neglect and abuse of the human rights of people with mental illness and their families.[3] Barriers to mental health service developments are complex and in addition to shortage of funding and skilled personnel include lack of political will, resistance to decentralisation of mental health services, challenges to implementation of mental health care in primary-care settings and the frequent scarcity of leadership.[4]

In response to the growing concern the Lancet published a call for action to scale up mental health services that has received support from World leaders.[5]

A set of core and secondary development targets and indicators to monitor progress in achieving the objectives of the call were proposed. The indicators selected (5 core and 6 secondary) address four important overarching goals: (a) sufficient planning and investment for mental health care; (b) a sufficient workforce to provide mental health services; (c) consistency of mental health care inputs and processes with best practice and human rights protection; and (d) improved outcomes for people with mental disorders. This will mean that the packages of treatment and care that are developed as part of scaling up activities must go well beyond clinical treatment of mental disorders to include rehabilitation programs, education, housing and employment.

There is, at present, no agreed method for classifying mental health systems or for systematically comparing mental health systems across countries, or in any one country over time. There is a need to develop simple and robust measures of mental health system quality, and feasible methods of data collection, that will enable tracking of outcomes and impacts of scaling up activities.

In response to call for action in Global Mental Health promising initiatives were launched recently including the World Health Organization Mental Health Gap Action Programme,[6] World Psychiatric Association programmes, the Movement for Global Mental Health,[7] the International Observatory Mental Health Systems at the University of Melbourne,[8] the Global Mental Health Centre at King's College London and Maudsley International (www.maudsleyinternational.com)

Mental health is a central component of a person's wellbeing and inseparable from physical health. Every country must include mental health as key priority of their clinical and public health plans. This will become a real challenge at times of Global financial crisis.

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Άρθρο Σύνταξης
Editorial

Η παγκόσμια ψυχική υγεία

Προβλέπεται ότι μέχρι το 2030 οι τρεις κύριες αιτίες επιβαρυμένης νόσησης αναμένεται να είναι το HIV/AIDS, η κατάθλιψη και η ισχαιμική καρδιοπάθεια.[1] Η πραγματική επιβάρυνση συνέπεια ψυχωσικών διαταραχών είναι –πιθανότατα – υποεκτιμημένη εξαιτίας της ανεπαρκούς αξιολόγησης της σύνδεσης των ψυχικών νόσων με άλλες καταστάσεις σωματικής υγείας. Η αλληλεπίδραση μεταξύ ψυχικών και σωματικών καταστάσεων επιβεβαιώνει την επισήμανση ότι δεν υπάρχει υγεία χωρίς ψυχική υγεία.[2]

Ανάπτυξη υπηρεσιών υγείας παρατηρείται, στις μέρες μας σε πολλές χώρες του κόσμου με έμφαση στην κοινοτική φροντίδα. Υπάρχει, ακόμη, μια σημαντική διαφοροποίηση –σε διεθνές επίπεδο– στην παροχή υπηρεσιών. Στις ΗΠΑ, παραδόξως, οι φυλακές φαίνεται να υποστηρίζουν το σύστημα παροχής ψυχιατρικών υπηρεσιών. Επίσης, σχεδόν το ένα τρίτο ή ακόμη και το ένα δεύτερο των αστέγων ατόμων στην Αμερική πάσχουν από ψυχικές ασθένειες. Επιπλέον, το «στίγμα» σε σχέση με τις ψυχικές διαταραχές κυριαρχεί σε παγκόσμιο επίπεδο.

Στις περισσότερες χώρες με χαμηλό ή μέσο εισόδημα οι κρατικές δαπάνες στη ψυχική υγεία είναι πολύ χαμηλότερες απ' ό,τι αυτές χρειάζονται. Κατά κανόνα, υπερτερεί η νοσηλεία στα ψυχιατρικά νοσοκομεία όπου όμως, η ποιότητα των θεραπευτικών υπηρεσιών κυμαίνεται, ενώ υπάρχουν πολύ λίγες κοινοτικές υπηρεσίες ψυχικής υγείας. Ακόμη, υπάρχει ένα σοβαρό έλλειμμα εκπαιδευμένων επαγγελματιών ψυχικής υγείας σε κοινοτικές δομές και έλλειψη νομοθετημένων κανόνων προστασίας για τους ασθενείς. Η ανεπάρκεια των κοινοτικών υπηρεσιών και η έλλειψη εκπαιδευμένων επαγγελματιών ψυχικής υγείας, συχνά, οδηγεί σε παραμέληση των ασθενών και καταπάτηση ανθρωπίνων δικαιωμάτων των ασθενών και των οικογενειών τους.[3] Τα εμπόδια στην ανάπτυξη κοινοτικών υπηρεσιών ψυχικής υγείας αποτελούν σύνθετο πρόβλημα, που σχετίζεται με τη μείωση των κρατικών χορηγιών, την έλλειψη εκπαιδευμένου προσωπικού, την έλλειψη πολιτικής βούλησης, την αντίσταση στην αποκέντρωση των υπηρεσιών ψυχικής υγείας, τις αμφισβητήσεις για εμπλοκή της φροντίδας ψυχικής υγείας στις δομές πρωτοβάθμιας φροντίδας υγείας και την έλλειψη των στελεχών υψηλού επιπέδου.[4]

Σε απάντηση του αυξημένου ενδιαφέροντος σχετικά με τα παραπάνω θέματα, το περιοδικό Lancet δημοσίευσε μια πρόσκληση για δράση για την ανάπτυξη υπηρεσιών ψυχικής υγείας που υποδείχθηκαν από παγκόσμιες προσωπικότητες.[5] Προτάθηκε μια σειρά από πρωτεύοντες και δευτερεύοντες αναπτυξιακούς στόχους και δείκτες για την αξιολόγηση της εξέλιξης και την πραγματοποίηση των αντικειμένων της πρόσκλησης.

Οι δείκτες που προτάθηκαν (5 πρωτεύοντες και 6 δευτερεύοντες) οδήγησαν σε τέσσερις ιεραρχημένους στόχους: (α) επαρκής σχεδιασμός και χρηματοδότηση για τη φροντίδα ψυχικής υγείας, (β) επαρκές εργατικό δυναμικό για την εξασφάλιση λειτουργίας των υπηρεσιών ψυχικής υγείας, (γ) συνέχεια και συνέπεια στην καταγραφή δεδομένων και διαδικασιών σε σχέση με τη φροντίδα ψυχικής υγείας σε συνάρτηση με την καλύτερη πρακτική και προστασία

των ανθρωπίνων δικαιωμάτων, (δ) βελτίωση της έκβασης για άτομα με ψυχικές διαταραχές. Αυτό σημαίνει ότι όλα τα «πακέτα» θεραπείας και φροντίδας τα οποία αναπτύσσονται ως μέρος της δραστηριότητας θα πρέπει να προχωρούν πέραν της γενικής θεραπείας των ψυχικών διαταραχών περιλαμβάνοντας αποκαταστασιακά προγράμματα, εκπαίδευση, διαμονή και επαγγελματική ένταξη των ασθενών.

Στις μέρες μας δεν υπάρχει κοινά συμφωνημένη μέθοδος κατηγοριοποίησης και ταξινόμησης των συστημάτων ψυχικής υγείας ή συστηματικής σύγκρισης των συστημάτων ψυχικής υγείας ανάμεσα σε διάφορες χώρες ή σε μία χώρα διαχρονικά. Υπάρχει ανάγκη ανάπτυξης απλών και έγκυρων εργαλείων μέτρησης της ποιότητας των συστημάτων ψυχικής υγείας και εύχρηστες μέθοδοι συλλογής πληροφοριών που θα μπορούν να ανιχνεύσουν την έκβαση των ασθενών και την αύξηση των δραστηριοτήτων παροχής υπηρεσιών.

Σε απάντηση της πρόσκλησης για δράση σε σχέση με την παγκόσμια ψυχική υγεία, ελπιδοφόρες πρωτοβουλίες σημειώθηκαν πρόσφατα περιλαμβάνοντας το «Πρόγραμμα δράσης για το χάσμα ψυχικής υγείας» της World Health Organization,[6] «την κίνηση για την Παγκόσμια Ψυχική Υγεία» της World Psychiatric Association,[7] «το Παγκόσμιο Κέντρο ψυχικής υγείας» του University of Melbourne,[8] «το Παγκόσμιο Κέντρο ψυχικής υγείας» του King's College of London and Maudsley International (www.Maudsleyinternational.com).

Η ψυχική υγεία αποτελεί βασικό συστατικό του «ευ ζείν» και είναι αναπόσπαστα συνδεδεμένη με τη γενική σωματική υγεία. Κάθε χώρα πρέπει να περιλαμβάνει την ψυχική υγεία ως κύρια προτεραιότητα στους σχεδιασμούς της κλινικής και δημόσιας υγείας. Αυτό βέβαια, θα αποτελέσει μια πραγματική πρόκληση σε εποχές παγκόσμιας οικονομικής κρίσης.

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Research article
Ερευνητική εργασία

Association of serum BDNF and val66met polymorphism of the brain-derived neurotrophic factor in a sample of first psychotic episode patients

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Polymorphisms in the brain-derived neurotrophic factor (BDNF) gene have been indicated to be associated with schizophrenia. Previous studies have suggested that val66met polymorphism may increase the risk for schizophrenia, although other studies have not confirmed this association. Decreased BDNF levels in the brain and the serum of patients with psychotic disorders have been reported in first episode psychotic (FEP) patients. In our study we investigated the potential genetic association of this polymorphism with schizophrenia in a sample of 38 FEP patients with schizophrenia compared with a sample of 21 normal controls. Furthermore, we assessed serum BDNF levels and investigated whether there was an association between this polymorphism and alterations of serum BDNF levels between the investigated groups. There was a significant difference in genotyped frequencies between cases and controls (p=0.030). The homozygous carriers Met/Met were over-represented in the schizophrenia group (13/31, 41.9%), compared to controls (2/19, 10.5%). The serum BDNF levels in the sample of FEP patients was significantly reduced compared to controls (18.87±8.23 ng/mL *vs* 29.2±7.73ng/mL, U=140, p=0.0). No association was found between alterations of serum BDNF levels and Val66Met polymorphism in the group of patients (p=0.198). Negative correlations were shown between serum BDNF levels of the patients and the PANSS Negative subscale scores (p=0.015). There was found no significant difference between genotypes and memory scores in the sample of patients. Our findings indicate that serum BDNF levels at the onset of schizophrenia and BDNF Val66Met variant may be susceptibility risk factors for schizophrenia.

Key words: BDNF, BDNF val66met polymorphism, first episode, schizophrenia, psychopathology.

Introduction

The brain-derived neurotrophic factor (BDNF) is a member of the neurotrophic family that modulates neurotransmitter synthesis, metabolism and neuronal activity[1] BDNF is also involved in the development of dopaminergic-related systems,[2] and the mesolimbic dopamine systems.[3] Thus, according to both the neurodevelopmental theory[4,5] and the dopamine hypothesis[6,7] in the etiology of schizophrenia, the BDNF genetic locus is a strong candidate gene implicated in the development of this disorder.

The function of BDNF in Central Nervous System (CNS) raises the possibility that this type of neurotrophin is relevant to schizophrenia and a number of studies have reported the potential contribution of BDNF in the pathophysiology of the disorder. Decreased serum BDNF levels have been reported in neuroleptic free patients with schizophrenia when compared to healthy controls,[8,9] and also in serum and in prefrontal cortex in chronic patients with schizophrenia on antipsychotics.[10,11] Increased BDNF levels have been reported in chronicaly medicated patients.[12,13] BDNF levels have also been associated with the severity of positive psychotic symptoms of the patients[8] and with both positive and negative psychotic symptoms.[9]

A number of association studies have been carried out to test correlation between BDNF gene variants and schizophrenia. The two most common studied BDNF polymorphisms were the G196A (val66met) and the C270T.[14–16] Specifically the val66met polymorphism at codon 66, has been reported to influence changes in BDNF expression in the hippocampal area and affect the ability to perform tasks of verbal episodic memory.[16] Furthermore BDNF has been studied as a risk factor for schizophrenia.[17,18] Other genetic studies however have not confirmed this result in various populations of schizophrenic patients.[19–21]

In this study, we investigated whether this polymorphism of the BDNF gene is associated with first psychotic episode of schizophrenia and additionally whether there was a relationship with the alteration of serum BDNF in the group of drug-naive patients. Furthermore, we investigated the correlation of serum BDNF levels with the positive and negative psychotic symptoms of the patients.

Material and method

Subjects

Thirty seven unrelated drug-naïve FEP patients (M/F:16/21) with a mean age 26.81±9.22 years old, were recruited from the Psychiatric Departments of the two General Hospitals (General Hospital of Nikea-Pireaus and "ATTIKON" General Hospital, Haidari, Athens) from January 2006 through June 2008. Blood samples were collected at the time of patients' admission. Patients were assessed by SCID-IV,[22] by Positive and Negative Syndrome subscales (PANSS),[23] and by the Wechsler Digit Span forwards and backwards Task.[24] Exclusion criteria included a history of any neurological disease and current substance abuse or dependence in the preceding 6 months as defined by DSM-IV.[25]

Three patients were excluded because they were diagnosed –based on SCID– as suffering from brief psychotic episode and five patients with mania. The patients were followed-up monthly by two experienced psychiatrists. During this period three patients were excluded from the sample because they were diagnosed as suffering with substance abuse. Twenty five patients were suffering from paranoid type of schizophrenic disorder, ten of disorganized schizophrenia and 3 of the catatonic subtype.

The healthy control group consisted of twenty two persons (M/F:13/9) with a mean age 26.81±9.22 years old, which were recruited from the Biochemistry Laboratory Department of Athens Dromokaition Psychiatric Hospital. All controls were candidates for military services and as such were interviewed by one psychiatrist who had excluded the presence of any major psychiatric or neurological disorder. Additionally the exclusion criteria included history of current substance abuse or dependence in the preceding 6 months as defined by DSM-IV (APA, 1994).

Patients were matched to healthy controls regarding gender (Pearson Chi Square=1.386, df=1, p=0.2390), age (Mann Whitney U=354, p=0.405), years of education (Mann Whitney U=360, p=0.412),

marital (Pearson Chi Square=2.091, df=1, p=0.148) and employment status (Pearson Chi Square=0.101, df=1, p=0.750). The study was approved by the ethics committees of the three Hospitals and written informed consent was obtained from all research participants.

BDNF Measurement

Preparation of serum and storage

Human sera were obtained by drawing blood in serum collection Vacutainer tubes (Becton-Dickinson, Rutherford, NJ). The samples were allowed to clot for 30 min before centrifuged at 3500 rpm for 15 min at 15 °C. Serum was carefully separated and stored at –20 °C until analyzed.

Measurement of BDNF levels

Serum BDNF levels were quantitated in the rethawed serum samples by Quantikine Immunoassay Kit (Catalog No. DBD000) of R&D Systems (Minneapolis, MN 55413, USA). This was a double antibody sandwich ELISA method. The manufacturer's instructions were applied to develop the kit to the calibration method and to the measurement of the samples. The absorbance was measured at 450 nm and corrected at 570 nm by Mediators PhL microplate reader (Mediator Diagnostika Gmbh, Vienna, Austria).

Genotyping

DNA for genetic analysis of the BDNF precursor protein gene was extracted from 200μl of whole blood from each patient with the QIAGEN DNA Blood mini kit, according to the manufacturer's instructions. A PCR-RFLP assay was used for the detection of the single nucleotide substitution (A578G) which results in the Val/Met amino acid change in the BDNF precursor protein, as originally described by Maisonpierre et al.[26] A 206bp-long fragment of the BDNF precursor protein gene was amplified using the primers 5′-CTGGAGAGCGTGAATGGGCC-3′ and 5′-TCCAGCAGAAAGAGAAGAGGAGGC-3′, according to the protocol described by Nanko et al.[19] RFLP analysis of the PCR products with the restriction enzyme PmaCI followed and the A578G mutation was detected by the production of two restriction fragments, 70 and 136bp-long respectively. If both restriction patterns were observed (uncut PCR product and the two restriction fragments) the patient was described as a heterozygote for the BDNF precursor protein gene, coding for both normal (Val) and mutated (Met) phenotypes of the protein.

Statistical analyses

Deviation from the Hardy-Weinberg equilibrium was determined using a Pearson's x^2 test. The genotype frequencies of the patients were in accordance with the Hardy Weinberg equilibrium, whereas the respective frequencies in the control population were not. Spearman's test was used to study the correlations between serum BDNF and PANSS-positive and negative subscale scores. Differences in genotype frequencies between FEP patients and healthy control subjects were compared using the chi-square test. The statistical significance was defined by p<0.05.

Results

Serum BDNF levels of FEP patients were significantly reduced compared to healthy controls (Mann Whitney U=140, p=0.0). Serum BDNF levels were not correlated in patients to age (onset of disease) (Spearman's rho=0.274, p=0.101) and to the subtype of the schizophrenic disorder (Kruskal Wallis Chi-Square=3.883, p=0.144). Significantly negative correlation was found between serum BDNF levels and PANSS-negative subscale scores (Spearmans' rho= –0.398, p=0.015). There was no correlations observed between serum BDNF levels and PANSS-positive subscale scores (Spearmans' rho=–0.001, p=0.994).

Significant differences in genotype frequencies of BDNF Val66Met polymorphism were observed between FEP patients and healthy control subjects (Pearson Chi-Square=7.013, df=2, p=0.030). Specifically the homozygous mutant Met/Met genotype frequency was higher in the group of patients compared to healthy control subjects. The prevalence of genotypes Val/Val, Val/Met and Met/Met in patients with first psychotic episode was 19.4% (6 of 31), 38.7% (12 of 31) and 41.9% (13 of 31) respectively, with p=0.39 and q=1–p=0.61, whereas the prevalence of these genotypes in the control population were 10.5% (2 of 19), 79% (15 of 19) and 10.5% (2 of 19) respectively, with p=0.5 and q=1-p=0.5 (see table 1). The genotype frequencies of the patients were in

Table 1. Association of val66met genotypes in the group of normal controls and in the group of first psychotic episode patients (p=0.030).

	BDNF Val66Met variant			*Allele Frequency*	
	Homozygous Val-val	*Heterozygous val-met*	*Homozygous met-met*	*Val allele*	*Met allele*
Normal n=19	2 (10.5%)	15 (79%)	2 (10.5%)	19 (50.0%)	19 (50.0%)
Patients n=31	6 (19.4%)	12 (38.7%)	13 (41.9%)	24 (38.7%)	38 (61.3%)

accordance with the Hardy Weinberg equilibrium, whereas the respective frequencies in the control population were not.

Genotype was not associated by age at onset of illness (Kruskal Wallis Chi-Square=0.506, p=0.776), serum BDNF levels (Kruskal Wallis Chi-Square=3.235, p=0.198), PANSS-positive (Kruskal Wallis Chi-Square =3.198, p=0.202) and PANSS-negative (Kruskal Wallis Chi-Square=2.471, p=0.291) subscale scores in the group of patients (see table 2).

Neither the digit span forwards (a measure of sustained attention) nor the digit span backwards scores (a measure of verbal working memory were associated significantly with genotype (p=0.338, p=0.678 respectively) or serum BDNF levels (Spearman's rho=-0093, p=0.732) in the sample of FEP patients (table 2).

Discussion

In the present study we investigated the serum BDNF levels and the presence of BDNF Val66Met polymorphism and their association with psychopathological and memory variables in a sample of drug-naive FEP patients with schizophrenia. This study was a follow up of our project with drug-naïve FEP patients and alterations in serum BDNF levels.

We confirmed the significantly reduced serum BDNF levels in FEP drug-naive patients compared to healthy controls. These results are consistently with our previously published results[9] and with other clinical studies observed in patients not only in the context of schizophrenia[8] but also in the context of mania and major depressive episode.[27,28] This may indicate that BDNF though non specific to schizophrenia, could be a biomarker of clinical importance. Our results offer further support to the prominent role of neurotrophins in the neurodegenerative pathogenetic theory of schizophrenia through their capacity to regulate central neurotransmission as well as to promote neuroplasticity.[3,29,30]

We also found a significant difference in the frequency of BDNF Val66Met variant in the sample of FEP patients (p=0.030), compared to healthy controls. Specifically the homozygous Met/Met carri-

Table 2. Sample characteristics and main effect of genotype in studied variances (means)

Variable	*Val/Val*	*Val/Met*	*Met/Met*	*Chi-Square*	*p*
Patients (31)	6	12	13		
Age of onset	26.50	27.08	26.53	0.506	0.776
Ser BDNF	17.06	22.65	16.96	3.235	0.198
Panss-pos	35.33	36.58	32.23	3.198	0.202
Panss-neg	31.16	30.33	33.46	2.471	0.291
B mem sc	33.66	19.60	19.33	0.776	0.678
F mem sc	23.33	24.40	33.71	2.170	0.338

B mem Sc: Backwards memory scores
F mem Sc: Forwards memory scores

ers showed a 41.9% over-represented with respect to the heterozygous type. Our study confirms the association of BDNF Val66Met polymorphism with schizophrenia. Other studies have confirmed the implication of this polymorphism to schizophrenia[31] and the age of onset of the disease.[32] The first study was a meta-analysis with chronic schizophrenic patients and the second referred to a sample of 42 FEP African-Americans patients. However other studies have failed to associate this polymorphism with schizophrenia in either Caucasians or Asian populations.[21,33–35]

Although there are contradictory results about the association of BDNF Val66Met variant to schizophrenia, other studies have linked this polymorphism to brain morphology, cognitive function and psychiatric symptoms in schizophrenia.[36–38] Met allele carriers had significantly greater reductions in frontal gray matter volume, with reciprocal volume increases in the lateral ventricles than Val homozygous patients. This is a result that seems to be in association with changes in cognition and clinical symptoms in schizophrenia.[39–43] Although we found no significant differences between genotypes status of patients and other variables like age of onset, alteration of serum BDNF levels, PANSS-Positive and PANSS-Negative subscale scores, we cannot rule out that other polymorphisms of BDNF gene could be related to these features of schizophrenia.

Our study also revealed significant negative correlations between serum BDNF levels of the patients and the PANSS-Negative subscale scores. Correlations of BDNF levels with PANSS-Positive subscale scores have been reported in previous studies.[8,27] Additionally our study reports a negative correlation between PANSS negative subscale scores and serum BDNF levels. As mentioned before, reduced serum BDNF levels in FEP patients might reflect an abnormally functioning dopaminergic-related signaling system, which leads to the emergence of psychotic symptoms. The negative correlation with PANSS-Negative but not with PANSS-Positive subscale scores may reflect the abnormally functioning dopaminergic-relating signaling system of mostly negative symptoms which are the core symptoms of schizophrenia. Therefore, it can be suggested that BDNF levels might be linked to the formation of these symptoms. These correlations may also indicate that BDNF is associated with the severity of psychotic symptoms of schizophrenia.

We found no significant difference in both digit span forwards and digit backwards scores. In a study of Egan et al, the same BDNF val66met polymorphism was found to have an effect on memory function and modulation.[16] This effect though not specific to schizophrenia seems to influence cognitive function which is found to be abnormal in certain forms of schizophrenia and also, as mentioned above, to aspects of brain morphology.[41] Therefore BDNF variations may influence memory function by impacting on an underdeveloped abnormal frontal gray brain matter. Despite the fact that in our sample of FEP patients the Met/Met carriers had the lowest digit forward digit backwards scores compared to the two other carriers, this hypothesis cannot be substantiated from our data.

Among the limitations of our study is the rather small though well balanced sample size. However, it must be stated that drug-naïve first-episode patients with schizophrenia are difficult to ascertain. BDNF levels were assessed in serum, thus representing an indirect measurement of brain BDNF levels. However, preclinical studies have confirmed the relationship between BDNF levels in the peripheral blood and the brain.[42,43]

Conclusions

Our results reinforce the finding that decreased serum BDNF levels are strongly associated in drug-naive first psychotic patients with schizophrenia reflecting pathophysiological processes related to the onset of the disease. The significant evidence for association between the BDNF Val66Met polymorphism and schizophrenia in a pure sample of greek nationals, provides evidence that this polymorphism is associated with schizophrenia in this caucasian population as well. Further analysis of other polymorphisms with the BDNF gene are needed to be investigated in order to ascertain the relationship between specific genotype status, alterations of BDNF levels and psychopathology in patients with schizophrenia.

Συσχέτιση των επιπέδων νευροτροφικού παράγοντα ορού BDNF και του γενετικού πολυμορφισμού val66met του ίδιου παράγοντα σε μια ομάδα ασθενών με πρώτο ψυχωσικό επεισόδιο σχιζοφρενικής διαταραχής

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Η παρουσία αρκετών λειτουργικών πολυμορφισμών στο γενετικό τόπο του νευροαναπτυξιακού παράγοντα BDNF έχει συσχετισθεί με την ανάπτυξη της σχιζοφρενικής διαταραχής. Ειδικότερα σε προηγούμενες μελέτες έχει βρεθεί ότι η παρουσία του πολυμορφισμού Val66Met αυξάνει τον κίνδυνο ανάπτυξης σχιζοφρενικής διαταραχής, αν και άλλες μελέτες δεν το επιβεβαιώνουν. Μειωμένα επίπεδα BDNF στον εγκέφαλο και στον ορό ασθενών με ψυχωσικές διαταραχές έχουν αναφερθεί σε ασθενείς με πρώτο ψυχωσικό επεισόδιο. Στην παρούσα μελέτη μας ερευνήσαμε την πιθανή γενετική σχέση αυτού του πολυμορφισμού σε ένα πληθυσμό 38 ασθενών με πρώτο ψυχωσικό επεισόδιο σχιζοφρενικής διαταραχής σε σύγκριση με έναν άλλο πληθυσμό 21 υγιών εθελοντών. Επιπροσθέτως, μετρήσαμε τα επίπεδα BDNF στον ορό και μελετήσαμε την πιθανή σχέση μεταξύ του συγκεκριμένου πολυμορφισμού και των μεταβολών των επιπέδων του BDNF στον ορό και των δύο υπό μελέτη ομάδων. Βρέθηκε στατιστικά σημαντική σχέση στις συχνότητες των γονοτύπων μεταξύ των ασθενών και των υγιών (p=0,030). Οι ομόζυγοι φορείς Met/Met υπερεκπροσωπούνταν στην ομάδα των ασθενών με σχιζοφρενική διαταραχή (13/31, 41,9%), σε σύγκριση με την ομάδα των υγιών (2/19, 10,5%). Τα επίπεδα ορού του BDNF στην ομάδα των ασθενών ήταν μειωμένα σε σχέση με τα αντίστοιχα επίπεδα στον ορό των υγιών σε στατιστικά σημαντικό βαθμό (18,87±8,23 ng/mL έναντι 29,2±7,73 ng/mL, U=140, p=0,0). Δεν βρέθηκε συσχέτιση μεταξύ των μεταβολών των επιπέδων του BDNF στον ορό και της παρουσία του γενετικού πολυμορφισμού Val66Met στην ομάδα των ασθενών (p=0,198). Αρνητικές συσχετίσεις βρέθηκαν μεταξύ των επιπέδων του BDNF στον ορό και του σκορ στην κλίμακα PANSS αρνητικών συμπτωμάτων της σχιζοφρένειας (p=0,015). Δεν βρέθηκαν σημαντικές διαφορές μεταξύ των γονοτύπων και των μνημονικών σκορ στην ομάδα των ασθενών. Τα αποτελέσματά μας καταδεικνύουν ότι τα επίπεδα του νευροαναπτυξιακού παράγοντα BDNF και ο γενετικός πολυμορφισμός του BDNF Val66Met αποτελούν παράγοντες κινδύνου για την ανάπτυξη της σχιζοφρενικής διαταραχής.

Λέξεις ευρετηρίου: Νευροτροφικός παράγοντας, BDNF, γενετικός πολυμορφισμός, πρώτο επεισόδιο, σχιζοφρένεια, ψυχοπαθολογία.

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Research article
Ερευνητική εργασία

Attitudes on euthanasia and physician-assisted suicide among medical students in Athens

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Attitudes towards assisted death activities among medical students, the future health gatekeepers, are scarce and controversial. The aims of this study were to explore attitudes on euthanasia and physician-assisted suicide among final year medical students in Athens, to investigate potential differences in attitudes between male and female medical students and to review worldwide attitudes of medical students regarding assisted death activities. A 20-item questionnaire was used. The total number of participants was 251 (mean age 24.7±1.8 years). 52.0% and 69.7% of the respondents were for the acceptance of euthanasia and physician-assisted suicide, respectively. Women's attitudes were more often influenced by religious convictions as well as by the fact that there is a risk that physician-assisted suicide might be misused with certain disadvantaged groups. On the other hand, men more often believed that a request for physician-assisted suicide from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression. Concerning attitudes towards euthanasia among medical students in various countries there are contradictory results. In USA, the Netherlands, Hungary and Switzerland most of the students supported euthanasia and physician-assisted suicide. However, in many other countries such as Norway, Sweden, Yugoslavia, Italy, Germany, Sudan, Malaysia and Puerto Rico most students expressed negative positions regarding euthanasia and physician assisted suicide.

Key words: Euthanasia, physician-assisted suicide, attitudes, medical students.

Introduction

Euthanasia (EUT) and physician-assisted suicide (PAS), i.e. voluntary euthanasia, have received increased attention over the last decades.[1–3] The term euthanasia originated from Ancient Greek philosophers. Plato and Socrates argued that suicide and assisted suicide were acceptable if they meant a more peaceful and less painful death. Plato in his tract "The Republic" writes that a physician should not lay a finger on a terminally ill body, as this would result in a long and unhappy life for the ill person. However,

the Ancient Greek physicians were opposed to euthanasia. According to the "Hippocratic Oath" doctors should preserve the patients' life and not cause harm to them. "I will never give anyone, even if I was asked for, fatal poison…" wrote Hippocrates. The "Hippocratic Oath" is an important issue in contemporary medical debates.[4]

Nowadays there are many changes in the prevailing causes of death (e.g. traffic accidents, malignant tumours) as well as in medical technology prolonging the process of dying but, many times, without improving the patients' quality of life. Numerous surveys have explored attitudes toward EUT expressed by lay public, terminally ill patients or their relatives and medical professionals. However, the available data on this area among medical students, the future health gate-keepers, are contradictory although they will be concerned with terminally ill patients as well as with suicidal patients.

The aims of this study are: (a) to explore attitudes on EUT and PAS among final year medical students in Athens, (b) to investigate potential differences in attitudes between male and female medical students and (c) to review worldwide attitudes of medical students regarding assisted death activities.

Material and methods

To assess attitudes toward EUT and PAS the authors developed a questionnaire based on a review of international studies on the views of physicians and medical students regarding assisted death activities.[1,2,5–8] The Greek version of the questionnaire consists of 20 items and requires about 10 minutes to complete. The answers on the questionnaire are assessed by fixed-response items with three response options. A copy of the questionnaire can be obtained from the first author (VPK). For a sample of Greek students (n=30) the questionnaire showed appropriate temporal stability (test-retest reliability, k=0.91).

A consecutive series of final year medical students in Athens University completed the questionnaire in the presence of members of the research team. Students were informed briefly about the aim of the study. The questionnaires were administered before starting lectures on various psychiatric topics not related to EUT. The survey was anonymous and no identifying information was placed in the questionnaire. Because the terms "euthanasia" and "physician-assisted suicide" could be unclear, respondents were provided with definitions of the terms. Students were asked to give an opinion on whether EUT or PAS should be permitted as well as to determine the factors that could influence their view on EUT or PAS or would be important in deciding when PAS should be allowed. Questions about age, sex and religion of the respondents were also included.

Descriptive statistics were used to explore patients' demographic characteristics as well as their responses to the questionnaire's items. Frequencies of responses between men and women were compared with the chi-square test. The level of significance was set at 0.05.

Results

Out of a total of 266 students, 15 (5.6%) refused to participate in the study. 251 students completed the questionnaire. Their mean age was 24.7 (±1.8) years. There were 139 (55.4%) men with a mean age of 24.19 (±1.6) years and 112 (44.6%) women with a mean age of 24.50 (±1.5) years. 79.6% of the students were informed about EUT and PAS. 130 respondents (52.0%) were for the acceptance of EUT under some circumstances (i.e. terminal illness). 175 respondents (69.7%) endorsed the view that PAS may be morally acceptable under some circumstances and that the decision should be up to the affected individual. 138 students (55.6%) endorsed the view that if they themselves had a terminal illness, there might be conditions (pain and physical discomfort) under which they would consider obtaining a physician's assistance to end their life. Only 36.8% of the respondents endorsed the view that if a family member or friend had a terminal illness there might be conditions under which they would consider obtaining a physicians' assistance to end his/her life. 199 students (79.2%) believed that withdrawing life-sustaining medical treatment in terminally ill patients to hasten death, if requested by the patient, should be always or under circumstances permitted. 134 respondents (53.3%) believed that prescribing drugs to relieve pain in doses that may hasten death, if requested by the

patient, should be always or under circumstances permitted. Only 86 students (35.0%) believed that a physician should be always or under circumstances permitted to hasten the death of a terminally ill patient if that is requested by his/her family members or friends.

The following factors would be very or moderately important in deciding when PAS should be allowed: the expected quality of life of the affected patient (82.2%); the length of time the patient could be expected to live (52.9%); and the financial burden of the patient or the patient's family (27.5%).

The following factors influenced a great deal or moderately the respondents' view on the issue of EUT or PAS: the consistency with the physician's role in preserving or protecting life according to the Hippocratic Oath (96.0%); the risk that PAS might be misused with certain disadvantaged groups (94.0%); personal moral convictions (92.8%); personal experience with terminally ill patients (i.e. family members, friends or important others) (85.6%); personal religious convictions (66.9%).

140 students (55.7%) believed that there should be sufficient legal safeguards regarding the possible legislation of PAS and EUT. 135 (53.7%) agreed that the legalisation of PAS or EUT may be a risk for the legitimate everyday medical practice.

Only 10 respondents (3.9%) believed that psychiatric evaluation of the patient is required in the case of PAS. Yet, 21.7% agreed that a request for PAS from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression.

The comparison between male and female medical students' attitudes revealed statistically significant differences in only three questions (table 1). Religious convictions as well as the risk that PAS might be misused with certain disadvantaged groups influenced women's attitudes more often. On the other hand, men more often believed that a request for PAS from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression.

Discussion

Concerning the dilemma for or against EUT and PAS there are contradictory data among medical students. In many countries such as the USA, the Netherlands, Hungary and Switzerland most of the students supported EUT and PAS. Two studies among medical students on attitudes towards EUT and PAS were carried out in the USA. In the Oregon study[5] 65% of the respondents expressed support to PAS and in the Miami study[6] EUT was acceptable by 75% of the respondents. In the Netherlands, Muller et al[7] found that 80% of medical students were in favour of EUT and 50% of them endorsed the view that le-

Table 1. Statistically significant differences between male and female medical students' attitudes on euthanasia and physician-assisted suicide.

Question	*Answers*	*Women N (%)*	*Men N (%)*	*Stat. Sign*
13. To what degree influence your view on the issue of physician-assisted suicide or euthanasia your religious convictions?	AGD M NA	48 (42.9) 40 (35.7) 24 (21.4)	45 (32.4) 35 (25.2) 59 (42.4)	$x^2 = 11.45$ $p<0.001$*
16. To what degree influence your view on the issue of physician-assisted suicide or euthanasia the risk that it might be misused with certain disadvantaged groups?	AGD M NA	104 (92.9) 6 (5.3) 2 (1.8)	109 (78.4) 18 (12.9) 12 (8.7)	$x^2=4.30$ $p<0.05$*
20. Do you believe that a request for physician-assisted suicide from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression?	Yes No IDN	15 (13.4) 82 (73.2) 15 (13.4)	37 (26.6) 92 (66.2) 10 (7.2)	$p<0.05$**

AGD=a great deal; M= moderately; NA=not at all, IDN=I do not know/I do not answer
* AGD and M answers vs. NA answers
** Yes vs No and IDN answers

gal punishment of EUT and PAS should be abolished. In Hungary, 78% of medical students supported a person having a right to die, but 44% of them had doubts about the legalization of PAS and EUT.[8] In Switzerland most medical students supported PAS (77%) and direct active euthanasia (70%).[9]

However, in many other countries, students expressed negative positions regarding the EUT and PAS. In Norway, 36% of the respondents supported EUT in cases of terminal disease, while the legalization of EUT was favoured by 23% of them.[10] In Sweden, 34% of the respondents expressed a positive opinion regarding legalization of EUT, 52% had a negative opinion and the rest were undetermined.[11] In Yugoslavia, 35% of students were for the acceptance of EUT and 23% believed that EUT should be legalized.[12] In Italy, only 28% of the students were in favour of EUT and PAS.[13] In Germany, 89% of fifth-year medical students believed that PAS was illegal and only a third of the students viewed PAS as ethically acceptable in certain situations.[14] In a recent study at two German universities (U1 Bohn, U2 Düsseldorf), with and without palliative medicine education respectively, only 22.4% of final year medical students at U1 and 35.7% at U2 favoured a legalisation of active EUT.[15] In Sudan, the majority (76%) of final year medical students opposed euthanasia and their reasons included religious beliefs, ethical convictions and fear of misuse.[16] In Malaysia, only 32% of students favoured the legalization of EUT, 71% of them were against the idea of active euthanasia but 52% of the respondents were for the withdrawal of active therapy in a patient suffering from a painful terminal disease.[17] In Puerto Rico, 40% of medical students expressed support for EUT and 50% of students were not opposed to PAS, if legalized.[18] In a more recent study from Puerto Rico, 28% of medical students supported EUT and only 13% of them would engage in PAS.[19]

About half of medical students in our study favoured EUT and a greater proportion of them (70%) believed that PAS may be acceptable under circumstances. In this study, the variables that influenced the students' attitudes towards EUT and PAS were: moral, religious and professional ethical restrictions (Hippocratic Oath), personal experiences with terminally ill patients and the risk that PAS might be misused with certain disadvantaged groups. Only 4% of the respondents believed that psychiatric evaluation is indispensable in patients requesting PAS. Yet, 22% agreed that a request for PAS from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression.

The issue of whether psychiatric consultation should be optional or mandatory for requests for PAS from patients with a physical disease remains controversial. In favour of mandatory psychiatric evaluation is the risk of the physician misjudging the patient's competence and the high prevalence of mental disorders, especially depression, among terminally ill patients asking for PAS. On the other hand, in favour of optional psychiatric evaluation is mainly the risk of "psychiatrization" and "stigmatization".[20–25] Nevertheless, given the state-dependent nature of mental illness the important role of psychiatrists to detect and treat psychiatric illnesses, mainly depression, in these patients, as well as to provide an assessment of the patients' decision-making ability is well documented.[21,22,26]

Gender differences in attitudes towards EUT and PAS among medical students have scarcely been explored in published literature to date. Reported results are contradictory and do not allow definite conclusions to be drawn. A study in Dutch medical students found that males were more opposed to EUT and PAS than females[7]; another two studies, in Puerto Rico[19] and in the USA,[28] found that women were generally more neutral or uncertain regarding assisted death practices than men; finally, a Norwegian study recorded no significant gender differences.[10] In our study, no significant differences in the acceptance of EUT and PAS between males and females were recorded either; however, women's attitudes were more often influenced by religious convictions as well as the risk that PAS might be misused with certain disadvantaged groups than men while the latter more often believed that a request for PAS from a terminally ill patient is prima-facie evidence of a mental disorder, usually depression.

When looking for explanations for differences in attitudes on EUT and PAS between countries or between time periods, the role of cultural influences (such as religious beliefs, family ties, etc.) and their changes diachronically should be considered.[28–31]

In Greece, where EUT and PAS are banned by the law, the code of medical practice and the Christian orthodox religion, there are few data exploring general population or health professionals' attitudes on this subject. Few years ago, Papapetropoulos et al (32) explored the attitudes towards PAS among sixth-year medical students in Patras, the third largest city in Greece, and found that less than 10% of the respondents agreed with PAS. In a Greek public opinion survey regarding EUT, about 45% of the respondents were opposed to life-sustaining medical treatment. The most important reasons behind a request for PAS were pain, despair and depression.[33]

There are limitations in all studies dealing with subjects' attitudes. The first limitation concerns the potential effect of the tendency of some respondents to respond in a socially desirable fashion. Another limitation concerns the interpretation of data. Attitudes do not necessarily relate to actual behaviour and there is no simple causal relationship between cultural and personal attitudes and the respective behaviour.

In conclusion, the results of our study could be of interest regarding the progress of legalisation of EUT and PAS in many countries and the need for procedural safeguards. Nowadays, students in medical schools are trained to investigate, diagnose, treat aggressively, prolong life and cure. Yet, both physicians and students feel uncomfortable with death and dying patients.[34–37] Therefore, there is a need for special education of medical students, the future health gate-keepers, on end-of-life decisions and the possible relationship between the request for PAS and the existence of a treatable mental disorder, usually depression, motivating patients' interest in PAS.

Στάσεις των φοιτητών της Ιατρικής Σχολής Αθηνών σχετικά με την ευθανασία και την υποβοηθούμενη αυτοκτονία

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Η ευθανασία (ΕΥ) και η υποβοηθούμενη αυτοκτονία (ΥΑ), δηλαδή η εθελοντική ευθανασία, αποτελούν αντικείμενο εκτεταμένων συζητήσεων μεταξύ επιστημόνων διαφορετικών κατευθύνσεων (ιατροί, νομικοί, κληρικοί κ.ά.) τα τελευταία χρόνια. Στις μέρες μας καταγράφεται σημαντική αύξηση των νεοπλασματικών και άλλων χρόνιων-τερματικών παθήσεων και των τροχαίων ατυχημάτων. Το γεγονός αυτό σε συνδυασμό με την μεγάλη πρόοδο της τεχνολογίας οδήγησε σε αύξηση του προσδόκιμου χρόνου επιβίωσης των ασθενών αυτών χωρίς όμως –συχνά– την ανάλογη βελτίωση της ποιότητας της ζωής τους. Μεγάλος αριθμός ερευνών, σε παγκόσμιο επίπεδο, πραγματοποιείται προκειμένου να καταγραφούν οι απόψεις-τάσεις του γενικού πληθυσμού, των ασθενών με ανίατες ασθένειες και των συγγενών τους όπως επίσης και των επαγγελματιών ψυχικής υγείας σε θέματα

ΕΥ και ΥΑ. Οι πληροφορίες σε σχέση με τα παραπάνω θέματα, όσον αφορά στους φοιτητές ιατρικής –μελλοντικούς υπερασπιστές της δημόσιας υγείας– είναι σχετικά ανεπαρκείς και αντιφατικές. Η μελέτη αυτή στοχεύει (α) να διερευνήσει τις στάσεις σε θέματα ευθανασίας και υποβοηθούμενης αυτοκτονίας μεταξύ τελειόφοιτων σπουδαστών της Ιατρικής Σχολής του Πανεπιστημίου Αθηνών, (β) να εντοπίσει πιθανές διαφορές στις στάσεις ανδρών και γυναικών φοιτητών, και (γ) να παρουσιάσει και να σχολιάσει τις στάσεις φοιτητών ιατρικής σε διάφορες χώρες του κόσμου. Για τη μελέτη αυτή αναπτύχθηκε και χρησιμοποιήθηκε ένα ερωτηματολόγιο 20 ερωτήσεων που βασίσθηκε σε ανάλογα ερωτηματολόγια που χρησιμοποιήθηκαν σε διάφορες άλλες χώρες. 251 τελειόφοιτοι ιατρικής (55% άνδρες και 44% γυναίκες), με μέση ηλικία 24,7 (±1,8) χρόνια, συμπλήρωσαν το ερωτηματολόγιο. Όλοι οι φοιτητές της μελέτης ήταν Χριστιανοί Ορθόδοξοι ως προς το θρήσκευμα. 79,6% των φοιτητών ήταν ενημερωμένοι σχετικά με τα θέματα της ΕΥ και της ΥΑ. 52% και 69,7% των ερωτηθέντων ήταν υπέρ της ΕΥ και της ΥΑ, αντίστοιχα, κάτω από ορισμένες προϋποθέσεις. 55,6% των ερωτηθέντων απάντησαν ότι εάν οι ίδιοι υπέφεραν από επώδυνη-ανίατη-καταληκτική ασθένεια θα ζητούσαν τη βοήθεια ιατρού για να τερματίσουν τη ζωή τους (υποβοηθούμενη αυτοκτονία). 79,2% των ερωτηθέντων υποστήριξαν ότι θα έπρεπε ένα γιατρός υπό προϋποθέσεις ή και ανεξάρτητα προϋποθέσεων να εκτελέσει την επιθυμία ενός ασθενούς που πάσχει από ανίατη-επώδυνη -καταληκτική ασθένεια και να προχωρήσει σε διακοπή της μηχανικής υποστήριξης των ζωτικών του λειτουργιών. Οι παρακάτω παράγοντες επηρέαζαν θετικά τη στάση των ερωτηθέντων απέναντι στη ΕΥ και την ΥΑ: η χαμηλή ποιότητα ζωής του ασθενούς και οι έντονοι πόνοι (82,2%), η μικρή διάρκεια προσδόκιμης επιβίωσης (52,9%), η σοβαρή οικονομική επιβάρυνση του ασθενούς και της οικογένειάς του (27,5%). Εξάλλου, οι παρακάτω παράγοντες επηρέαζαν αρνητικά τη στάση των ερωτηθέντων απέναντι στην ΕΥ και την ΥΑ: οι Ιπποκρατικές αρχές που οριοθετούν το ρόλο του γιατρού στο «να προστατεύει και να διατηρεί» την ανθρώπινη ζωή (96,0%), ο κίνδυνος κατάχρησης σε άτομα με σωματικές και ψυχικές μειονεξίες (94,0%), οι προσωπικές ηθικές αρχές (92,8%), η προσωπική-οικογενειακή εμπειρία γύρω από ανίατες ασθένειες (85,6%), οι προσωπικές θρησκευτικές πεποιθήσεις (66,9%). 55,7% των ερωτηθέντων απάντησαν ότι πρέπει να υπάρξουν ικανοποιητικές δικλείδες ασφαλείας στην περίπτωση νομικής κατοχύρωσης της ΕΥ και της ΥΑ. Μόνο 3,9% των φοιτητών απάντησαν ότι θεωρείται απαραίτητη η ψυχιατρική εκτίμηση του ασθενούς που επιθυμεί να τερματίσει τη ζωή του ενώ 21,7% απάντησαν ότι η επιθυμία του ασθενούς για ΥΑ είναι πιθανή ένδειξη ψυχικής διαταραχής (συνήθως κατάθλιψης). Η σύγκριση γυναικών και ανδρών φοιτητών έδειξε ότι οι γυναίκες συχνότερα επηρεάζονται στις στάσεις τους από τις θρησκευτικές τους πεποιθήσεις και τον κίνδυνο κατάχρησης σε άτομα με σωματικές και ψυχικές μειονεξίες. Αντίθετα, οι άνδρες συχνότερα πιστεύουν ότι η επιθυμία ασθενούς για ΥΑ είναι πιθανή ένδειξη ψυχικής διαταραχής. Υπέρ της ΕΥ και της ΥΑ έχει ταχθεί η πλειονότητα των φοιτητών στις ΗΠΑ, Ολλανδία, Ουγγαρία, Ελβετία. Αντίθετα, σε άλλες χώρες όπως Νορβηγία, Σουηδία, Γιουγκοσλαβία, Ιταλία, Γερμανία, Σουδάν, Μαλαισία, Πουέρτο Ρίκο μεγάλο μέρος των φοιτητών είναι κατά της ΕΥ και της ΥΑ.

Λέξεις ευρετηρίου: Ευθανασία, υποβοηθούμενη αυτοκτονία, στάσεις, φοιτητές ιατρικής.

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Research article
Ερευνητική εργασία

Fatigue and somatic anxiety in patients with major depression

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The objective this study aimed to investigate the independent contribution of somatic anxiety to the severity of depression-related fatigue. Seventy-six patients (85.5% female), aged 23–65 years (mean 48.7±10.6), diagnosed with major depressive disorder and currently in a major depressive episode (MINI 5.0.0.) with a 17-item Hamilton Depression Rating Scale (HDRS) score ≥17, were studied. Forty-nine patients (64.5%) were concurrently suffering from anxiety disorder(s). Patients with physical diseases or other fatigue-related conditions were excluded. Reported fatigue was measured with the 14-item Fatigue Questionnaire (FQ). Based on HDRS item 11 (somatic anxiety) scores, patients were divided into those with somatic anxiety (HDRS-11≥2) and those without (HDRS-11≤1). Pearson's (r) and Spearman's (rho) correlations between FQ score, age, gender, inpatient status, HDRS score and somatic anxiety status were calculated. A multiple regression analysis was then performed, with FQ as the dependent variable. Fifty-seven patients (75%) were rated as suffering from somatic anxiety (HDRS-11≥2). Patients with somatic anxiety had significantly higher HDRS and FQ scores. The FQ score significantly correlated with the HDRS score (r=0.36, p=0.001) and somatic anxiety status (rho=0.35, p=0.002). The FQ score was independently predicted by HDRS score and somatic anxiety status, with standardised beta coefficients of 0.259 (p=0.028) and 0.255 (p=0.031), respectively. R2 was 0.185. Both the severity of depression and the presence of somatic anxiety independently correlate with the severity of reported fatigue in patients with major depression. This finding has potential implications for the management of depression-related fatigue.

Key words: Major depression, somatic anxiety, fatigue.

Introduction

Fatigue is a frequent symptom in the general population and one of the principal presenting symptoms in primary care facilities.[1,2] Fatigue is also associated with a wide variety of conditions (physical diseases, neurological or psychiatric disorders, chronic fatigue syndrome), in which it is a major determinant of prognosis and functional capacity.[3] Various self-report measures have been introduced to assess the severity and prevalence of fatigue in various settings.[4,5] The Fatigue Questionnaire[6] is the most widely used multidimensional measure assessing the intensity of reported fatigue-related symptoms.

Depressive and anxiety symptoms are prevalent in many fatigue-related conditions and have been found to correlate with the severity of reported fatigue. Studies in the community and in primary care settings have found that the severity of reported fatigue correlates with the severity of both depression and anxiety.[7–10] Furthermore, several studies have isolated strong independent correlations between the severity of reported fatigue and the intensity of depressive and anxiety symptoms in patients with fatigue-related diseases or conditions, such as multiple sclerosis,[11–13] Parkinson's disease,[14] cancer,[15,16] HIV infection,[17,18] fibromyalgia,[19,20] systemic lupus erythematosus,[21–23] sleep apnea,[24] and chronic fatigue syndrome.[25–27]

Fatigue is a core symptom of major depression as well as a prodromal and a residual symptom of depressive disorders.[28,29] It is prevalent in 73–97% of depressed patients and has a detrimental impact on their level of functioning and quality of life.[30,31] However, fatigue in major depression is understudied compared to other fatigue-related conditions. A few studies have recently attempted to isolate predictors of depression-related fatigue; female gender, sleep disturbances and the severity of depression are the main ones that have been located.[32–35] Depressed patients often suffer from comorbid anxiety disorders or subthreshold anxiety symptoms.[36,37] However, the independent contribution of somatic anxiety symptoms (i.e. effects of autonomic overactivity) to the severity of depression-related fatigue has not been investigated and this was the objective of this study. The isolation of potential additional predictors of depression-related fatigue might allow clinicians to manage this debilitating symptom in a more specific and efficient way.

Material and method

Subjects

Subjects included in the study were consecutive patients of both sexes, aged 18–65 years, who were either hospitalized in one of the wards of the Psychiatric Clinic, or treated at the outpatient service of Eginition Hospital from March 2005 to March 2007. All patients had a diagnosis of Major Depressive Disorder (MDD) and were currently in a Major Depressive Episode (MDE), as assessed by the short structured DSM-IV-based interview MINI version 5.0.0.[38] Moreover, all patients had a 17-item Hamilton Depression Rating Scale (HDRS)[39] score ≥17.[40]

Exclusion criteria were: (1) other diagnoses interfering with patients' cooperation in the study (catatonic or psychotic features in the present episode, organic mental disorders, mental retardation), (2) other DSM-IV axis I mental disorders except anxiety disorders (alcohol or other substance abuse during the last 6 months, eating disorder during the last 6 months, sleep disorders) potentially associated with clinically significant fatigue, (3) severe physical diseases or other fatigue-related conditions (severe obesity with BMI>45, pregnancy, fatigue-associated medications except psychotropics), (4) a recent (i.e. less than 3 weeks ago) change in the drug treatment regimen.

All patients had their medical history recorded. A thorough physical examination was carried out and blood was drawn for a biochemical profile, total blood count and basic endocrinological tests within ±2 days from the clinical/psychometric evaluations. Patients were further tested once clinical evaluations and routine laboratory tests provided evidence for physical diseases potentially associated with prominent fatigue. When patients met one or more of the exclusion criteria, they did not enter the analyses. All patients were asked to provide written informed consent before participating in the study. The study protocol was approved by the Research Ethics Committee of Eginition Hospital. Subjects finally included were 76 patients, aged between 23 and 65 years (mean 48.7±10.6 years); 65 were females (85.5%) and 38 (50%) were inpatients. Forty-nine

patients (64.5%) were concurrently suffering from anxiety disorder(s), as assessed with the MINI. The majority of patients (N=63, 82.9%) were under antidepressant medication (47.4% on SSRIs and 35.5% on SNRIs).

Measures

The following instruments were used for cross-sectional assessment of the severity of fatigue and depression.

Fatigue

The severity of fatigue during the last two weeks prior to assessment was recorded by means of the Fatigue Questionnaire (FQ), a frequently used, established, self-report fatigue questionnaire, comprising 14 items measuring the intensity of fatigue-related symptoms. Each item is rated on a 4-point Likert scale (0 "better than usual", 1 "no more than usual", 2 "worse than usual", 3 "much worse than usual"). The FQ score is the sum of all items' scores. Greek translation and back translation of the FQ was made according to the guidelines of the World Health Organization.[41] The FQ consists of two subscales: a mental and a physical fatigue subscale.[6]

Depression

The severity of depression was assessed with the 17-item HDRS, which is one of the most widely used observer-rated instruments to assess the severity of depressive symptoms in MDD patients. Ratings are completed by the examiner on the basis of patient interview (depressive symptoms experienced over the past week), information provided by relatives or nurses and observations. Eight items are scored from 0 to 2 and nine items are scored from 0 to 4. A cut-off point of 17 is often used to ensure a degree of depression severity.[40]

Somatic anxiety

HDRS item 11 measures somatic anxiety and includes physiological concomitants of anxiety, i.e. "butterflies", indigestion, stomach cramps, belching, diarrhoea, palpitations, hyperventilation, paraesthesias, sweating, flushing, tremor, headache, urinary frequency.[39]. It is rated on a 5-point Likert scale (0=absent, 1=mild, 2=moderate, 3=severe, 4=incapacitating). Using the median HDRS item 11 score (i.e. 2) as a cut-off point, patients were divided into those with somatic anxiety (HDRS-11 score ≥2) and those without (HDRS-11 score ≤1).

Statistical analysis

Descriptive statistics were used to check the distributions of all variables. Student's independent samples t-test or Mann-Whitney U test (as appropriate) and Pearson Chi-square test were used for the comparison of continuous and categorical variables, respectively, between patients with somatic anxiety and those without. Pearson's (r) and Spearman's (rho) coefficients were employed in bivariate correlations between the FQ score as the dependent variable and the independent variables (age, gender, inpatient status, HDRS score and somatic anxiety status), as well as in intercorrelations between the independent variables to test for collinearity.

Then, a stepwise multiple regression analysis was performed, with the FQ score as the dependent variable, so as to isolate independent predictors of the severity of fatigue. Any variable found to correlate with the FQ score at a $p<0.1$ entered the regression analysis. Whenever two independent variables had a Pearson's or Spearman's correlation coefficient ≥0.7 between them, one of them was excluded from the multivariate analysis for collinearity.[42]

Results

Age, HDRS and FQ scores had approximately normal distributions. HDRS scores ranged from 17 to 33 (mean 21.7±5.1). FQ scores ranged from 8 to 42 (mean 30.3±7.6); 65.8% of patients had a mean item score of >2. Fifty-seven patients (75%) were rated as suffering from somatic anxiety (HDRS-11 score ≥2).

Patients with somatic anxiety did not significantly differ from those without in age (t=0.19, df=74, P=0.85), gender (x2=0.89, p=0.35) and inpatient status (x^2=0.63, p=0.43). However, patients with somatic anxiety had significantly higher scores both on the HDRS (t=3.83, df=74, $p<0.001$) and the FQ (t=3.32, df=74, $p<0.001$). Inpatients scored higher on the HDRS (t=2.71, df=74, p=0.008) than outpatients, but these two groups did not significantly differ in the FQ score (t=0.36, df=74, p=0.72). There were not significant differences between males and females both

in the HDRS (U test, z=1.58, p=0.11) and FQ scores (U test, z=1.69, p=0.09). Medicated and non-medicated patients had not significant differences in HDRS (t=0.87, df=74, P=0.39) and FQ scores (t=0.34, df=74, p=0.74). Patients on SNRIs did not significantly differ from those on SSRIs in HDRS (t=0.80, df=61, p=0.42) and FQ scores (t=0.82, df=61, p=0.41).

Bivariate (Pearsons's or Spearman's, as appropriate) correlations between FQ scores and the independent variables are shown in table 1. FQ scores significantly correlated with HDRS scores (r=0.36, p=0.001) and somatic anxiety status (rho=0.35, p=0.002). Age, gender, HDRS score and somatic anxiety status entered the multiple regression model with the FQ score as the dependent variable. The HDRS score and somatic anxiety status turned out to be the only significant predictors of the FQ score, with standardised beta coefficients of 0.259 (p=0.028) and 0.255 (p=0.031), respectively. R^2 was 0.185.

Discussion

The present study aimed to investigate whether somatic anxiety independently correlates with the severity of fatigue reported by patients with unipolar non-psychotic major depression. Depressed patients with other axis I mental disorders (except anxiety disorders) or severe physical diseases potentially associated with prominent fatigue were excluded, so that the confounding effect of other fatigue-related conditions is avoided. Moreover, included patients were either drug-free (17.1%) or, when medicated (82.9%), on a stabilized antidepressant treatment regimen, so as to avoid the confounding effect of side-effects associated with treatment initiation or modification. The correlation of the severity of reported fatigue with anxiety symptoms has been investigated in the general population,[9,10] in patients with chronic fatigue syndrome,[27] neurological or physical diseases,[11–24] but not in patients with major depression. Fatigue is highly prevalent in these patients and has a debilitating effect on them; therefore, the isolation of independent predictors of fatigue reported by depressed patients and the implementation of effective treatment strategies are highly warranted.[43]

In general, the percentages of fatigue and somatic anxiety of clinically significant severity reported by patients in our sample are in accordance with data from previous studies.[30,31,33,35–37,44] The severity of fatigue did not have significant correlations with age, in accordance with data from previous studies.[32,34,35]

Table 1. Correlations between FQ score, age, gender, inpatient status, depression severity (HDRS score) and somatic anxiety status in patients with major depression.

	FQ	*Age*	*Inpatient status*	*Gender*	*HDRS*	*Somatic anxiety status*
FQ	1.000					
Age	–0.054	1.000				
	0.641					
Inpatient status	0.000	0.183	1.000			
	1.000	0.113				
Gender	–0.195	0.108	0.037	1.000		
	0.092	0.352	0.748			
HDRS	0.362(**)	0.156	0.293(*)	0.183	1.000	
	0.001	0.179	0.010	0.114		
Somatic anxiety status	0.352(**)	-0.037	0.091	–0.108	0.394(**)	1.000
	0.002	0.753	0.434	0.353	<0.001	

Pearson's r or Spearman's rho correlation coefficients with corresponding p-values, *P<0.05, **P<0.01 (two-tailed)

Gender (0: female, 1: male); inpatient status (0: outpatient, 1: inpatient); somatic anxiety status (0: without somatic anxiety, 1: with somatic anxiety)

Fatigue scores did not significantly differ between males and females, in contrast to findings from previous reports which have recorded higher levels of fatigue in female subjects.[32,34] This may be due to the low percentage of males (14.5%) in our sample, which may have concealed gender differences in fatigue scores, as well as to males having slightly higher, albeit not to a statistically significant degree, HDRS scores than females (mean 24.3 *vs* 21.3). Inpatients were more depressed than outpatients, as expected, but their difference in HDRS scores (means 23.3 *vs* 20.2) was not great enough to yield a statistically significant difference in FQ scores, as well.

The severity of fatigue was significantly correlated with the severity of depression (HDRS score) in our sample, corroborating previous findings.[33–35,44] Fatigue scores were significantly higher in patients with somatic anxiety compared to those without, independent of the severity of depression. This finding has potential implications for the rationale of therapeutic interventions needed to alleviate depression-related fatigue. Somatic anxiety lowering medications, such as anxiolytics or beta-blockers, might prove to be helpful, when properly selected and dosaged, in the management of fatigue-related complaints in depressed patients.

Certain limitations of this study should be noted. First, the vast majority of patients studied were under antidepressant medication (SSRIs or SNRIs). Fatigue and somatic anxiety in depressed subjects under treatment can be associated both with depression per se and with its treatment. Nevertheless, recorded fatigue severity was not correlated with being or not medicated nor with the kind of antidepressant received (SSRIs or SNRIs), suggesting that antidepressant-related fatigue might, at least in part, be compensated for by the alleviating effects of antidepressants on depression-associated fatigue. Moreover, newer antidepressants are far less associated with fatigue and other physical complaints than older tricyclic drugs.[45] Second, the low percentage of males in our sample may have concealed gender differences in fatigue scores. A final limitation was that estimates of somatic anxiety relied exclusively on HDRS item 11, which concerns physiological concomitants of anxiety, and no specific somatic anxiety scale was used. Therefore, our results should be replicated in studies using specific anxiety scales also measuring a somatic anxiety component.

In conclusion, our results suggest that the severity of depression as well as the presence of somatic anxiety independently correlate with the severity of reported fatigue in patients with major depression; this finding has potential implications for the management of depression-related fatigue. However, further studies are warranted to investigate questions about the causality of recorded associations between fatigue and somatic anxiety in major depression as well as the underlying pathophysiological mechanisms.

Κόπωση και σωματικό άγχος σε ασθενείς με μείζονα κατάθλιψη

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Σκοπός της παρούσας μελέτης ήταν η διερεύνηση της ανεξάρτητης συνεισφοράς του σωματικού άγχους στη βαρύτητα της κόπωσης που σχετίζεται με τη μείζονα κατάθλιψη. Μελετήθηκαν 76 ασθενείς (85,5% γυναίκες, 50% εσωτερικοί ασθενείς), ηλικίας 23–65 ετών (ΜΟ 48,7±10,6), που εί-

χαν διαγνωσθεί με μείζονα καταθλιπτική διαταραχή και βρίσκονταν τη δεδομένη στιγμή σε μείζον καταθλιπτικό επεισόδιο (με βάση τη βραχεία δομημένη συνέντευξη MINI 5.0.0.). Όλοι οι ασθενείς είχαν ελάχιστη βαθμολογία 17 στην κλίμακα κατάθλιψης του Hamilton των 17 λημμάτων (HDRS). Αποκλείσθηκαν ασθενείς με σωματικές νόσους ή άλλες καταστάσεις που συνοδεύονται από έντονη κόπωση. Η αναφερόμενη κόπωση μετρήθηκε με το ερωτηματολόγιο κόπωσης (FQ), των Chalder et al (1993), που έχει 14 λήμματα και αποτελείται από δύο υποκλίμακες, σωματικής και διανοητικής κόπωσης. Με βάση τη διάμεσο βαθμολογία (δηλαδή 2) στο λήμμα 11 της HDRS, που μετράει σωματικό άγχος, οι ασθενείς διαιρέθηκαν σε όσους είχαν σωματικό άγχος (HDRS-11≥2) και σε όσους δεν είχαν (HDRS-11≤1). Στη συνέχεια, υπολογίσθηκαν οι συντελεστές συσχέτισης Pearson (r) ή Spearman (rho) ανάμεσα στη βαθμολογία στο FQ, την ηλικία, το φύλο, την ύπαρξη ή μη σε νοσηλεία, τη βαθμολογία στην HDRS και την ύπαρξη ή μη σωματικού άγχους. Τελικά, πραγματοποιήθηκε ανάλυση πολλαπλής παλινδρόμησης με το FQ ως εξηρτημένη μεταβλητή για τη διερεύνηση των παραμέτρων που συσχετίζονταν ανεξάρτητα με τη βαρύτητα της αναφερόμενης κόπωσης. 49 ασθενείς (64.5%) διεγνώσθησαν επιπλέον με τουλάχιστον μία αγχώδη διαταραχή. 57 ασθενείς (75%) βρέθηκαν να έχουν σωματικό άγχος (HDRS-11≥2). Οι ασθενείς με σωματικό άγχος είχαν σε βαθμό στατιστικά σημαντικό υψηλότερη βαθμολογία στις κλίμακες HDRS ($t=3,83$, $df=74$, $p<0,001$) και FQ ($t=3.32$, $df=74$, $p<0,001$) σε σύγκριση με τους ασθενείς χωρίς σωματικό άγχος. Η βαθμολογία στο FQ συσχετίσθηκε σε βαθμό στατιστικά σημαντικό με τη βαθμολογία στην HDRS ($r=0,36$, $p=0,001$) και με την ύπαρξη σωματικού άγχους ($rho=0,35$, $p=0,002$). Η βαθμολογία στην HDRS και η ύπαρξη σωματικού άγχους συσχετίζονταν ανεξάρτητα με τη βαθμολογία στο FQ στην ανάλυση πολλαπλής παλινδρόμησης, με σταθμισμένους συντελεστές βήτα 0,259 ($p=0,028$) και 0,255 ($P=0,031$), αντίστοιχα. Η τιμή του R2 ήταν 0,185. Τόσο η βαρύτητα της κατάθλιψης όσο και η παρουσία σωματικού άγχους συσχετίζονται ανεξάρτητα με τη βαρύτητα της αναφερόμενης κόπωσης σε ασθενείς με μείζονα κατάθλιψη. Το εύρημα αυτό είναι πιθανώς χρήσιμο στην αντιμετώπιση της κόπωσης που σχετίζεται με τη μείζονα κατάθλιψη.

Λέξεις ευρετηρίου: Μείζονα καταθλιπτική διαταραχή, σωματικό άγχος, κόπωση.

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Research article
Ερευνητική εργασία

Clinical symptoms and social functioning among immigrant and greek patients with schizophrenia: A comparative study

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Migration is considered an important risk factor for schizophrenia. However, studies on the differences in psychotic symptomatology between immigrants and native patients revealed mixed results. This study compared clinical symptoms and social functioning between immigrant and native patients with schizophrenia in Greece in order to examine the influence of social factors on the disorder's manifestation and severity. A structured questionnaire including demographic and clinical information was administered to two groups of patients with schizophrenia; the first one was comprised of 65 immigrant patients (38 men and 27 women) and the second included 58 greek patients (35 men and 23 women). Patients' psychopathology was evaluated by the Positive and Negative Syndrome Scale (PANSS), the Calgary Depression Scale for Schizophrenia (CDSS) and the Global Assessment of Functioning Scale (GAF). The x^2 test and the ANOVA were used for the comparisons of categorical and continuous variables respectively between the two groups of patients. Analysis of eigenvalues and multivariate analysis (MANOVA) were also used. Age and duration of illness were significant greater in the greek group of patients. Lack of insight was the only reason of hospitalization of immigrant patients. The immigrant group of patients had significantly lower scores in the negative syndrome subscale, the general psychopathology subscale and the total PANSS scale while they had significantly higher scores in the GAF scale. No between patients' groups difference was found on CDSS scores. Analysis of eigenvalues and MANOVA revealed that the national group (immigrants *vs* native) and the reason of admission were the only general variables with significant influence on patients' psychopathological features and functioning. Consistently with previous studies that have shown better prognosis in immigrant compared to the native patients with schizophrenia, immigrant patients in our study had milder negative and total psychotic symptomatology and were less impaired in terms of global functioning than the greek group. Being an immigrant appears to be an important factor related to these differences between our study groups. A possible explanation of our findings could be that immigrant patients with schizophrenia attending to greek mental health services have been 'filtered'

because of a 'salmon bias' type phenomenon; the severe ill usually return to their country of birth due to the lack of financial and social support for immigrant patients in Greece. An alternative hypothesis is that the families and the local communities of immigrant patients with schizophrenia, being tied enough, provide support to their ill members that results in better outcome, especially with respect to negative syndrome and social functioning.

Key words: Schizophrenia, migration, positive symptoms, negative symptoms, social functioning.

Introduction

During the 1990s, Greece had to face the newly arising problem of organising mental health services for immigrants. The number of immigrants in our country had grown five times within a decade (1991–2001). Officially the immigrants constitute up to 7% of the population, and this rate would probably be 10%, if illegal immigrants were also included.

Migration is considered an important risk factor for schizophrenia, and numerous studies confirmed the increased incidence of schizophrenia among immigrant populations,[1,2] while no specific association with particular ethnic group has been found. The trauma of migration (loss of cultural identity, adaptation in new, mainly unknown and probably disadvantageous conditions), as well as the probability that a high rate of "pre-schizophrenic" individuals migrates, have been discussed as the main causative factors –between others– for this phenomenon.[2–4] Immigrants coming from poorer countries are at higher risk for mental diseases, allowing the hypothesis that migration as a risk-factor for mental disorders constitutes the resultant of many different social-environmental factors (social class, living in big cities, etc).[5] In addition, a recent meta-analysis[6] has shown that second generation immigrants were at higher risk for schizophrenia in comparison with the first generation. As probable explanation for this finding, it was proposed that second generation immigrants are exposed for long to conditions of social competition and discrimination, experiencing "social defeat" –cancellation of their expectations for complete social intergration and permanent stress– which results in increased vulnerability to mental disorders. We have also to study acculturation as a factor of deterioration of mental health.[7]

It has been proposed that the study of schizophrenia in groups of immigrants provides important information concerning the aetiology of the illness, especially for possible social-environmental pathogenetic factors.[8] Studying schizophrenia in immigrant populations could also provide information for the possible effect of socio-enviromental factors on the phenomenology, the course and the prognosis of the illness. However, large-scale studies on differences in phenomenology of schizophrenia between immigrant and native groups of patients are limited.[4]

The present study aims to examine whether migration affect the pattern and the severity of symptomatology and the impairment of functioning in patients with schizophrenia. According to the findings of the most previous relative studies[9–14] we hypothesize that immigrant patients with schizophrenia will have more severe psychotic symptoms and deficits in functioning than native greek patients. To the best of our knowledge, this is the first comparative study on the symptoms of schizophrenia in immigrant and native greek patients.

Material and method

Participants

Data were collected in "Eginition" hospital and "Dromokaition" psychiatric hospital, after approval of both hospitals' ethic-committees. The random sample constituted of 123 patients; 65 immigrants (28 inpatients and 37 outpatients, 38 men and 27 women) and 58 native greeks (28 inpatients and 30

outpatients, 35 men and 23 women). Criteria of inclusion were: age younger than 55 years, absence of mental retardation or history of neurological illness, brain injury and substance abuse. Diagnosis of schizophrenia was made by clinicians of equivalent clinical experience, according to DSM-IV criteria.[15] The demographic and clinical data were collected through interviews of patients and members of their families and were cross-checked with relevant data from patients' medical records.

Clinical assessment

A structured questionnaire was administered for the demographic and clinical data collection. The following standardized clinical scales were used for the patients' clinical assessment:

1. The Positive and Negative Syndrome Scale (PANSS),[16] standardized in greek language,[17] was used to assess current psychotic symptoms. PANSS includes three subscales: for the positive syndrome (PANSS-Pos), the negative syndrome (PANSS-Neg), and the general psychopathology (PANSS-Gpsy.)
2. The depressive symtoms were assessed with the Calgary Depression Scale for Schizophrenia (CDSS),[18] standardized in Greek.[19]
3. The Greek version of Global Assessment of Functioning (GAF) was used as an overall measure of functioning. The GAF is the modified version of the Global Assessment Scale,[20] which has proven validity and reliability in Greek language.[21]

Statistical analysis

For the purposes of our analysis, we will refer to the demographic and clinical data collected through the structured questionnaire with the term "general variables", while the data that resulted from the clinical scales will be reported as "*specific variables*". Chi-square test and ANOVA were used for comparisons between immigrant and Greek groups on the categorical and the continuous variables respectively.

In order to examine if the differences between immigrant and Greek patients concerning their symptoms and global functioning could be attributed exclusively to the condition of belonging to one of these groups (immigrants *vs* natives) –which will be further reported as "national group" in the statistical analysis– we had to control for the effect of any other general variable on the specific variables as well as for interactions between the general variables. For this reason, the power of each variable was calculated in a 64-dimension space with Matlab 7.01 using analysis of eigenvalues in a matrix of distances (euclidean and manhattan block). For further analysis we used Statistica 6.0. Statistically importance in our analysis was defined by a confidence interval over 90%. Multiple Analysis of Variance (MANOVA) was used for the analysis of the dependence of the specific variables on general variables.

The analysis of eigenvalues revealed that 18 variables account for 99% of the total variance. Further analysis using multidimensional scaling showed that the following five variables accounted for 90% of the total variance, therefore they were eligible to enter as independent factors in MANOVA: *National group (Greek/Immigrant), Age, Sex, Education, Main reason of admission (hospitalization or outpatient treatment)*. Of note, only general variables were finally eligible to enter in MANOVA and national group was one of them.

Results

Description of the group of immigrant patients

Socio-demographic and clinical characteristics of immigrant and Greek patients in our sample as well as the between-groups differences are presented in table 1. The mean age of immigrant patients was 32,3 (±4.2) years whereas the mean age in the greek group was 36.1 (±3.1) years.

All immigrants came from countries with low or relatively low level of economic growth: 61.5% came from countries in Balkans and Eastern Europe, 27.7% from African countries and 10,8% from countries in Middle East, Asia and Latin America. Their mean duration of living in Greece was 8.35 (±5.58) years. Among them, 62.3% lived legally, while 37.7% illegally in Greece or were admitted in a residence for refugees. The 23% of them reported that they came in Greece after the onset of the illness and 77% that the onset of the illness had followed migration – 50% within the first 5 years and 27% within the first 10 years living in Greece.

Differences in general variables between the two groups (immigrants vs *greeks)*

Demographic and clinical characteristics of the two groups are presented in table 1. There were no significant differences between the two groups regarding sex, years of education and family status. Age was significantly greater and duration of illness significantly longer in the greek group. The reasons of hospitalization were significantly different between the two groups, since lack of insight was the only reason of immigrant patients' hospitalizations, whereas it was reported as the main reason in only the one fourth of greek patients' admissions. No significant difference between the groups was found with respect to family history of psychiatric disorders.

Table 1. Comparison between immigrant and greek patients with schizophrenia: demographic and clinical characteristics.

	Immigrants (n=65)	*Greeks (n=58)*	*p*
Age :			
–18	4 (6.2%)	0.030*	
18–24	11 (16.9%)	2 (3.4%)	
25–34	22 (33.8%)	2 (3.4%)	
35–44	19 (29.2%)	19 (32.8%)	
45–55	9 (13.8%)	23 (39.7%)	
Sex (male)	38 (58.4%)	12 (20.7%)	0.856
Family status			0.123
Unmarried	38 (58.4%)	44 (75.9%)	
Married	15 (23.1%)	8 (13.8%)	
Divorced	12 (18.5%)	6 (10.3%)	
Education (years)	11 (16.9%)	12 (20.7%)	0.180
Family history of:			
Schizophrenia	12 (18.5%)	15 (25.9%)	0.385
Bipolar disorder	2 (3.1%)	1 (1.7%)	1.000
Depression	10 (15.4%)	9 (15.5%)	1.000
Duration of illness(years)	5.6 (±3.5)	12.6 (±3.1)	0.001**
Outpatients	28 (43.1%)	28 (48.3%)	0.560
Main reason of admission:			0.000***
Lack of insight	28 (43.1%)	7 (12.1%)	
Aggressive behaviour	0	3 (5.2%)	
Self-harming behaviour	0	3 (5.2%)	
Other	0	15 (25.9%)	

*p<0.05, **p<0.01, ***p<0.001

Differences in specific variables between the two groups (immigrants vs greeks)

Table 2 shows the mean scores of the two groups on the clinical scales used for the assessment. There was no significant difference between the two groups in the positive syndrome subscale of PANSS, whereas greek patients had significant higher scores on the negative syndrome and the general psychopathology subscales as well as the total score of PANSS. The immigrant group had higher mean score on CDSS but this difference did not reach statistical significance. Immigrant patients had also significantly higher mean score on GAF scale, which means that they were less impaired in term of global functioning than greek patients.

Associations between general and specific variables

The effects of the five general factors that were found with analysis of eigenvalues, namely national group, age, sex, education, and main reason of admission, on the specific variables (PANSS-Pos, PANSS-

Table 2. Comparison between immigrant and greek patients with schizophrenia: ratings on clinical scales

	Group			
Scale	*Immigrants mean (SD)*	*Greeks mean (SD)*	*F*	*p*
PANSS-Pos	17.52 (6.87)	18.79 (7.09)	1.02	0,316
PANSS-Neg	17.93 (7.51)	23.31 (10.14)	9.81	0.002**
PANSS-GPsy	35.37 (7.80)	40.75 (10.53)	7.83	0.006**
PANSS-Total	77.05 (15.83)	90.27 (26.70)	8.90	0.004**
CDS	7.03 (4.07)	5.83 (4.48)	2.29	0,113
GAF	55.87 (14.08)	43.35 (16.50)	23.17	0.000***

*p<0.05, **p<0.01, ***p<0.001

Neg, PANSS-GPsy, PANSS-total, CDSS, GAF) were tested with MANOVA using Wilks' test. Although there was a significant difference between groups on the duration of the illness, this variable did not have significant effect on the total variance of the sample. The effects of all general factors except the years of education, on the total variance of the sample were significant on the 90% level, as shown in table 3. The national group and the main reasons of admission had the greater effect on the total variance (p<0.001).

The associations between the five general factors and the scores on the clinical scales are presented in table 4. The dependence of negative syndrome and the general psychopathology subscales, as well as the total score of PANSS on the "national group" was statistically significant. The effect of "national group" on the CDSS and the GAF scores was also significant. The GAF and the negative syndrome subscale of PANSS were significantly dependent on the main reason of admission. The educational level had significant effect on negative syndrome subscale and PANSS total score. MANOVA revealed that no specific variable was significantly dependent on age after controlling for the remaining general variables. This finding is important, since the comparison between the two groups using ANOVA showed significant difference in age. No dependence was also found with respect to sex.

Table 3. The effect of general factors* on the total variance of the patients' sample (Wilks' test).

	Wilks' λ	*F*	*Effect*	*Error*	*p***
National group	0.757	4.651	6	87,000	0.000
Age	0.625	1.452	30	350,000	0.062
Sex	0.873	2.107	6	87,000	0.060
Education	0.749	1.096	24	304,717	0.346
Reason of admission	0.498	2.806	24	304,717	0.000

Only variables entering in the Multiple Analysis of Variance (MANOVA) are presented here.
*General factors include social-demographic and clinical variables
**p values correspond to the indepedent effect of each variable

Table 4. Dependence of specific patients' variables on general patients' variables resulting from Multiple Analysis of Variance (MANOVA).

Specific variables	*General variables*				
	National group	*Age*	*Sex*	*Education*	*Reason of admission*
PANSS-Pos	0.115	0.229	0.337	0.409	0.070
PANSS-Neg	0.001*	0.173	0.811	0.031*	0.027*
PANSS-GPsy	0.000	0.580	0.087	0.098	0.177
PANSS-Total	0.000***	0.689	0.577	0.037*	0.126
GAF	0.014*	0.987	0.704	0.557	0.000***
CDS	0.035*	0.516	0.602	0.484	0.275

*p<0.05, **p<0.01, ***p<0.001

Discussion

Effect of migration on psychopathology and functioning in patients with schizophrenia

The major finding of the present study is that belonging in one of the two national groups (immigrants or native greeks) was an important factor affecting the psychopathological profile and the level of functioning in patients with schizophrenia. This was indicated by the significant difference between the two groups with respect to their psychopathological features and functioning and further confirmed after detection and controlling for intercorrelations with other factors that were possible confounders and mediators, such as age, sex, educational level, and reason of admission in our study. Moreover, the psychopathological characteristics in our analysis were associated with the national group more potently than with any other factor studied.

The second factor potently correlated with psychopathological variables was the reason of admission which was a rather artificial factor in our study, thus without great clinical importance. The latter variable, as defined in our study included the following categories: lack of insight, aggressive behaviour,

self-harming behaviour and other reasons. Taking into account this categorization, clinicians could obviously predict that patients belonging to each one of them will have a different psychopathological profile from the remaining patients. For example, it is likely that patients with "lack of insight" as major reason for treatment will present more intense both positive and negative symptoms as well as lower level of depressive symptoms.[22]

Therefore correlations between psychopathological characteristics with the main reason of admission should not be considered of equal importance with the correlations between them and the national group.

Although there was significant association between the educational level and the negative syndrome subscale as well as the total score of the PANSS, the effect of the educational level on the total sample variance was found not significant with the Wliks' test. Therefore, we should consider the independent effect of this variable on the psychopathological profile much less potent than the effect of the national group.

Conclusively, being immigrant or native was single the most important factor affecting the psychopathological profile and level of functioning relative to other demographic, social or clinical characteristic examined in this study.

Differences in psychopathology and functioning between greek and immigrant patients with schizophrenia

Greek patients in our sample had significant higher scores on PANSS scale than the immigrant patients, which was a rather unexpected finding. Previous cross-sectional studies either have not show significant differences between immigrant and native patients with schizophrenia in the manifestation and severity of psychotic symptoms,[23,24] or have shown more severe positive[9–13] or negative[14] symptoms in immigrant patients. However, our results are consistent with longitudinal studies on the course and the prognosis of schizophrenia in immigrant patients. McKenzie et al,[25] were the first to find in a prospective comparative study that Afro-Caribbean patients with schizophrenia in the United Kingdom had milder course of illness than the British patients – mainly larger periods of remission.[25] Callan,[26] in a retrospective study, compared hospitalized afro-caribbean and native british patients with schizophrenia and found that the onset of the illness was more acute and the duration of hospitalization was shorter in immigrants, concluding a milder course of illness in immigrants.[26] More recent prospective studies on relapses after the first episode of schizophrenia indicated better outcome in immigrant patients.[27,28] However, other studies found that the course and the prognosis of the illness were more unfavourable in immigrant patients with schizophrenia.[29–33] A large-scale multi-center trial in the United Kingdom by McKenzie et al,[34] indicated that differences between immigrant and native patients in terms of the outcome and the course of illness, though complex, certainly exist. Although our study provides further support to this conclusion, it is obvious that the findings on specific differences in psychotic symptoms are yet contradictory and therefore further investigation is warranted.

The difference on the PANSS total score between greek and immigrant patients resulted from immigrants' significant lower scores on the negative syndrome and the general psychopathology subscales. Besides, immigrants had lower scores on GAF. The between groups differences in negative syndrome severity probably contributes to the different level of functioning as measured with GAF.

Many hypotheses have been postulated to explain the differences in symptoms and functioning between native and immigrant patients with schizophrenia. Increased possibility of false diagnosis of schizophrenia given to cases of "acute psychotic reactions" has been proposed as a possible explanation for better prognosis observed in immigrant patients.[9] However, this assumption is not relevant with our findings because the clinical diagnosis of schizophrenia in our study was strictly based on DSM-IV criteria and the mean duration of illness in the two groups was sufficiently long for differential diagnosis. Consequently, we have to look into the living conditions of immigrant patients with schizophrenia in our country, their family and social environment as possible sources of support as well as the treatment and care they receive, for possible explanations for our findings.

Taking into account that immigrants in our country –as well as in our sample– are in their great majority economic immigrants coming from adjacent countries,[35] mainly from the Balkans and Eastern Europe, we can hypothesize that a "salmon bias" type phenomenon[36] related with schizophrenia could account for our findings. It is possible after the onset of the disease, when the relatives perceive the chronic dysfunction of the sick individual, in the absence of any social benefit and frequently any social assistance, they often decide to send the patient back to relatives living in the country of origin. This tendency would be more intense in cases of patients with severe negative symptoms, cognitive impairment and disorders of behaviour, which might result in respectively mild symptoms observed in patients that remain in Greece as in our study group. Cochrane and Bal[3] observed that immigrants women from Pakistan living in UK returned more often to their country, after the onset of schizophrenia.

However, if we assume that the sample of immigrant patients attending mental health services in Greece are not "infiltrated", then we should look for conditions that increase the efficacy of care and support the immigrant patients receive in our country. Differences in the support offered to the patients by their families could account for differences in severity of symptoms and level of functioning between the two groups. Many immigrants living in Greece come from countries where the families are extended and its members are strongly linked together. Moreover, immigrants from adjacent countries often immigrate together with many of their family members. The extended family contex offering a role, even auxiliary (eg. in a family business, manufacture or in homework) to its ill member, constitutes a safe and supportive environment for patients with schizophrenia, which may contribute to their clinical improvement, especially with respect to their negative symptoms and level of functioning.

Since the 1980s international epidemiologic studies have shown that the outcome of schizophrenia is considerably worse in industrial countries compared to developing countries,[37] Birchwood et al[27] found that the rates of relapses and readmissions to the hospital after the first episode of schizophrenia in the United Kingdom were lower in Asian immigrant patients than in Afro-Caribbean immigrants and natives. They attributed these findings to the maintenance of specific feature in Asian communities, namely extended family structure, greater opportunities for social reintergration, and more positive constructions of mental illness. Some cultural characteristics of certain traditional communities have been offered as possible explanations to this effect. Rabinowitz and Fennig[38] found that at the time of first hospitalization Jewish immigrants in Israel were considerably older than the native-born Israelis, but this difference was not observed in the second generation immigrants. They also attributed the delaying effect of migration on the age of onset of the illness to habits conserved in the communities of first generation immigrants, such as a higher tolerance to odd behaviour and stronger social support.

Limitations

Our findings should obviously be further tested by studies with larger sample sizes. Other limitations of our study need to be mentioned here, were data-collection in two psychiatric hospitals in Athens, the inclusion of both inpatients and outpatient in the study groups and the greater age and duration of illness of greek patients.

Conclusions

Our findings are consistent with the hypothesis that there is significant effect of migration on the manifestation, the severity of symptoms and the level of functioning in schizophrenia. Contrary to other relative studies, we found that immigrant patients with schizophrenia in our country present less severe symptoms and higher level of functioning than native patients. We have attempted to explain our findings based on two alternative and contradictory assumptions; the possibility that an "infiltrated sample" of immigrant patients attending to mental health services in our country due to a specific type of selection bias, and the hypothesized favorable effect of stronger support offered by patients' families and social intergration due to traditional features of immigrant communities, on the outcome of schizophrenia. In the latter case, our study reflects the important influence of specific social-environmental

factors on the psychopathological profile and the functioning impairments in schizophrenia.

Some important implications for the mental health system in our country come out:

– There are no sufficient data about the mentally ill immigrants and their needs
– It is very probable that families and social networks in the communities of immigrants could offer a considerable amount of support to immigrant patients with schizophrenia, contributing to better outcome.

Consiquently, improvement of care provided to mentally ill immigrants and the support offered to their families by the Greek mental health services, could result in optimal outcome with low financial invenstment.

Κλινική συμπτωματολογία και ψυχοκοινωνική λειτουργικότητα μεταναστών και ελλήνων ασθενών με σχιζοφρένεια: μια συγκριτική μελέτη

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Η μετανάστευση αποτελεί σημαντικό παράγοντα επικινδυνότητας για την σχιζοφρένεια και η μελέτη της σε ομάδες μεταναστών μπορεί να συμβάλλει σημαντικά στη διερεύνηση των αιτιοπαθογενετικών παραγόντων της νόσου. Η παρούσα μελέτη αποτελεί την πρώτη απόπειρα διερεύνησης της σχιζοφρένειας σε μετανάστες ασθενείς στη χώρα μας με σκοπό να εντοπίσει πιθανούς κοινωνικούς-πολιτισμικούς παράγοντες που επηρεάζουν τη μορφή και τη βαρύτητα των ψυχοπαθολογικών εκδηλώσεων της νόσου. Στη μελέτη συμμετείχαν 65 μετανάστες ασθενείς με σχιζοφρένεια διαφόρων εθνικοτήτων (38 άντρες και 27 γυναίκες) και 58 έλληνες ασθενείς με σχιζοφρένεια (35 άνδρες και 23 γυναίκες). Σε όλους τους ασθενείς χορηγήθηκε δομημένο ερωτηματολόγιο δημογραφικών και κλινικών πληροφοριών καθώς και οι κλίμακες: Κλίμακα Θετικού και Αρνητικού Συνδρόμου (PANSS), Κλίμακα Κατάθλιψης για σχιζοφρενικούς ασθενείς του Calgary (CDSS) και Κλίμακα Σφαιρικής Εκτίμησης της Λειτουργικότητας (GAF). Για τη σύγκριση των κατηγορικών μεταβλητών μεταξύ των δύο ομάδων χρησιμοποιήθηκε η δοκιμασία x^2 ενώ για τις συνεχείς μεταβλητές η ανάλυση της διακύμανσης (ANOVA). Έγινε επιπλέον μελέτη της διασποράς των μεταβλητών μέσω ανάλυσης των ιδιοτιμών και Πολλαπλής Ανάλυσης της Διακύμανσης (MANOVA). Οι έλληνες ασθενείς εμφάνιζαν σημαντικά μεγαλύτερη μέση ηλικία και διάρκεια της νόσου. Σημαντικά διέφεραν οι δύο ομάδες στους λόγους νοσηλείας. Οι μετανάστες ασθενείς εμφάνισαν σημαντικά μικρότερη βαθμολογία στις υποκλίμακες του αρνητικού συνδρόμου και γενικής ψυχοπαθολογίας καθώς και συνολική βαθμολογία της PANSS, ενώ εμφανίζουν σημαντικά μεγαλύτερη βαθμολογία στην κλίμακα GAF. Αντίθετα, δεν παρατηρήθηκε σημαντική διαφορά στην κλίμακα CDSS μεταξύ των δύο ομάδων. Από τη MANOVA βρέθηκε σημαντική επίδραση της εθνικής ομάδας στη συμπτωματολογία

και τη λειτουργικότητα. Τα ευρήματα της μελέτης συνηγορούν υπέρ της υπόθεσης ότι η μετανάστευση επηρεάζει σημαντικά τις ψυχοπαθολογικές εκδηλώσεις και τη βαρύτητα της σχιζοφρένειας. Προτείνονται δύο εναλλακτικές ερμηνευτικές υποθέσεις: είτε ότι οι μετανάστες ασθενείς με ήπια βαρύτητα της νόσου παραμένουν και λαμβάνουν υπηρεσίες ψυχικής υγείας στη χώρα μας είτε ότι είναι ηπιότερη η πορεία της νόσου στους μετανάστες ασθενείς λόγω της ισχυρής οικογενειακής και κοινωνικής στήριξης που λαμβάνουν εντός των κοινοτήτων τους.

Λέξεις ευρετηρίου: Σχιζοφρένεια, μετανάστευση, θετικά συμπτώματα, αρνητικά συμπτώματα, κοινωνική λειτουργικότητα.

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Research article
Ερευνητική εργασία

Acquired competence in cognitive therapy following a two level course

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The objective of this study was to examine the predictive value of trainees' previous experience and performance at an introductory course in Cognitive Therapy for their subsequent success in an advanced course. From 203 completers of an introductory course during seven consecutive years 32 participated in an advanced course. In a linear regression analysis previous clinical and psychotherapeutic experience as well as performance at the introductory course were studied as predictors for trainees' success in the advanced course. Performance at the introductory course was the only significant predictor of trainees' successful completion of the advanced course. An introductory course might help to select those trainees who have the desired qualities to succeed in a formal psychotherapeutic training program.

Key words: Cognitive therapy, training, acquired competence.

Introduction

Psychiatry training programs are developing methods to demonstrate competence of trainees in certain areas of psychotherapy.[1–3] Educators should be able to assure formative competencies that include mastery of core knowledge of the psychotherapies, actual undertaking of these psychotherapies, and adequate performance in selected elements of these psychotherapies.[4–6]

In the discipline of cognitive therapy (CT) there has been a long history of standardizing methods of training, supervision and assessment[7–10] although the readiness of residency training programs to provide adequate training in CT has not been established.[11–13] It has been anticipated that working with specialty organizations for CT could assist in developing better programs.[11]

Not all residents have the desired qualifications to participate in an advanced course with supervised

clinical practice. In our previous report[14] we suggested that we might need to reconsider the policy regarding trainees' admission to such programs. The "objective" background criteria may be less important than having the trainees enter an introductory course that provides a better opportunity for observing and selecting those trainees that have the desired qualities to participate in an advanced clinical level. In that study we explored the criteria that educators follow when selecting candidates for a subsequent advanced training course, which includes the treatment of patients. We found that trainees' abilities to learn and to successfully relate to others in group situations were decisive for entering the advanced CT training course. An important limitation was that a circular measurement could not be avoided since rank ordering of the suitability for continuing training in CT was based on the decision of staff members. The staff of the course might be biased in estimating the competence acquired during the same course where they teach and subjective factors can play a role.

In the present study we assessed the predictive value, if any, of trainees' previous clinical and psychotherapeutic experience and their performance at the introductory course for their subsequent performance at the advanced course which includes the treatment of clinical cases under individual and group supervision. The effectiveness of the trainees in practice when treating psychiatric patients under supervision would give a better picture of their formative performance. Our hypothesis was that their performance in the introductory course would be the safest predictor of success at the advanced course.

Material and method

Training program: The CT educational program in the department of Psychiatry at the Athens University, in collaboration with the University Mental Health Institute, consists of a two level program, an introductory and an advanced, each of them lasting for one academic year.

The introductory course consists of 25 sessions of four hours duration each spread over one academic year. Each training session includes 2 hours of didactic presentations for the basic principles of CT theory and practice and 2 hours of participation in one of three groups (8–12 trainees). These groups are coordinated by experienced cognitive therapists and aim at a more active participation of trainees through role-playing, modelling, and group supervision of videotaped therapeutic sessions. At the end of the course group coordinators rate trainees' suitability to continue further training according to a rank order of the participants in the group. Approximately the top quarter of trainees are accepted to the advanced course. According to our previous report[14] the introductory course is a helpful screening procedure since it offers the opportunity to observe and select those trainees who have the qualities necessary for participation in a formal training program undertaking the treatment of patients under both individual and group supervision. The decision to advance a trainee to the next course was found to be mainly influenced by the coordinators' rating and performance in written assignments.[14]

The advanced course helps developing the basic skills learnt during the introductory course and expand them in order to treat patients under supervision. It comprises individual and group supervision.

Individual supervision: All trainees are assigned four cases of patients from the CT clinic. They are all psychiatric patients suffering mainly from depression (non psychotic and not bipolar)[15] and anxiety disorders. All patients are assessed by one of the coordinators of the program as for their suitability for brief CT. The maximum number of therapeutic sessions for each patient is set to 25. Each therapeutic session corresponds to one session of individual supervision. Treatment sessions start at the beginning of each academic year (September) and are scheduled to be completed by the end of the academic year (June). At the beginning of the course each trainee is assigned a patient to treat. If a patient drops out then immediately the trainee undertakes another patient from the available waiting list. After a relatively small number of sessions the supervisor has to decide whether the trainee is able to undertake another case. If yes, the trainee immediately is assigned a second patient from the waiting list and receives individual supervision by a second supervisor. If the trainee is not considered competent enough to continue to a second case he has to wait until his

competence is reconsidered. In the meantime he is proceeding with his current patient and attends group supervision as described below. The same rule of thumb applies to the second, third and fourth cases. In order to reach a decision, supervisors take in consideration trainee's ability to assess patients (clinical, behavioral and cognitive assessment), to produce and communicate to the patient and the supervisor the case formulation, to develop a psychotherapeutic relationship based on collaborative empiricism through "Socratic questioning" and the use of "behavioral experiments". All supervisors are experienced cognitive therapists and academically oriented clinicians trained to use global methods of evaluating competency in psychotherapy which are considered to be more realistically achievable.[12] They may also use ratings from supervisors' scales such as the Cognitive Therapy Scale (Young and Beck 1980 unpublished manuscript) which usually is completed according to an audiotape of a therapy session. Finally supervisors are taking into consideration patient's symptomatic and functional improvement through ratings of psychopathology scales. In order of a case to be considered as completed the individual supervisor has to assess the successful implementation of CT in at least ten sessions leading to clinical improvement. A trainee is considered as successful completer when he has finished all four cases during an academic year. All supervisors have to agree on the competence of a trainee and special meetings are set for this purpose. An academic year is considered to be an adequate time period for the completion of four cases since availability of patients is ensured by a long waiting list already assessed as for their suitability for brief CT. There is an effort to eliminate factors outside the control of trainees that could inhibit the completion of training in time. We assume therefore that "prompt termination" during an academic year, properly defined and assessed, reflects the successful performance at treating four cases of patients under individual supervision not only in temporal but also in qualitative terms.

Group supervision: It consists of 25 two-hour sessions during the academic year lead by two experienced cognitive therapists. It aims at helping trainees to acquire the basic skills believed to be necessary and common for all psychotherapies such as abilities to manage boundaries, develop a therapeutic alliance, listen, deal with emotions and understand.[12] Trainees choose either a representative session or relational problems that they wish to bring upon in the group. At the conclusion of the 25 sessions of group supervision, group supervisors rate, in consensus, each trainees' performance in the group supervision based on a 4-item general psychotherapy skills rating scale (4-item GPSS). The items of the scale are: (1) Theoretical knowledge, (2) Active presence or participation, that is both the number of absences and the extent of his/her essential involvement in the group processes, (3) Group relational capacity and (4) Relational capacity with the patient as reflected in the discussion of the assigned cases in the group. Each item is rated in a three (3=excellent, 2=good, 1=fair) points scale. A total score (sum) is calculated for the 4-item GPSS score that represents trainees' rating for their performance at the group supervision. Cronbach's alpha value show a good reliability for the scale (Cronbach's $\alpha = 0.846$).

In the present study we examined the files of all trainees who during seven consecutive years participated in the advanced course. They all derived from the population of 203 trainees described in our previous report[14] concerning the introductory course. During this period of time the status of the training staff remained unchanged, thus both individual and group supervisors were the same.

In order to measure the performance of trainees at the advanced course we used two variables: the total score of the 4-item GPSS rating scale and a variable stating prompt (1) or delayed termination (0) of assigned cases. As dependent variables we used (a) previous clinical experience according to the number of years of participation in the treatment of mental health patients (3=extensive>3years; 2=medium: between 1 and 3 years; 1=low<1 year), (b) previous psychotherapeutic experience (3=extensive: treated cases under supervision; 2= medium: participated in courses of less than one year duration; 1=low: participated in courses of less than one year duration), (c) performance at the introductory course as rated by the place in the rank order in the group (4th, 3rd, 2nd, 1st).

Statistical analysis: Linear regression estimates the coefficients of the linear equation, involving one or

Table 1. Professional background and previous experience of the participants in the advanced course (N=32).

Characteristics of participants	*n*	*Prompt termination n (%)*	*Delayed termination n (%)*
Profession			
Psychiatrists and residents in psychiatry	18 (56.3)	12 (62.5)	6 (37.5)
Psychologists and other	14 (43.7)	10 (71.4)	4 (28.6)
Clinical experience			
Extensive: >3 years*	14 (40.6)	11 (78.5)	3 (21.5)
Low/Medium: ≤3 years*	18 (59.4)	1 (5.6)	17 (94.4)
Psychotherapeutic exrerience			
Extensive: treated cases under supervision	8 (25.3)	7 (78.5)	1 (12.5)
Low/Medium: participated in courses of up to one year duration	24 (74.7)	15 (62.5)	9 (37.5)

*Participation in the treatment of mental health patients

more independent variables, which best predict the value of the dependent variable. We used twice the linear regression analysis in order to assess the predictive value of previous experience and performance at the introductory course for trainees' performance at the advanced course. The variables previous clinical experience, previous psychotherapeutic experience and performance at the introductory course were used as the independent variables for the prediction of the score of the 4-item GPSS (dependent variable). The same independent variables were used in the second linear regression analysis for the prediction of prompt termination (dependent variable).

Results

Out of 42 trainees eligible to participate at the advanced course, data from 32 of them have been analysed (table 1). Six never started the advanced course due to changes in their professional and family status and four were unable to undertake in time cases of patients because of significant reasons apparently irrelevant to their competence in CT (one for health reasons and three because they changed professional status). Table 1 shows professional background and previous experience of the trainees in relation to the time of termination of assigned cases. Twenty trainees managed to treat four cases of patients under four different individual supervisors during an academic year (prompt termination) while twelve needed extra time to finish their training (delayed termination). Table 2 presents the 4-item GPSS rating of the 32 participants in the advanced course in relation to the time of termination.

The data from the first simple linear regression analysis which used as dependent variable the 4-

Table 2. The 4-item general psychotherapy scale rating (4-item GPSS) of the participants in the advanced course (N=32)

	N	*Prompt termination N (%)*	*Delayed termination N (%)*
Theoretical knowledge			
Excellent	14 (43.8)	11 (78.6)	3 (21.4)
Good	13 (40.6)	8 (61.5)	5 (38.5)
Fair	5 (15.6)	1 (20)	4 (80)
Participation			
Excellent	18 (56.3)	13 (72.2)	5 (27.8)
Good	7 (21.9)	4 (57.1)	3 (42.9)
Fair	7 (21.9)	3 (42.9)	4 (57.1)
Relationship in group			
Excellent	14 (43.8)	13 (92.9)	1 (7.1)
Good	15 (46.9)	7 (46.7)	8 (53.3)
Fair	3 (9.4)	0	3 (100)
Therapeutic relationship			
Excellent	17 (53.1)	13 (76.5)	4 (23.5)
Good	10 (31.3)	6 (60)	4 (40)
Fair	5 (15.6)	1 (20)	4 (80)

item GPSS score are shown in table 3 while the second linear regression with dependent the prompt termination are shown in table 4. The results from these analyses show that only performance at the introductory course is a significant predictor for both the score of the 4-item GPSS (p=0.009) (table 3) and prompt termination (p=0.021) (table 4).

Discussion

Performance at the introductory course was found to be a significant predictor of success at the advanced course for both the rating of the group supervision and the prompt termination of clinical cases under individual supervision. On the other hand, previous clinical and psychotherapeutic experiences do not contribute significantly in the prediction of performance at the advanced course.

In our previous report,[14] which included the population from which these trainees were drown, the most significant predictors of performance at the introductory course were learning abilities and the ability to relate in group situations. In both studies, clinical and psychotherapeutic experience were not significant predictors of performance either at the introductory or the advanced course. Our findings support that the temporal definition of professional experience and training is not by itself a safe predictor for successful termination of a two year duration CT course. The level of professional training and experience is subject to misinterpretation because it does not account to what is trained. It seems that an introductory course in CT prior to the formal training offering treatment of patients under supervision, is useful. In order to train residents in psychiatry to CT a full-scale training might not be needed, instead an introductory course might help to observe and select those trainees who have the qualities necessary for participation in a formal training program in CT. In a more theoretical framework it can be suggested that an introductory course such as the one presented in our previous report might help to overcome some of the clinical and organizational problems for evaluation of competence in CT in the context of training in psychiatry.[4,5,11,12] Further it might offer a solution for those residents who go beyond residency training requirements in CT through the qualities of adult learning.[16]

One limitation of the study can be the dependent variables that measure the competence in CT might have been influenced by various hard to control factors. We tried to reach decisions on trainee's competence based on the opinion of many members of the staff. All training staff are academically oriented clinicians trained to use global methods of evaluating competency in psychotherapy which are considered to be more realistically achievable,[12] Another limitation is the small number of subjects which might have biased our results relating to the finding that prior clinical and psychotherapy experience did not affect the outcome. However, we decided to use the same population of trainees (from the 203 trainees who completed the introductory course in seven consecutive years) that was included in our previous report although the possibilities for the variables that could enter in the regression analysis diminished.

Table 3. Coefficients of Simple Linear Regression (β), the 95% Confidence Intervals for β and the statistical significance of all variables entered in the analysis with the score of the 4-item GPSS as the dependent variable (n=32).

	B	*95% CI*	*P*
Clinical Experience	0.315	–0.755–1.388	0.552
Psychotherapeutic Experience	0.707	–0.847–2.261	0.359
Performance at the introductory course	-0.425	–7.36–0.114	0.009

R^2=0.310, adjusted R^2=0.633 (F=4.19, P=0.013)

Table 4. Coefficients of Simple Linear Regression (β), the 95% Confidence Intervals for β and the statistical significance of all variables entered in the analysis with prompt termination (0=yes, 1=no) as the dependent variable (n=32).

	B	*95% CI*	*P*
Clinical Experience	0.078	–0.172–0.273	0.643
Psychotherapeutic Experience	0.150	–0.185–0.461	0.389
Performance at the introductory course	–0.423	–0.141–-0.012	0.021

R^2=0.256, adjusted R^2=0.176 (F=3.210, p=0.038)

In conclusion, our results support two main points: first, an introductory course in CT during the period of training in psychiatry may facilitate the selection of the most motivated trainees who can effectively acquire competence in a formal CT course and second, previous clinical and psychotherapeutic experience is not by itself a safe predictor of successful termination of a CT course.

Απόκτηση επάρκειας στη γνωσιακή ψυχοθεραπεία μετά από εκπαιδευτικό σεμινάριο δύο επιπέδων

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Σκοπός της μελέτης είναι να εξεταστεί η προβλεπτική αξία της προηγούμενης εμπειρίας και της απόδοσης των εκπαιδευομένων σε ένα εισαγωγικό σεμινάριο στη γνωσιακή ψυχοθεραπεία, ως προς την επιτυχή ολοκλήρωση του προχωρημένου σεμιναρίου που επακολουθούσε. Από τους 203 εκπαιδευόμενους που ολοκλήρωσαν το εισαγωγικό σεμινάριο σε διάστημα 7 ετών, οι 32 συμμετείχαν στο προχωρημένο σεμινάριο. Με τη χρήση γραμμικής παλινδρόμησης η προηγούμενη κλινική και ψυχοθεραπευτική εμπειρία και η απόδοση στο εισαγωγικό σεμινάριο μελετήθηκαν ως προβλεπτικοί παράγοντες για την επιτυχή ολοκλήρωση του προχωρημένου σεμιναρίου. Η απόδοση στο εισαγωγικό σεμινάριο ήταν ο μόνος σημαντικός προβλεπτικός παράγοντας για την επιτυχή ολοκλήρωση του προχωρημένου σεμιναρίου. Η ύπαρξη ενός εισαγωγικού σεμιναρίου μπορεί να βοηθήσει στην καλύτερη επιλογή των εκπαιδευομένων που έχουν τα απαιτούμενα ποιοτικά χαρακτηριστικά για την επιτυχή ολοκλήρωση ενός επίσημου ψυχοθεραπευτικού εκπαιδευτικού προγράμματος στη γνωσιακή ψυχοθεραπεία.

Λέξεις ευρετηρίου: Γνωσιακή ψυχοθεραπεία, εκπαίδευση, απόκτηση εμπειρίας.

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Special article
Ειδικό άρθρο

Doping in sports

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Regardless of one's stance on the topic, drugs are an important issue in sports. Sports pages in newspapers around the globe routinely report on athletes at every level of competition using performance enhancing substances to gain an unfair advantage over their competitors. The level of sophistication in beating drug testing, and developing "next-generation" agents continues to raise. The relative paucity of well designed research has been an additional factor impeding attempts to adequately address the problem. Very limited funds are currently available to conduct the necessary research. Without credible data, athletes are more vulnerable to the claims made by those benefiting from the sales of these compounds. Many younger fans and those dreaming of a similar future admire highly successful professional athletes. A strong, consistent statement admonishing drug use is needed. Actions speak louder than words. Every time a successful athlete is caught using PE drugs, every effort to diminish drug use is negatively impacted. The "win at all cost" and "second place is the first loser" mentality needs to be continually challenged by words and actions in youth sports at every level of competition. Finally, the war on drugs in sports needs to be a coordinated, well organized international undertaking as sports play an important role in virtually every culture. If we are to maintain the integrity of competition and protect the health of the athletes, we must dramatically increase our efforts to eliminate performance enhancing drugs as an acceptable option for any athlete. Sports science professionals and sports psychiatrists need to work with coaches, trainers, athletes, and national governing bodies to educating athletes on the effects of performance enhancing drug use. To achieve this important goal everyone involved in sports needs to be knowledgeable on the negative impact this has on all aspects of organized sports. It is a difficult challenge, but one that must be addressed.

Key words: Doping, sports, athletes.

Dope

The word dope is derived from the Afrikaans term "Dop". Dop was a brandy made from grape skins and was used as a stimulant during ceremonial dances. In 1889 a mixture of opium and other narcotics was given the name "dope". It was given to race horses in an attempt to improve their speed. Today, doping refers to the use of virtually any illegal or banned substance with the intent to improve athletic performance by cheating. Doping is intended to improve strength, speed, endurance, recovery time, relieve pain, or mask the use of other illegal or banned drugs.[1] The most common examples of drugs used in doping include stimulants (amphetamines), narcotic analgesics (morphine), beta-blockers (inderol), and the most commonly used doping agent, anabolic steroids. Not all doping agents are illegal. In fact, many are prescription medications used to treat diseases. When athletes dope for performance enhancement, they consume far greater doses than a doctor would prescribe to treat an illness. Caffeine, found in coffee, tea, and many beverages, is considered doping when taken in large quantities for the purpose of performance enhancement. Another form of doping used by some endurance athletes (i.e. long distance runners, cyclists, cross country skiers) is blood doping, this involves taking out your own blood over time and putting back the oxygen carrying components of the stored blood prior to competing with the intended goal of increasing endurance. Doping is a potentially serious, even life threatening practice and is, by definition, cheating.

Doping Control

These are efforts of organized sports federations or leagues to catch athletes who dope and educate all competitors on the health risks associated with doping. The mainstay of doping control is urine drug testing. This involves the athlete providing a urine sample under strict collection procedures, which is sent to a certified laboratory, which screens the urine for banned drugs. Drug testing can take place at the competition (in-comp testing) or out of competition (out of comp testing). Given the use of masking agents, out of comp, no advance notice testing is the most effective way of catching those athletes seeking an unfair advantage. Beating drug testing (providing a drug free urine even after doping) has become a lucrative, largely internet based, business. Products sold include drug free urine, which can be inserted into an artificial penis or vaginal pouch and adulterants (see definition).

Clean Urine

A urine sample which does not contain any banned substances.

Dirty Urine

A urine sample that tests positive for banned substances.

In-comp testing

Drug testing performed at the time of an athletic competition.

Out-of-comp testing

Drug testing which takes place before or after a competition, game or match.

Split Sample

A procedure used in drug testing where the urine sample collected is divided into two containers (A and B sample). The A sample is tested for banned substances and the B sample is only used to confirm a positive test found in the A sample. If the A sample is clean, the B is not tested and is thrown out.

Chain-of-Custody

This refers to the protocol carried out in drug testing. Once a urine sample is collected by the Doping Control team it stays in visual contact until it is signed off to the transport service and ultimately delivered to the testing laboratory. The purpose of chain of custody is to ensure the urine sample is not tampered with before being received by the laboratory. A sign-off sheet accompanies the sample, documenting that all parties handling the sample have directly observed it. At no time can the sample be not accounted for. Lapses in the sign-off log could call into question the validity of a positive test result. In fact, the lab will not even test a sample, which has a broken chain of custody.

Adulteration

Tampering with a urine sample in an attempt to invalidate a drug screen. Dopers will adulterate a urine specimen by adding contaminants to alter the pH, specific gravity or other characteristics of the sample.

Stacking

A form of anabolic steroid doping involving a systematic increasing of the dose of steroid taken over a given time frame. Doping with anabolic steroids results in dosing which far exceeds that required to treat medical illness and has serious adverse health consequences for the athlete.

Masking

The taking of a substance by an athlete with the intended goal of covering up the use of a banned drug on a urine drug screen. Masking agents, although not performance enhancing, are banned substances as well.

Theme

The practice of doping to gain an unfair advantage in athletic competition dates back as far as competitive sport itself. Ancient Greek athletes were known to cheat over 2,000 years ago. Unfortunately, doping in sports is a serious concern of virtually every sports federation, professional and amateur league and high school and university sports program. The use of steroids by a well-known athlete is likely to get more media coverage than someone breaking a world record. Doping control policies and programs are often complex. Although most agree that knowingly taking a banned substance to gain an unfair advantage is cheating and should be punished, the issue is often less obvious. For example, would it be considered cheating if an athlete who takes a banned substance for a known medical condition or is given an illegal drug by a coach or trainer and not informed it is banned? The policy of all Doping Control agencies is that the athletes are responsible for everything they put into their body. Although arbitration boards exist, established to evaluate the athletes' explanation of their drug use, ignorance of the rules is rarely a successful defense. The goal of drug-free competition is to maintain fair competition, safeguard the health of athletes, and maintain the integrity of sport. Drugs in sports are bad for the multibillion euro/dollar sports business. Fans admire the accomplishments of gifted athletes, but are frequently angered when a doping scandal is uncovered. Recently, the American baseball player, Barry Bonds, surpassed the legend Babe Ruth in hitting home runs. At the same time, he has been accused of taking steroids to gain strength and power. Despite denying the allegations, he is ridiculed by fans outside his home city. Many have called for his accomplishments to not be entered into the record books. Another example is the winningest Tour de France champion of all time, Lance Armstrong: despite being cleared of allegations of doping, he has lost virtually all of his lucrative endorsements. The 2006 winner of the Tour was tested positive for testosterone and pending his appeal, will be stripped of his title. Although testosterones is a naturally made steroid, it can be taken to increase strength. Given the fact that these substances are naturally occurring, it is difficult to define them as doping agents. The world loves a winner, but not one who is perceived as a cheat. As the rewards for victory have continually increased, so has the apparent need to win at any cost.

To underscore the importance and current relevance of doping in sports, Bud Selig, the current commission of American Baseball ran a full page statement in the most prestigious newspapers in the United States on Jun 16, 2006.[2] In this "open letter to baseball fans," mr Selig addressed the use of human growth hormone (hGH) by baseball players. This action was directly related to recent reports of hGH use by a professional baseball player. In his letter, he acknowledged the revelation of a Major League player admitting to using hGH, a performance enhancing drug. He expressed his "anger and disappointment" for someone breaking the rules. He defended the players by pointing out this is a rare event and that it is difficult to test for hGH, but "he is committed to work with testing organizations to develop a reliable test." He emphasized Major League Baseball agreed to the "toughest drug testing and penalty program for steroids in all of professional sports." He proclaimed he was "committed to protecting our game… and the integrity of America's pastime." Of interest, the fact that performance enhancing drug use only recently seemed to become a priority for

Major League Baseball, after Congressional hearings were held following the Balco-Barry Bonds steroid abuse allegations. It is widely acknowledged that drugs have been used by players for many years prior to these public proclamations. Mr Selig's closing statement captures the goal of doping control. He wrote, "the goal of baseball is simple. It's a game that is to be won or lost on the field as a result of the natural talents of the game's remarkable athletes. I will do everything possible to make sure that this one goal can always be met." A skeptic might question the true motivation for this action and how it is related to the business of MLB and its fan base. Regardless, it speaks volumes about the importance of doping in modern day sports.

There are well documented cases of athletes dying from doping, but fortunately this is uncommon. Given the high doses used in doping, it is difficult to determine the short and long term effects on the athlete.[3] It would not be ethical to give doses equivalent to those used "in the gym" to athletes in a research study to determine the side effects. What is known about the side effects of many of the drugs of abuse, such as anabolic steroids and growth hormone, is extrapolated from observation and reports of admitted users.[5] Additional information is derived from the existing medical literature on the effects in patients prescribed these drugs for medical reasons. There is some controversy over the reported side effect profiles of many of these compounds when used in healthy athletes. Steroids, for example, have a large number of documented adverse side effects, but not every user will necessarily experience these problems. There is no way of predicting which adverse effects will develop and to what extent. Much has been written about "roid rage".[4,5] This refers to the extreme anger reported in some steroid abusers. The clinical studies, which have attempted to study this reaction, have reported inconsistent findings. What has been reported by most users is irritability and mood lability. Aggression is not routinely reported and may be related to other factors, unique to the individual and their current life circumstances. Given all the potential adverse side effects, why do athletes take anabolic steroids? The most obvious answer is to increase skeletal muscle mass (size) and ultimately strength, power and speed. These drugs do not create an athlete. They do allow the conditioned athlete to train harder by improving recovery time from strenuous workouts. The ability to "overtrain" and improve strength, power and speed does give the user an unfair advantage over the non using athlete. Some investigators have reported a prominent placebo effect experienced by athletes taking anabolic steroids. Regardless, there is no doubt that use of high dose anabolic steroids combined with intense workouts will result in physical changes not achievable by training without using steroids. This is why efforts to discourage drug use through testing and education are important not only for the health of the athlete, but to promote fair competition as well.

The majority of competitors never dope and commit themselves to being the best they can be through hard work and dedication. The pressure to use performance enhancing drugs also comes from teammates, coaches, trainers and even parents who develop a distorted perspective on the meaning of competition. Education on the potential dangers of doping needs to include coaches, trainers, and parents (in the case of adolescent athletes), in addition to the athlete.

Virtually all doping agents present a health risk to the user, some more significant than others. Unfortunately, the side effects experienced with many of the other performance enhancing drugs are not well known. Of potentially greater concern, is the long term ill effects on health. By the time these effects are discovered, it will likely be too late for those abusing these drugs to be treated and the damage will be done. For this reason, it is important to research and learn about the short and long term side effects of all doping agents. Eliminating drug use by all athletes is the ultimate goal, but not realistic at this time or in the foreseeable future.

Case Studies

Case I

Unfortunately, an entire text could be written on modern day athletes and doping. High profile case examples may only represent the tip of the iceberg, no one knows. Data on the prevalence of doping in sports is highly speculative and difficult to interpret. For obvious reasons, the actual number of dopers in any given sport is not known. Cheaters are unlikely to freely admit their actions, and large scale screen-

ing on a regular basis of all athletes is currently not possible. The following real-life cases highlight a few of the issues associated with doping in sports.

A 16 year old adolescent male always dreamed of being a high school football player. Despite an aggressive workout schedule and intense weight lifting, he was only able to get his weight up to 215 pounds. The coach told him after the tryout that he liked his effort, but he would need to put on 25 additional pounds to make the team. The player asked the coach how he could possibly do it. The coach gave him a name of someone who could help him achieve his goal. Eight months later the player returned weighting 255 pounds and looking very muscular. His strength had increased dramatically and he was able to train at a very high level. He made the team and was very pleased. In the third game of the season, he became angry over a penalty called on him and punched the official. He was thrown off the team for his misconduct. He later confided to a teacher he felt close to that he had been given anabolic steroid injections by a strength and conditioning coach. The coach was subsequently fired for his actions when it was discovered he had been sending his players to a known steroid "pusher." Whether the steroids caused the violent behavior is debatable. The increase in weight and strength and the ability to over-train was directly related to his steroid use. The tragic ending to this case is the player was told he had to increase his size in order to fulfill his dream, by his coach. The high school did not have a drug testing program or any form of drug abuse education available to the athletes prior to this incident, but now does.

Case 2

A 24 year old world class swimmer came to a world championship meet and broke two world records. Despite being an elite swimmer, she had never challenged world records in her career. Her drop in times was remarkable and many of her competitors questioned her dramatic improvement. In addition to her increased speed in the pool, she had a significant change in her physique. Her upper body became much more muscular and her breasts appeared smaller. Her voice was noted to be much deeper than it had been in the past. Given her bodily changes combined with her incredible improvement in her times, many felt she had to be doping. She was drug tested following her world record swims and no performance enhancing drugs were detected. Despite her negative drug test, many felt she had beaten the test and, in fact, had used performance enhancing drugs.

This case highlights a belief of many involved in doping control that the cheaters are often one step ahead of the testers. One athlete confided that current drug testing is little more than an intelligence test, since "only an idiot will get caught." Although a cynical view, it does represent a sense of failure of the doping control process by some athletes.

Το «ντόπινγκ» στα σπόρ

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Ανεξάρτητα από την τοποθέτηση του καθενός μας απέναντι σε αυτό το θέμα, οι ουσίες που βελτιώνουν τις αθλητικές επιδόσεις παίζουν σημαντικό ρόλο στον αθλητισμό. Οι αθλητικές στήλες των εφημερίδων, διεθνώς, δημοσιεύουν τακτικά περιπτώσεις όπου αθλητές χρησιμοποιούν βελτιωτικές της επίδοσης ουσίες για να εξασφαλίσουν πλεονεκτήματα έναντι των αντιπάλων τους. Η εξέλιξη στην ανακάλυψη μεθόδων που αποτρέπουν την ανίχνευση των ουσιών αυτών είναι εντυπωσιακή. Δυστυχώς η έρευνα στον τομέα της χρήσης των ουσιών αυτών δεν χρηματοδοτείται επαρκώς. Χωρίς αξιόπιστα δεδομένα οι αθλητές είναι ευάλωτοι στους ισχυρισμούς αυτών που επω-

φελούνται από τις πωλήσεις των ουσιών. Πολλοί νεαροί οπαδοί των αθλητών και όσοι ονειρεύονται μια λαμπρή αθλητική σταδιοδρομία, θαυμάζουν τους επιτυχημένους και επαγγελματίες αθλητές. Χρειάζεται επομένως μία ισχυρή καταγγελτική διακήρυξη. Ωστόσο, οι πράξεις μετρούν περισσότερο από τα λόγια. Κάθε φορά που ένας καταξιωμένος αθλητής διαπιστώνεται ότι κάνει χρήση ουσιών, η προσπάθεια περιορισμού των ουσιών αυτών χάνει έδαφος. Η νοοτροπία που βασίζεται στην αρχή «νίκη με οποιοδήποτε κόστος» και «η δεύτερη θέση είναι η πρώτη θέση του ηττημένου» πρέπει να αμφισβητείται με λόγια και με έργα στον αθλητισμό των νέων σε όλους τους τομείς άθλησης. Τέλος, ο πόλεμος εναντίον των ουσιών στον αθλητισμό πρέπει να είναι μια συντονισμένη, καλά οργανωμένη διεθνής επιχείρηση επειδή ο αθλητισμός παίζει σημαντικό ρόλο σε όλους τους πολιτισμούς. Αν θέλουμε να διαφυλάξουμε την ακεραιότητα της άμιλλας και να προστατεύσουμε την υγεία των αθλητών θα πρέπει να εντατικοποιήσουμε τις προσπάθειές μας για να αποκλεισθούν οι ουσίες αυτές ως μία αποδεκτή προοπτική για τους αθλητές. Οι επαγγελματίες των επιστημών του αθλητισμού και οι ψυχίατροι του αθλητισμού πρέπει να συνεργάζονται με τους προπονητές, τους αθλητές και τις διοικήσεις στην εκπαίδευση των αθλητών σε σχέση με τις επιδράσεις που μπορούν να έχουν οι ουσίες αυτές. Για να επιτευχθεί αυτός ο σημαντικός στόχος πρέπει όλοι αυτοί που ασχολούνται με τον αθλητισμό να γνωρίζουν την αρνητική επίπτωση που έχουν οι ουσίες σε όλες τις πλευρές του οργανωμένου αθλητισμού. Πρόκειται για μια δύσκολη πρόκληση που πρέπει όμως να αντιμετωπισθεί.

Λέξεις ευρετηρίου: «Ντόπινγκ», αθλήματα, αθλητές.

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Special article
Ειδικό άρθρο

Psychoanalysis and the public health sector: The Greek experience

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The question of whether psychoanalysis –outside the original psychoanalytical setting– can co-exist with the public sector of health services has been substantially answered by the development of relevant psychoanalytic theory and the evolution of novel psychotherapeutic techniques. Psychoanalysis has a non specific and a specific effect on the public sector. The first explores how psychoanalytic concepts formulate a special understanding of mental disorders in everyday clinical practice; both in the organisation of services and a personalised approach of particular circumstances and needs of patients. The second explores how different kinds of psychoanalytic therapies are incorporated in the public sector. The setting is as crucially important here as are the appropriate funding, the recruitment of an adequate number of specialists and psychoanalytic training. Unfortunately psychoanalysis is not considered as cost-efficient by the majority of decision makers. In Greece, psychoanalysis has been present since the late 20's, initially as an instrument of perfection of children's understanding and education and also as a specific therapeutic method, appropriate for human psyche's understanding and for the treatment of some mental diseases. In the last 30 years psychoanalysis has been more closely implicated in the development of public health services and, by extension, in the psychiatric reform taking place in the country. Psychoanalytic supervision is mainly implemented in outpatient clinical practice. Brief psychoanalytic psychotherapies are implemented in outpatient and inpatient settings.

Key words: Psychoanalysis, public health, psychoanalytic setting, psychoanalytic supervision, brief psychoanalytic psychotherapies, public sector, Greece.

Introduction

Psychoanalysis, just like all original theories, has been influenced, since the beginning until the present, by specific social circumstances perceptible in the work of S. Freud and his disciples. A social understanding is equally necessary, in order to approach reactions to psychoanalysis. A characteristic example is the reaction caused by the concept of child sexuality, in the early 20th century, especially in some social classes and within the psychoanalytic movement itself (We are referring to the detachment of A. Adler). Also, the hostility of Academic Medicine to psychoanalysis, the accusation of not being a scientific method, in comparison to the dominant biological positivism of that time. In practice, the context of private/solitary medicine was prevalent, at that time, and a serious debate on the existence of a Public health sector, was not possible.

Since this early period, psychoanalysis transcended the margins of solitary and private practice. The experiences of the "Poliklinic" in Berlin and of the "Ambulatorium" in Vienna, in the early 20's, testimony on the interest of Freud and his disciples for a public exercise of psychoanalysis. They have proposed time limited indications for psychoanalysis, especially for delinquent young people and patients suffering psychosomatic diseases.[1] We have to notice also K. Jung's[2] remarkable work on the therapy of psychotic patients and the pioneering work of S. Ferenzi,[3] who was the first to develop novel therapeutic techniques for patients that would be today diagnosed as "borderline", and realized the importance of countertransference and empathy.

Many changes have occurred in all aspects of human life in the century following the appearance of psychoanalysis. The development of a continuously developing Public Healthcare Sector is one of those changes. This was the consequence of a public mandate for free and comprehensive health care for everybody under the auspices of the State. As a pioneering practice, in the beginning, and as a necessary component of any psychotherapy after World War II, psychoanalysis have gained a huge audience, some people speaking about a "right to psychoanalysis". Psychoanalytic theory, following the changing needs and opportunities, has proposed new techniques, new fields of application and improvements in its theoretical framework, all these in a more and more competitive field of psychotherapies , where new concepts and methods (behavioral, systemic, cognitive and others) have challenged psychoanalysis, adopting in the same time many of its achievements.

General theory – Basic psychoanalytic concepts

Psychoanalysis revealed the role of drives in the formation of a subject's desire and the mechanisms through which desire is satisfied. At the same time emphasized on the primordial mother-child relationship, recognizing the importance of the object of investment of drives and later of psychical representations in the formation of the subject. This is how S. Freud set the foundations of the development of each individual's unique personality and of the person as a social being.[4]

Psychoanalysis has to investigate the individuality of the subject and its relationship to the external and internal environment. Concerning the internal environment, investigation equally refers to its intrapsychic and its interpsychic dimensions, while for the external environment it is important to study the relationships with significant others, in the context of family and social institutions.

Psychoanalysis –through understanding the symbolization of symptoms– is able to assign meanings to psychic illness of suffering individuals, without alienating them from their social environment and their personal history. Psychoanalysis attributes a meaning to projective processes (projection, projective identification), in relation to the development of transference towards "the Other", who could be a therapist or an institution (e.g. a ward of a hospital, or a group). In parallel, the development of empathy and the understanding of countertransference and its reactions allow a better understanding of the needs of a patient and favor a more effective management. The recognition of the importance of these processes in a therapist–patient relationship, is a *sine qua non* condition for the transformation of

an ordinary relationship to a therapeutic one, in individual and also in group therapies.[5]

Psychoanalysis promoted the idea of the "setting" that is to say of a framework of rules for its application, since the very beginning. This is the only way for psychic processes to be studied and dealt with, by using the interpretation as the basic therapeutic tool. The following questions are posed: (a) under the current conditions of medical practice, can the need for the setting be preserved outside the solitary-private doctor-patient relationship? and (b) how can the tool of interpretation be applied?

The initial capital importance of the interpretation for psychoanalysis, its value per se, has not been denied. However, nowadays we know better the substantial therapeutic value of other derivatives, such as the function of silence, of containment and of the corrective emotional experience.[6,7]

With regard to the setting, it seems necessary to emphasize that it primarily refers to the internal capacity of the therapist or the therapeutic team to maintain firm boundaries in the relationship with the patient, so that the creation and –subsequently– the maintenance of the necessary intermediate space, which permits contact and collaboration between them, for the duration of the therapy. This means that the stability of the setting is a dynamic situation and not an inflexible technique, which has to respond to the particular needs of a patient. The setting permits the constancy of the therapeutic situation. It is composed of real and symbolic determinants. Its main characteristics are stability, consistency, foresight, confidentiality and continuity. It is ever-present, just like parents are for their child. Therefore it is necessary for any therapeutic process.[8]

We emphasized on the development of the setting in psychoanalysis, because we think that the application of rules, mostly deriving from it, in the development of psychiatric, therapeutic practices in the Public Sector services, is one of the most substantial contributions of psychoanalysis.

Modern psychoanalytic theory and practice

During the past few decades, clinical practice had to face new psychopathological forms, following concurrent social and family trends, requiring new, modified techniques. Psychoanalysis mainly deals with a broad spectrum of disorders related to morbid personalities, reflecting new forms of familial and interpersonal relationships.[9] We are called to deal with patients who have severe pre-oedipal developmental fixations, with severe archaic and narcissistic symptoms, with incomplete, non-integrated mental structures, with split aspects of their self and diffused identity. They present incomplete, problematic identifications, restricted internal differentiation and incomplete internalization of solid psychic structures, which can not dictate acceptable inhibitions and also can not allow sublimation and constructive outcomes on a social level. Thus the patient's complaint is not fixed on a symptom, but mainly on various types of psychological malfunction: interpersonal and social difficulty and isolation, deprivation of social and personal integration, an unbearable feeling of void or boredom, seeking an identity and the meaning of life. These new forms of psychopathology and their associated clinical practice are closely observed and interpreted by modern psychoanalytic theory, suggesting new techniques, which are differentiated in their therapeutic aims and are adapted to the needs of these patients.

Holmes[10] summarizes the changes in modern psychoanalytic psychotherapy, as follows:

1. From the awareness of unconscious psychic content and the arrest of repression, to the appropriate integration of the fragmented aspects of the self. Now the focus is in trying to establish the self and create a sense of subjective identity.
2. The aim of treatment is no longer an accurate reconstruction of past childhood, but rather the study of the patient's material, as experienced in "the here and now" of the therapeutic relationship. Emphasis is placed on the analytic meeting as a new corrective experience, with key features of reliability, consistency, stability and non-exploitation.[11] The elements of the psychoanalytical process leading to structural change are: (a) insight, (b) the operation of containment and (c) the unprecedented new experience.

3. The redefinition of infant sexuality primarily in terms of dependence on the primary object of care, and emotional connection with it. The psychoanalytic theories of attachment emphasize the ability of the therapist-parent for emotional match-attunement with the patient-infant, as an important factor in mental change.
4. From reaching insight, to the development of self-consciousness. This means to be able to identify feelings, thoughts and impulses and to put them into words. This is very important for the abundance of modern clinical presentations characterized by poor mentalization and excessive somatization and acting out, for instance "psychoses blank", psychosomatic disorders, heavy borderline situations. Here the role of the therapist is to provide a transitional space, not only for making sense, but also for symbolic exchange and processing, which is internalized by the patient.[12]
5. There is a move towards being pragmatic about therapeutic goals, with emphasis, not so much on the radical restructuring of the personality, but rather on the shift of the psychic balance towards more mature-healthier patterns of function.

Psychoanalysis is able to assess its advantageς, its limitations, its indications and contraindications. We have to notice some efforts to treat autism and especially schizophrenia in the 60s and 70's.[13,14] Today, we focus on the psychoanalytic therapy of psychoses putting emphasis on the maturing role of identifications.[15,16] The therapist offers primarily the most mature and healthy model for internalization and identification. This function of internalization is not limited to the personal relationship, but seeks the active support of the whole therapeutic framework. This process is closely related to the psychoanalytic concepts of intermediary–transitional space, the holding environment, the importance of a stable setting and the role of empathy.[17]

Specific psychoanalysis units

Psychoanalytic theory and practice has assured a decisive influence on the formation of mental health professionals and on the understanding of mental illness by psychiatrists. New points of view, basic concepts, therapeutic techniques and practices resulted from it, which have been adopted, to variable degrees by the Public Sector. In addition, the contribution of psychoanalysis is objectified by the incorporation of specific psychoanalysis units. The latter are pleomorphic in both their theoretical and their technical approach. The main reason for this is the need to be adaptable to various and different clinical needs. For instance, psychoanalytic psychotherapy units that offer their services in the context of the General Hospital are very different to the psychosocial rehabilitation units for chronic patients.[18–20]

Psychoanalytic education

The necessary requirements for the application of psychoanalysis in the Public Sector are the presence of a critical mass of psychoanalytically-trained mental health professionals and the necessary clinical supervision on the level of individuals, group and unit. The most important problem is the non-recognition of Psychotherapy as a profession by the State. This is directly correlated with the fact that psychoanalytic training occurs outside the State's educational institutions and costs dearly. This deters a lot of young mental health professionals who, under current circumstances, seek heuristic answers to their psychotherapeutic and intellectual needs.

Another problem, related to staffing, is the fact that existing staffs are expended at long-term therapies, not really necessary, which more modern forms of psychoanalytic work can remediate. These long therapies permit to the State's services to claim that psychoanalysis is more costly compared to other forms of therapy and not to recruit psychoanalysts. Recent literature strongly suggests that psychoanalysis is a cost-effective form of therapy, in the long-term perspective.[21–25] Another major anti psychoanalytic argument; psychoanalysis being a metaphysical and a non-scientific method, has collapsed under the weight of current findings of neurosciences.[26]

The case of Greece

Particularly, as far as Greece is concerned, we can mention some pioneer experiences since the 20's

and 30's.[27] With the exception of a short experience of establishment of a psychoanalytic group, in late 40's, under the leadership of Princess M. Bonaparte,[28] the structured psychoanalytic groups appeared following the demise of the military junta in 1974.[28] Psychoanalysis had been strongly implicated in the research of a more liberal and friendly social environment, in the research of a profound reform of psychiatric services and more closely in the social demand of the development of well equipped services of public health. This process became more evident since the establishment of a National Health System, since 1983.[29]

The recent psychoanalysis movement was primarily based on the action of many young psychiatrists who became socially radical during the years 1967–1974, of military dictatorship in the country. Many of them have followed later a psychoanalytic training. These young psychiatrists have been influenced by a small group of psychoanalysts of the previous generation, who had accumulated the necessary knowledge and experience from their practice in the National Health System of the United Kingdom, in psychoanalytic settings developed in public services in France, Switzerland, Italy and United States. These developments gave rise to a number of psychoanalytically educated psychiatrists, who integrated their psychodynamic expertise in the newly developed public sector. Psychoanalysis had a more profound impact in Children's and Adolescents' services, created in late 70's, because there was no resistance derived from a pre-existing non-psychoanalytic practice.[30]

During the last 25 years the public mental health care sector has been transformed by a considerable development of out door and in door services. From the era of the big hospitals and asyla, when primary care was more or less practiced by the private sector, we have now transcended to the era of sectorised community-based psychiatry, where the State assumes responsibility for all levels of care.[31]

We can resume as follows:

1. Gradual decline of the asyla and their scheduled closure. Three of them have already closed, and the rest are expected to close by 2012.
2. Big psychiatric hospital has been reformed. The number of beds per ward has decreased substantially; they acquired short-stay and acute units. They also developed community mental health centers and community services.
3. A large, multimodal and extended network of psychosocial rehabilitation was developed throughout Greece, in order to cater for the increasing numbers of patients released from ex-asyla. Funding is a crucial problem to resolve for these rehabilitation units.
4. A substantial number of Community Mental Health Centers was created, albeit still not sufficiently many.
5. For the first time, Psychiatric Sectors were formed in General Hospitals, which now offer inpatient, outpatient and liaison psychiatric services.
6. In parallel, an independent network of child psychiatric services was developed, mainly in the form of Child Guidance Clinic. There are only three child psychiatry sectors in general pediatric hospitals, and two outpatient services for adolescents (in Athens and Salonika). The development of child psychiatric services remains inadequate and lags behind that for adults.
7. These changes were accompanied by an extended effort to educate and train personnel in order for them to create an array for all different mental health professions.
8. On the academic level, the study curriculum for basic mental health professions changed. The main characteristic is the reform of educational programs, which adopted a psychodynamic direction – not exclusively of psychoanalytic orientation. E.g. psychotherapy education became compulsory within psychiatric training and child psychiatry has been recognized as an autonomous specialty, separate to adult psychiatry since 1981.[32,33]

Psychoanalysis, as a cohesive theory, put its mark on these developments focusing on the liberation of suffering persons from the compulsions of their mental illness, not merely relieving them from present symptoms. The basic psychoanalytic concept of a spectrum of defenses and psychical functions extending from mental health to mental illness provided the theoretical basis for the crucial

anti-stigma campaign, which is still on-going today. We think that the osmosis between the basic ideas of social psychiatry and psychoanalysis permitted to the later to have a serious impact in the development of the public sector.[5,16]

The influence of psychoanalysis in the improvement of public psychiatric services has been considerable. Three examples which concern an early influence on everyday's work can be mentioned:

(a) working through appointments with pre-set duration, (b) favoring psychiatric practice in the team of mental health professionals, instead of solitary psychiatrist stand (c) the recognition of the significance of mental health professionals' feelings and their role in the establishment of a therapeutic framework - implicated in the process of understanding patient's morbidity and professionals' attitude and reactions.

Psychoanalysis and especially psychoanalytic training has blossomed in the private sector.[28]

In parallel, specific psychoanalytic services have developed mainly in University departments, far less in units within the national health system and also in private non profit organizations. Training in psychoanalytic psychotherapy has been established in the Psychiatric University departments of Athens,[34–37] Thessaloniki[19] and also in those of Patras[30] and Thrace. These units are focusing more particularly on brief psychoanalytic psychotherapy.[38,39] The psychiatric department of Athens University has also developed psychoanalytic inpatient and outpatient care of borderline patients.[40,41]

We have to note that experiences of psychoanalytic supervision of clinical practice, since the beginning of the 80's, have significantly contributed to improve the exercise of community based psychiatry in urban areas and also through rural mobile units.[42–46]

Finally, psychoanalysis has offered a framework of understanding of institutional functioning as a whole.[47,48]

If one critically examines the current status of psychiatry in Greece, could suggest that this is a status of a very wide reform, albeit still incomplete. If the reform focusing on out door care and prevention can not be completed; a danger of regression becomes evident.[49] There is a mixed involvement of public and private services in different sectors of care, within the actual psychiatric reform. How to distribute, between them, service users and funding, becomes a serious problem of planning of the steps to follow further. The ways of funding of units, of establishing psychotherapies and of training of psychotherapists are also some crucial problems to face. Psychoanalytic training is still offered mainly through private, voluntary engagement of trainees. It remains always a unique method of profound training in facing the needs of a person as a whole. Everyday practice in the public sector, especially in the field of short psychotherapies, is rather eclectic, joining methods and concepts coming from psychoanalysis, but also from other approaches.[50]

Conclusion

Psychoanalysis, not without trouble and retractions, is making the necessary theoretical and technical adjustments in order to meet modern requirements, i.e. new morbid conditions and new ways of developing units to cope with mental illnesses. It contributes greatly to preserve the individualized, human approach of patients, against "industrialized" forms of psychiatric care. The development of psychoanalytic theory and the evolution of novel psychotherapeutic techniques permit to psychoanalysis to face challenges coming from ongoing impact of other psychotherapeutic methods, like systemic and cognitive ones, especially in the public sector of mental health.[35] The acceptance of psychoanalysis in the public sector depends equally on the decision making strategies of governments concerning finances and stuff equipment. Psychoanalysis has to diffuse evidence on its efficacy, in order to limit preferences for less expensive, standardized methods, whose long term efficacy is not evident.

In Greece, social demand for psychoanalysis and therapies of psychoanalytic inspiration remains quite strong, offering a fertile ground for a further development of these methods of care and of understanding of our rapidly changing societies.

Ψυχανάλυση στο δημόσιο τομέα υγείας: Η Ελληνική εμπειρία

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Το ερώτημα αν η ψυχανάλυση, έξω από το συνηθισμένο πλαίσιο άσκησης, μπορεί να συνυπάρχει με το δημόσιο τομέα έχει απαντηθεί ουσιαστικά από την ανάπτυξη της ψυχαναλυτικής θεωρίας και πρακτικής και την εξέλιξη των νέων ψυχοθεραπευτικών τεχνικών. Η επίδραση της ψυχανάλυσης στο δημόσιο τομέα έχει ένα μη ειδικό και ένα ειδικό χαρακτήρα. Ο πρώτος αφορά στο πώς οι ψυχαναλυτικές έννοιες επιτρέπουν μια ιδιαίτερη κατανόηση των ψυχικών διαταραχών στην καθημερινή κλινική πρακτική, τόσο σε ότι αφορά στην οργάνωση των υπηρεσιών όσο και μια εξατομικευμένη προσέγγιση των ιδιαίτερων συνθηκών και αναγκών των ασθενών. Ο δεύτερος αφορά στο πώς τα διαφορετικά είδη ψυχαναλυτικής θεραπείας έχουν ενσωματωθεί στο δημόσιο τομέα. Η έννοια του setting (της οργάνωσης της θεραπευτικής λειτουργίας) είναι ζωτικής σημασίας, όπως και το ζήτημα της χρηματοδότησης, της πρόσληψης επαρκούς αριθμού ειδικών και της ψυχαναλυτικής εκπαίδευσης. Δυστυχώς, η ψυχανάλυση δεν θεωρείται οικονομικώς αποδοτική από την πλειονότητα των φορέων λήψης αποφάσεων. Στην Ελλάδα, η ψυχανάλυση έχει παρουσία από τα τέλη της δεκαετίας του 1920, αρχικά ως όργανο τελειοποίησης της κατανόησης και της εκπαίδευσης των παιδιών, αλλά και ως ειδική θεραπευτική μέθοδος, κατάλληλη για την κατανόηση του ανθρώπινου ψυχισμού και την αντιμετώπιση των ψυχικών ασθενειών. Κατά τα τελευταία 30 χρόνια, η ψυχανάλυση έχει εμπλακεί πιο ενεργά στην ανάπτυξη των δημόσιων υπηρεσιών υγείας και, κατ' επέκταση, στην ψυχιατρική μεταρρύθμιση, που πραγματοποιείται στη χώρα μας. Οι πιο εκτεταμένες ψυχαναλυτικές παρεμβάσεις αφορούν στην εποπτεία του κλινικού έργου, κατά κύριο λόγο, σε μονάδες άσκησης της ψυχιατρικής μέσα στον κοινωνικό ιστό και τις βραχείες ψυχοθεραπείες, συχνά σε συνεργασία με μονάδες νοσηλείας.

Λέξεις ευρετηρίου: Ψυχανάλυση, ψυχαναλυτική εποπτεία, βραχείες ψυχοθεραπείες, δημόσιος τομέας, θεραπευτικό πλαίσιο, Ελλάδα

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UEMS Working Group – Compulsory treatment in the community

The UEMS-Section of Psychiatry is sensitive to the very diverse legal structures in the EU and of the need to restrict itself to general issue. It recognises that detail is the responsibility of individual legislatures and that to try to cover every circumstance would be impossible. Initially, the Section considered attempting to produce a position statement on arrangements for detention under legal measure in EU Psychiatric practice. Following discussions, this became restricted to a consideration of Compulsory Care and Treatment in the Community. This, narrower focus has already been the subject of legislation in some countries [e.g. Mental Health (Care and Treatment), (Scotland) Act 2003] and is being actively considered in others. This paper also has that focus, so that issues relating to hospital care and detention fall out-with the review.

Kilsey et al (2005) in a Cochrane review have shown how few are the randomised controlled trials on involuntary out- patient commitment. The two trials they cite reflect the mental health care systems in specific mates of the TJSA. Here, legal measures were introduced in response to highly publicised acts of violence by persons with mental disorder. The resultant benefits in the management of dangerous individuals are held to be limited. There is evidence of greater benefit for those with schizophrenia, bipolar disorder and other serious illnesses where unrelated to the prevention of acts of violence though this is only providing that there is an appropriate plan of care (Applebaum 2001). It also seems evident chat any legislation, requires both realistic levels of investment in active outreach and intensive multi-agency care coordination in the community. Given the availability of care in the community, however, compulsory care and treatment in that community offers a less restrictive alternative to compulsory in-patient hospital detention.

Principles

The, expert committee charged with making recommendations in rexpect of mental health law reform in Scotland (Millan 2001) commented that such legislation spans a range of boundaries and interests. Most notably, the sensitivities of the patient and his/her carers, as well as of the legal and medical professionals and statutory care providers must all be considered. For these reasons, the committee recommended the adoption of a series of principles to guide those involved in the interpretation and implementation of the legislation. UEMS-Section of Psychiatry has reviewed these principles and believes they provide a sound basis on which to structure discussion.

They reflect the four key underlying principles of medical ethics, namely Justice, autonomy, beneficence (seeking to do good) and non-malificence (avoiding doing harm). Each of the points outlined below can be seen to reflect one or more of these key points.

Justice

Non discrimination

People with mental disorder should wherever possible retain the same rights and entitlements as those with other health needs.

Equality

There should be no direct or indirect discrimination on grounds of physical disability, age, gender, sexual orientation, language, religion, national, ethnic or social origin.

Respect for diversity

Service users should receive care, treatment and support in a manner that accords respect for their individual qualities , abilities and diverse backgrounds. Their age, gender, sexual orientation, ethnic group cultural and religious background should be properly taken into account.

Reciprocity

Where society imposes an obligation on an individual to comply with a programme of treatment and care, it should impose a parallel obligation on the health and social care authorities to provide safe and appropriate services, inducing ongoing care following discharge from compulsion.

Autonomy

Informal care

Wherever possible, care, treatment and support should be provided to people with mental disorder without recourse to compulsion.

Participation

To the extent permitted by their individual capacity, service users should be fully involved, in all aspects of their assessment, care, treatment and support. Account should be taken of their past and present wishes, so far as these can be ascertained. Service users should be provided with all the information and support necessary to enable them to participate fully. All such information should be provided in a way which renders it likely to be understood.

Respect for carers

Those who provide care to service users on an informal basis should receive respect for their role and experience. They should have their views and needs taken into account and receive appropriate information and advice.

Beneficence and non-malificence

Least restrictive alternative

Any necessary care, treatment and support for service users should be provided in the least invasive manner and in the least restrictive manner and environment compatible with the delivery of safe and effective care, taking account where appropriate of the safety of others.

Benefit

Any legislative intervention on behalf of the service user should be likely to produce benefit which cannot reasonably be achieved by other means.

Child welfare

The welfare of a child with mental disorder should be paramount in any intervention imposed on the child under the law.

Target Group

UEMS-Section of Psychiatry believes that resort to compulsory treatment in the community should be restricted to those who have a repealed history of deteriorations through non-compliance, severe enough in the past to have required involuntary in-patient care. Compulsory community intervention should reduce the likelihood that the service user will again deteriorate to a degree that in-patient commitment will again be necessary. There should also be evidence that a treatment plan, with the potential for appropriate care and support, can be delivered in the community. We believe it would be preferable to deliver treatment with medication in a medical setting, such as a local health centre rather than in the service user's home. The intention should be to prevent a "revolving door" situation. Community commitment should not be seen as an emergency, first line legislative intervention or financially cheaper alternative to in-patient hospital care if that is necessary.

Applicants

We believe it would be appropriate for there to be more than one applicant involved in legal submissions. A fully trained psychiatrist must be involved. Additional consideration should be given to requir-

ing a medical second opinion and the involvement of community care professionals, such as any social work and community psychiatric nursing staff, taxed with the implementation of the proposed care plan. We would advise against the direct involvement of carers in the application. Clearly they should be consulted but there is routine experience that their involvement in the legislative application itself may lead to subsequent recrimination from the service user and damage to their longer term relationship.

Appeal

Service users and their carers should have rights of appeal both in respect of the compulsory order itself and of the treatment measures allowed under it. There should be defined time limits for the duration of legally enforced measures although reapplication should be possible, if required. Service users and carers should be aware of these time constraints and reminded of their riphts of appeal at times of review. It is our view that, in the interests of justice, they should not have personally to finance legal representation in respect of appeals against orders or medical second opinions with respect to treatment.

Patient non-compliance

Where identical in-patient and out -patient commitment criteria exist, readmission to hospital care should be possible, providing that subsequent legal review to confirm this is appropriate. Where outpatient criteria differ from in-patient, this may not prove possible and alternative strategies will need to be developed. In practice a degree of service user compliance is essential for the effective functioning of a community order. This needs to be a necessary consideration when an application is initiated.

Conclusion

It would be fallacious to believe that the introduction of legal measures for compulsory intervention in the community will prove successful in isolation. There must also be an associated investment in community services, especially in the training and recruitment of professionals able to deliver the treatment and the supports necessary for service users and carers .

UEMS-Section of Psychiatry is aware that in many EU countries delivery of community care is still at a rudimentary stage. We would advise against the introduction of compulsory community care measures until a robust system of care delivery in the community has already been established and tested for the wider compliant service user population .

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Books review
Βιβλιοκριτική

Schizophrenia:
Biopsychological approaches and current challenges
Eds.: Kasper S, Papadimitriou GN
Informa Healthcare, London, 2009
ISBN-13:978-1-4200-8004-9

We introduce here the second edition of this book aiming to present, in five units and twenty nine successive chapters, the acquired knowledge and current challenges on diagnosis, psychopathology, neurobiology, pharmacological treatment of schizophrenia, as well as its role in society. The chapters are obviously written by leading experts all over the world.

The editors underline that, "…patients with schizophrenia are overwhelmed by the complexity of the problems emerging with the disease, so are their relatives and caregivers". In consequence "the chapters (of this book) aim to reach an audience comprising of physicians and basic scientists in various psychiatric specialties as well as doctors of neurology and aim to be of importance in public health considerations. The book should also be of interest to policy makers…". We think that the book achieves to satisfy a major challenge, which is to preserve scientific rigueur and, in the same time, be useful to people who need to familiarize with these issues.

Issues on neurobiology, genetic and epigenetic studies, brain abnormalities and biochemical alterations are expected to enrich substantially clinical approaches. Pharmacological advances are also described in corresponding chapters. Biological research is obviously the field of special interest of the majority of the contributors, but no one is willing to underestimate the complexity of psychological and social phenomena related to schizophrenia, developed in the units on Non pharmacological Treatment and Schizophrenia and Society.

Titles and authors of the chapters are the following:

Schizophrenia: Historical roots and brief review of recent research developments, C.*N. Stefanis and N.C. Stefanis*/Epidemiology and gender, *J. Wancata, M. Freidl, A. Unger*/Interviewing the patient with schizophrenia, *F. Thibaut*/Evaluation of symptomatology on schizophrenia, *J. Bobes, M.P. Garcia-Portilla, P.A. Saiz, M. Bousoño*/Clinical characteristics of first episode schizophrenia, *L.P. Henry, P.D. McGorry, M.G. Harris, P. Amminger*/Schizophrenia: Differential diagnosis and comorbidities, *C.A. Altamura, F. Dragogna, S. Pozzoli, M.C. Mauri*/Neurocognition and schizophrenia, *G. Sachs*/Genetic and epigenetic factors in schizophrenia, *A. Schosser, P. McGuffin*/Brain abnormalities in schizophrenia, *B. Bogerts, J. Steiner, H.G. Bernstein*/ Imaging in schizophrenia, *W. Cahn, N.EM. Van Haren, R.S. Kahn*/Biochemical alterations in schizophrenia, *B.Y. Glenthhoj, L.V. Kristiansen, H. Rasmussen, B. Oranje*/ Dopamine dysregulation in the brain network of decision-making: Can this explain the psychopathology of schizophrenia? *S.M. Assadi, M. Yücel, C. Pantelis*/ Neuropsychological markers and social cognition in schizophrenia, J. Burns/An update of meta-analyses on second-generation antipsychotic drugs for schizophrenia, *S. Leucht, C. Corves, W. Kissling, J.M. Davis*/ Maintenance pharmacotherapy in schizophrenia, *S. Kasper, E. Akimova, M. Fink, R. Lanzenberger*/Evaluation and medication therapy for treatment resistance in schizophrenia, *R.R. Conlay*/First episode schizophrenia: Considerations on the timing, selection, and duration of antipsychotic therapies, *B.J. Miller, P.F. Buckley*/Pharmacological profile and pharmaco-

genetic approaches of antipsychotics, *M.S. Lee, H.S. Chang*/Side effect burden of antipsychotic medication, *H.J. Möller, M. Riedel*/Rehabilitation in schizophrenia: Social skills training and cognitive remediation, *J. Ventura, L.H. Guzic*/Evidence-based psychosocial interventions for schizophrenia, *E. Granholm, C. Loh*/ Transcultural psychiatry and schizophrenia, *T. Stompe*/ Electroconvulsive therapy in schizophrenia, *G. Petrides, R.J. Braga*/Schizophrenia and stigma: Old problems, new challenges, *M.P. Economou, N.C. Stefanis, G.N. Papadimitriou*/Patient rights: Ethics and the clinical care of patients with schizophrenia, *E.G. DeRenzo, S. Peterson, J. Schwartz, A. Jeannotte, S. Selinger*/Genetic counseling in schizophrenia, *D.G. Dikeos, E. Vassos, G.N. Papadimitriou*/Violence in schizophrenia: Risk factors and assessment, *J. Rabun, S. Boyer*/Economic evaluation and schizophrenia, *M. Knapp, D. Razzouk*/ Transcultural aspects of schizophrenia and old-age schizophrenia, T. Okasha, A. Okasha

We think that this handbook offers an up-to-date, integrated knowledge on various aspects and approaches of schizophrenia, permitting familiarization or a better understanding on it.

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Σχιζοφρένεια:
Βιοψυχολογικές προσεγγίσεις και επίκαιρες προκλήσεις
Επιμ. έκδοσης: Kasper S, Papadimitriou GN
Informa Healthcare, London, 2009
ISBN-13:978-1-4200-8004-9

Παρουσιάζουμε τη δεύτερη έκδοση του πολυσυγγραφικού αυτού τόμου όπου, σε πέντε ενότητες και στα διαδοχικά κεφάλαια, παρουσιάζονται τόσο οι γνώσεις όσο και οι προοπτικές γύρω από τα ζητήματα της διάγνωσης, ψυχοπαθολογίας, νευροβιολογίας, και φαρμακευτικής αγωγής της σχιζοφρένειας, όπως επίσης και της κοινωνικής της φυσιογνωμίας. Τα κεφάλαια έχουν γραφεί από έγκριτους συγγραφείς, από όλο τον κόσμο.

Ένα βιβλίο αυτού του τύπου γίνεται απαραίτητο από την πολυπλοκότητα των παραγόντων που υπεισέρχονται στην κατανόηση και την πορεία της σχιζοφρένειας. Φιλοδοξία του είναι να προσφέρει επιστημονικά άρτια, αλλά και κατανοητή γνώση σε διάφορες κατηγορίες επιστημόνων, αλλά και σε υπεύθυνους για τη χάραξη πολιτικής. Η ποιότητα και το εύρος των κειμένων που περιλαμβάνονται σε αυτό τον τόμο αποτελούν εγγύηση για την επιτυχία των στόχων του.

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Psychodynamic Diagnostic Manual (PDM)
PDM Task Force (2006). Silver Spring, MD: Alliance of Psychoanalytic Organizations

The Psychodynamic Diagnostic Manual (PDM) attempts to expand contemporary psychiatry's ability to capture the different levels of psychiatric nosology by incorporating in an easily accessible language the long experience of psychoanalytic tradition mostly on the comprehension of personality. In accordance with DSM-IV-TR and ICD-10 phenomenological approach to psychiatric disorders, PDM deals extensively with the phenomenology of psychopathology and very little with the various psychoanalytical hermeneutical constructs. Diagnosing a patient according to the strict criteria of DSM and ICD classifications frequently leads to a number of different diagnoses that seem to overlap, as if discrete problems and symptoms just by chance coexist in the same person. Although PDM is modeled in its structure and title upon DSM-IV-TR, its central focus is on a more holistic picture in terms of personality functioning, affect expression, coping strategies, mechanisms of defense, quality of relationships. It is the individual that suffers the symptoms and a meaningful treatment planning is needed for the patient and not for the disorder.

The book is created though the collaborative effort of major psychoanalytic organizations, namely the American Psychoanalytic Association, the International Psychoanalytical Association, the Division of Psychoanalysis (39) of the American Psychological Association, the American Academy of Psychoanalysis, and the National Membership Committee of Psychoanalysis in Clinical Social Work. The text is organized in three parts. Part I deals with adult mental health disorders and Part II with child and adolescent mental health disorders. Part III deals in separate papers with the conceptual and research foundations that constitute the epistemological background of this book. Within Parts I and II the book uses a multidimensional approach which is similar and an expansion of DSM axial system. In detail Parts I and II are separated into chapters on personality patterns (P Axis), mental functioning (M Axis) and subjective experience (S Axis), and are followed by case illustrations that attempt to give an idea about how similar DSM-diagnosed patients may require quite different treatment approaches, depending on their individualized histories and specific situations.

In the P Axis, different personalities are set on a continuum of mental functioning, namely from healthy personalities to neurotic-level and borderline-level personalities. It is important to note that the term "borderline" is used by psychoanalysts in order to denote a dimensional level of severity of personality organization, whereas the same term in DSM realm means a specific (the more histrionic and dramatic) manifestation of this level of severity. After the dimensional personality approach, 14 distinct personality types are described; between them some that are not included in the last DSM editions (like sadistic and sadomasochistic, masochistic, somatizing, depressive, anxious and dissociative personality patterns). Each personality type ends with a synopsis of the following items:

- Contributing constitutional-maturational patterns
- Central tension/preoccupation
- Central affects
- Characteristic pathogenic belief about self
- Characteristic pathogenic belief about others
- Central ways of defending.

The M Axis underlines the variety of mental functioning –and may offer a useful expansion of DSM axes II and V– by providing illustrative descriptions of ranges and adequacy of functioning within each of the capacities listed below:

- Capacity for regulation, attention, and learning
- Capacity for relationships and intimacy (including depth, range, and consistency)
- Quality of internal experience (level of confidence and self-regard)
- Capacity for affective experience, expression, and communication
- Defensive patterns and capacities
- Capacity to form internal representations
- Capacity for differentiation and integration
- Self-observing capacities (psychological-mindedness)
- Capacity to construct or use internal standards and ideals (sense of morality).

The S Axis builds upon the manifest symptom descriptions of DSM-IV-TR by laying the emphasis on the patient's subjective experience of symptoms. Descriptions of affective states, mental content, somatic experiences, and relational patterns are added, along with clinical examples. The symptom-pattern section is placed third since the authors state 'that such patterns can be understood only in the context of the patient's overall personality structure and profile of mental functioning'.

A major aim of the PDM group was to broaden the horizons of current psychiatric practices by emphasizing the invaluable role of personality and mental functioning on health and disease. The effort to compromise with current phenomenological classifications may be simultaneously its significant advantage and its major disadvantage. Disadvantage, as it may be unsophisticated in characterizing psychological processes and etiological constructs that had always been at the core heart of psychoanalytic though. On the other hand it may be a very useful complement to DSM-IV-TR and ICD-10 followers, independently of their involvement with psychoanalysis. It could be helpful to those who are mostly influenced by other traditions, biological, cognitive-behavioral or family oriented and those colleagues who are new in the puzzling field of psychiatry.

The PDM is self-published and is available online at www.pdm1.org and at other e-bookshops (e.g. amazon) at a surprisingly affordable price.

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Εγχειρίδιο Ψυχοδυναμικής Διάγνωσης (PDM) Ομάδα Εργασίας PDM (2006). Silver Spring, MD: Συνεργασία Ψυχαναλυτικών Οργανώσεων

Το Εγχειρίδιο Ψυχοδυναμικής Διάγνωσης (PDM) επιχειρεί να διευρύνει τη δυνατότητα της σύγχρονης Ψυχιατρικής να κατανοήσει την ψυχιατρική νοσολογία, ενσωματώνοντας στα τρέχοντα διαγνωστικά συστήματα τη μακρά ψυχαναλυτική παράδοση, που αφορά κυρίως στην κατανόηση της προσωπικότητας. Σε συμφωνία με τη φαινομενολογική προσέγγιση του DSM-IV-TR και του ICD-10, το PDM πραγματεύεται σε μια εύκολα προσιτή γλώσσα τη φαινομενολογία της ψυχοπαθολογίας, χωρίς όμως να υπεισέρχεται σε ερμηνευτικές ψυχοδυναμικές προσεγγίσεις. Το βιβλίο χωρίζεται σε τρία μέρη. Το πρώτο μέρος πραγματεύεται τις ψυχικές διαταραχές της ενήλικης ζωής, το δεύτερο τις ψυχικές διαταραχές της παιδικής και εφηβικής ζωής και το τρίτο μέρος τα εννοιολογικά και ερευνητικά δεδομένα που αποτελούν την επιστημολογική βάση του βιβλίου. Στα δύο πρώτα μέρη, το βιβλίο χρησιμοποιεί μια διαστασιακή προσέγγιση που είναι σε αντιστοιχία με το σύστημα αξόνων του DSM, οργανώνοντας την ύλη στον άξονα της προσωπικότητας (P), στον άξονα της ψυχονοητικής λειτουργικότητας (M) και στον άξονα της υποκειμενικής εμπειρίας (S). Αν και το PDM έχει βασισθεί τόσο στον τίτλο, όσο και στη δομή του στο DSM-IV-TR, η προσέγγισή του είναι πιο ολιστική, συμπεριλαμβάνοντας τη λειτουργία της προσωπικότητας, την έκφραση των συναισθημάτων, τους μηχανισμούς άμυνας, τους προσαρμοστικούς μηχανισμούς και τις διαπροσωπικές σχέσεις.

Α. Σπυροπούλου
Ψυχίατρος, Α΄ Πανεπιστημιακή Ψυχιατρική Κλινική, Ιατρική Σχολή, Πανεπιστήμιο Αθηνών

Future scientific meetings
Προσεχείς επιστημονικές εκδηλώσεις

- **"56th Annual Meeting of the Academy of Psychosomatic Medicine (APM). Quality of Care: Implications for Psychosomatic Medicine", Las Vegas, USA**
  November 11–14, 2009
  Organizer: Academy of Psychosomatic Medicine: The Organization for Consultation-Liaison Psychiatry
  Contact: Executive Director APM
  E-mail:apm@apm.org, Website: www.apm.org

- **10th World Congress of the World Association of Psychosocial Rehabilitation, Bangalore, India**
  November 12–15, 2009
  Organizer: World Association for Psychosocial Rehabilitation
  Contact: Dr Afzal Javed, T. Murali, Prof. M. Madianos
  E-mail: afzal@afzalaved.co.uk/muralitryloth@gmail.com

- **1st International Congress on Neurobiology and Clinical Pharmacology & European Psychiatric Association Conference on Treatment Guidance, Thessaloniki, Greece**
  November 19–22, 2009
  Organization: International Society of Neurobiology and Psychopharmacology
  Collaboration: WPA Section on Private Practice Psychiatry, European Psychiatric Association
  E-mail: info@globalevents.gr,
  Website: www.globalevents.gr

- **DGPPN Congress, Berlin, Germany**
  November 25–28, 2009
  Organization: German Psychiatry & Psychotherapy Association, Website: www.dgppn-congress.de

- **4th International Gongress on Brain & Behaviour & 17th Thessaloniki Conference-Dual Congress Thessaloniki, Greece**
  December 3–6, 2009
  Organizer: International Society on Brain and Behaviour
  Collaboration: Hellenic Psychiatric Association, Psychiatric Association for Eastern Europe and the Balkans, Hellenic College of Academic Psychiatry
  E-mail: salonica@triaenatours.gr
  Website: www.triaenatours.gr

- **"WPA Regional Meeting", Dhaka, Bangladesh**
  January 21–23, 2010
  Organizer: Bangladesh Association of Psychiatry
  Contact: Prof A.H. Mohammad Firoz
  E-mail:bap@agni.com

- **18th European Congress of Psychiatry, Munich, Germany**
  February 27–March 2, 2010
  Organization: European Psychiatric Association
  Website: www.Kenes.com/epa

- **2ο Μονοθεματικό Πανελλήνιο Συνέδριο Ψυχιατρικής «Εξαρτήσεις, Συννοσηρότητα, Πρόληψη και Θεραπεία», Θεσσαλονίκη**
  Μάρτιος 5–7, 2010
  Οργ. Φορέας: Ελληνική Ψυχιατρική Εταιρεία
  Οργ. Γραφείο: Frei S.A. Congress Travel,
  Τηλ. 210-32 15 600, Fax: 210-32 19 296
  E-mail: info@frei.gr

- **5th Biennial Conference. International Society for Affective Disorders (ISAD) Vancouver, Canada**
  April 16–19 2010
  Organizer: International Society for Affective Disorders (ISAD)
  Collaboration: WPA Section on Affective Disorders
  Contact: Ms Caroline Holebrook
  E-mail: isad@isad.org.uk
  Website: www.isad.elsevier.com

- **1o Πανελλήνιο Συνέδριο Ελλήνων Νευρολόγων «Θεραπευτική στα Νευρολογικά Νοσήματα», Κως**
  Μάιος 20–23, 2010
  Οργ. Φορέας: Ελληνική Νευρολογική Εταιρεία
  Επικοινωνία: Καθ. Ν. Αρτέμης
  Οργ. Γραφείο: GEM Congress,
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  Τηλ. 210-97 10 800, Fax: 210-97 10 844
  E-mail: info@frei.gr
  Website: www.24neurocongress.gr

- **CINP World Congress, Hong Kong**
  June 6–10, 2010
  Organizer: Collegium Internationale Neuro-Pharmacologicum
  Website: www.cinp2010.com

- **20th IFP World Congress of Psychotherapy, Lucerne, Switzerland**
  June 16–19, 2010
  Organizer: International Federation for psychotherapy
  Website: www.IFP-FMPP2010.com

- **“WPA Regional Meeting", St. Petersburg, Russia**
  June 10–12, 2010
  Organizer: Russian Society of Psychiatrists
  Contact: Dr Valery Krasnov,
  E-mail: krasnov@mtu-net.ru

- **"XIII Annual Scientific Meeting of the European Association for Consultation-Liaison Psychiatry and Psychosomatics (EACLPP) and XXVIII European Conference on Psychosomatic Research (ECPR)", Innsbruck, Austria**
  June 30–July 3, 2010
  Contact: Prof. Gerhard Schüßler, MD
  E-mail:info@eaclpp-ecpr2010.org
  Website: www.eaclpp-ecpr2010.org

- **VII World Congress of Depressive Disorders and International Symposium on Post-traumatic Stress Disorder, Mendoza, Argentina**
  August 19–21, 2010
  Organizer: University of Cuyo
  Contact: Dr Jorge Nazar
  E-mail: jorge_nazar@hotmail.com
  Website: www.mendoza2010.org

- **13th European Symposium on Suicide and Suiciedal Behaviour, Rome, Italy**
  September 1–4, 2010
  Organization: University of Molise, Campobasso & University of Chieti-Pescara, Italy

- **“WPA Regional Meeting”, Beijing, China**
  September 1–5, 2010
  Organizer: Chinese Society of Psychiatry
  Contact: Dr Yizhuang Zou
  E-mail: yzouy@263.net
  Website: www.psychiatryonline.cn

- **International Conference: From Adolescence to Adulthood - Normality and Psychopathology, Larnaca, Cyprus**
  September 9–12, 2010
  Organizer: Cyprus Psychiatric Association
  Cooperation: World Psychiatric Association, European Society for Child and Adolescent Psychiatry, Hellenic Psychiatric Association, Hellenic Society of Child and Adolescent Psychiatry,
  Contact: Dr Neofitos Papaneofitou,
  Tel.–Fax: +35 724 62 42 04
  E-mail: neopap@cytanet.com.cy
  Website: www.topkinisis.com/AANP

- **10o Ετήσιο Συνέδριο, International College of Geriatric Psychoneuropharmacology, Αθήνα**
  Σεπτέμβριος 15–18, 2010
  Επικοινωνία: Καθ. Ε. Λύκουρας
  Οργ. φορέας: Ελληνική Ψυχογηριατρική Εταιρεία
  Επιστ. Συνεργασία: Β' Πανεπιστημιακή Ψυχιατρική Κλινική-Πανεπιστημιακό Γενικό Νοσοκομείο «Αττικόν», Κλάδος Ψυχογηριατρικής Ε.Ψ.Ε.
  Οργ. Γραφείο: Easy Travel, Αναγνωστοπούλου 19, 106 73 Αθήνα
  Τηλ.: 210-36 15 201, 210-36 09 442,
  Fax: 210-36 25 572
  E-mail: easytravel@hol.gr

- **“18th World Congress on Psychiatric Genetics”, Athens, Greece**
  October 3–7, 2010
  Organizer: International Society of Psychiatric Genetics Cooperation: National and Kapodistrian University of Athens Medical School 1st Department of Psychiatry Eginition Hospital, University Mental Health Research Institute
  Congress Organizing Bureau: Erasmus Conferences

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Contact: Prof. G.N. Papadimitriou
Tel.: +30 210 72 57 693, Fax: +30 210 72 57 532
E-mail: info@ispq2010.org
Website: www.erasmus.gr

- **16ο Διεθνές Φόρουμ Ψυχανάλυσης - International Federation of Psychoanalytic Societes:**
  «Το ενδοψυχικό και το Διυποκειμενικό στη Σύγχρονη Ψυχανάλυση», Αθήνα, Ελλάς
  Οκτώβριος 20–23, 2010
  Επικοινωνία: Αν. Καθηγητής Γρ. Βασλαματζής
  Οργ. Φορέας: Ελληνική Εταιρεία Ψυχαναλυτικής Ψυχοθεραπείας
  Οργ. Γραφείο: Easy Travel,
  Τηλ.: 210-36 15 201, Fax: 210-36 25 572,
  E-mail: easytravel@hol.gr

- **XXth World Congress of Social Psychiatry "Promoting the Integration of Health & Mental Health, Marrakech, Marocco**
  23–27 October, 2010
  Organizer: World Association of Social Psychiatry (WASP)
  Contact: a. Prof. Julio Arboleda-Florez, b. Prof. Driss Moussaoui
  E-mail: a. julio.arboleda-florez@queensu.ca,
  b. drissm49@gmail.com
  Website: www.wasp2010.com

- **3rd European, Congress of the International Neuropsychiatric Association &**
  4th Mediterranean Congress of the World Federation of Societies of Biological Psychiatry, Thessaloniki, Greece
  November 18–21, 2010
  Contact: Pr. C.R. Soldatos
  Organizing Bureau: Easy Travel
  19 Anagnostopoulou str, GR-106 83 Athens
  Tel.: +30 210 36 09 442, Fax: +30 210 36 25 572
  E-mail: easytravel@hol.gr
  Website: www.iua-wfsdp-dualcongress.gr

- **"WPA Regional Meeting", Cairo, Egypt**
  January 26–28, 2011
  Organizer: Egyptian Psychiatric Association
  Contact: Dr Tarek A. Okasha
  E-mail: tokasha@internetegypt.com

- **16th World Congress of the World Association for Dynamic Psychiatry (WADP), Munich, Germany**
  21–25 March, 2011
  Organizer: World Association for Dynamic Psychiatry
  Contact: Dr Sabino Funk
  E-mail: Lauraschreier@yahoo.de
  Website: www.wadp-congress.de

- **"WPA Regional Meeting", Yerevan, Armenia**
  April 14–17, 2011
  Organizer: Armenian Association of Psychiatrists
  Contact: Dr Armen Sophoyan
  E-mail: soghoyan@yahoo.com

- **Royal Australian and New Zealand College of Psychiatrists (RANZCP) 2011 Annual Congress, Darwin, Northern Territory, Australia**
  22–26 May, 2011
  Organizer: The Royal Australian and New Zealand College of Psychiatrists (RANZCP)
  Contact: Louise Hain
  E-mail: Louise.Hain@ranzcp.org
  Website: www.ranzcp.org

- **WPA Thematic Conference: Rethinking Quality in Psychiatry: Education, Research, Prevention, Diagnosis and Treatment, Istanbul, Turkey**
  9–12 June, 2011
  Organizer: a. Psychiatric Association of Turkey,
  b. Turkish Neuropsychiatric Association.
  Contact: Dr. Levent Küey
  E-mail: kueyl@superonline.com

- **"XV World Congress of Psychiatry", Buenos Aires, Argentina**
  September 18–22, 2011
  Organizers: (a) Argentina Association of Psychiatrist (AAP), (b) Association of Argentinean Psychiatrists (APSA), (c) Fountation for Interdisciplinary Investigation of Communication (FINTECO)
  Contact: Mariano R. Castex
  E-mail: mcastex@congresosint.com.ar
  Website: www.congresosint.com.ar

- **II International Congress Dual Disorders Addictive Behaviors and Other Mental Disorders, Barcelona, Spain**
  5–8 October, 2011
  Organizer: Sociedad Espaňola Patologia Dual (SEPD)
  Collaboration: NIDA and APAL

Contact: Prof. Miguel Casas
E-mail: mcasas@vhebron.net
Website: www.cipd2011.com

- **"WPA Regional Meeting", Taipei, Taiwan**
  November 12–13, 2011
  Organizer: Taiwanese Society of Psychiatry
  Contact: Dr Chiao-Chicy Che
  E-mail: twpsyc@ms61.hinet.net

- **WPA Thematic Conference-Community Psychiatry and Family Medicine. Joint Promotion of Mental Health Care, Granada, Spain**
  9–11 February, 2012
  Organizer: a. World Psychiatric Association, b. Spanish Association of Neuropsychiatry
  Collaboration: a. WONCA International and WONCA Europe, b. University of Granada
  Contact: Dr Fransisco Torres
  E-mail: ftorres@ugr.es

- **WPA Thematic Conference: Addiction Psychiatry, Barcelona, Spain**
  29–31 March, 2012
  Organizer: Socidrogalcohol
  Contact: Julio Bobes Garcia
  E-mail: a. bobes@ctv.es, b. bobes@uniovi.es

- **WPA Third Thematic Conference on Legal and Forensic Psychiatry, Madrid, Spain**
  12–14 June, 2013
  Organizer: Spanish Society of Legal Psychiatry
  Contact: Dr Alfredo Calcedo Barba
  E-mail: alfredocalcedo@gmail.com

"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

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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.

TYPES OF ARTICLES

1. **Editorials:** Short articles in both Englich and Greek language covering topics of particular importance, written by members of the Editorial Board and by invited authors (up to 500 words and 5–7 references).
2. **Review articles:** Should be written by one or two authors. They should not exceed 7,500 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 6,000 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.
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. Once or twice a year the issues will be published in English (with extensive abstract in Greek, 400–500 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,
17, Dionisiou Eginitou 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. Submission form can be found in every issue of the journal.

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 (about 300 words) as well as 4–5 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 all 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 5 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 τέσσερις φορές το 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 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 (που βρίσκεται συνημμένο σε κάθε τεύχος του περιοδικού) 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.

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 μετά από πρόσκληση της Συντακτικής Επιτροπής (μέχρι 500 λέξεις και 5–7 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 7.500 λέξεις (25 δακτυλογραφημένες σελίδες, διπλό διάστημα γραφομηχανής).
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 (10 δακτυλογραφημένες σελίδες, διπλό διάστημα γραφομηχανής).
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 δακτυλογραφημένες σελίδες, διπλό διάστημα γραφομηχανής).
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 6.000 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 στο 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 (περίπου 7 δακτυλογραφημένες σελίδες). 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.
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. Ένα ή δύο τεύχη ετησίως θα κυκλοφορούν εξ ολοκλήρου στην Αγγλική (με εκτεταμένη ελληνική περίληψη, 400–500 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,
Διονυσίου Αιγινήτου 17, 115 28 Αθήνα
e-mail: editor@psych.gr

Το δακτυλογραφημένο κείμενο πρέπει να συνοδεύεται από δισκέτα Η/Υ 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», υπόδειγμα του οποίου υπάρχει στο τέλος κάθε τεύχους του περιοδικού. 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 300 λέξεις). Στην περίληψη ανακεφαλαιώνονται τα κύρια μέρη της εργασίας. Φράσεις όπως «τα ευρήματα συζητούνται» πρέπει να αποφεύγονται. Στο τέλος της περίληψης αναγράφονται 4–5 λέξεις ευρετηρίου.

Αγγλική περίληψη: Στην τρίτη σελίδα γράφεται η αγγλική περίληψη, που πρέπει να έχει έκταση 400–500 λέξεων στις ανασκοπήσεις και τις πρωτότυπες εργασίες και 300 λέξεις στις υπόλοιπες εργασίες. Πρέπει να δίνει ουσιαστικές πληροφορίες. Στην αρχή της αγγλικής περίληψης αναγράφονται στα Αγγλικά τα ονόματα των συγγραφέων και ο τίτλος του άρθρου.

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 όλων των συγγραφέων. Στο 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 5. 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 γραφομηχανής 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.