be a vulnerability factor in schizophrenia. Taking these findings together cognitive impairments are increasingly seen as potential targets for pharmacological and psychosocial treatment and rehabilitation. This gains especially importance since recent studies have shown, that cognitive deficits are a major factor in impaired social and work function. In this contribution several key issues for cognitive rehabilitation in psychotic patients are discussed and different intervention approaches are outlined and reviewed with regard to their efficacy and effectiveness. Open questions concern issues of generalisation, transfer and maintenance, their integration with more comprehensive psychosocial rehabilitation programmes and their optimal combination with atypical neuroleptics.

S21.02
COGNITIVE DYSFUNCTIONS IN PSYCHOTIC PATIENTS: RELATIONSHIP WITH SYMPTOMS AND ANTIPSYCHOTIC TREATMENT

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Cognitive dysfunctions in psychotic patients are associated with poor social functioning and outcome. They have received increasing attention as limiting factors in rehabilitation and psychotherapeutic programs.

An interdependence among cognitive dysfunctions, psychopathology and social disability has been hypothesized by many authors; however, empirical findings have been reported supporting the alternative view that they represent separate dimensions of impairment. As a matter of fact improvement in psychopathology induced by pharmacological treatment is not always paralleled by a favorable modification of cognitive and social functioning.

These latter domains have been targeted by treatment with novel antipsychotics. Most of the studies assessing the impact of these drugs on cognition in comparison with standard neuroleptics support the view that they are superior in improving cognitive functioning. It has been hypothesized that this superiority is related to a lower frequency of extrapyramidal side effects and to the presence of a practice-related learning effect, not found for standard neuroleptics.

We investigated the effects of treatment with novel antipsychotics or low doses of standard neuroleptics on several cognitive domains, including attention/short-term memory, executive functions and learning of recurring sequences. According to our findings, both treatments improved attention and some aspects of executive functioning, in the absence of any detrimental effect on learning.

S21.03
HEMISPHERIC ASYMMETRIES AND PSYCHOTISM

J. Gruzelier

No abstract was available at the time of printing.

S21.04
A NEUROPHYSIOLOGICAL FRAMEWORK FOR PSYCHOSIS

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There is no generally accepted etiological model of the pathogenesis of productive psychotic symptoms. We explored the presently discussed neurodevelopmental model, comparing EEG data from normal juveniles at three ages with EEG data of medication-naïve, young, first-episode schizophrenic patients.

Basic assumptions are: 1) developmental EEG changes reflect the level of attained complexity of cortico-cortical connectivity, of neuronal networks, and, at each moment, their momentary accessibility; 2) neurodevelopmental abnormalities, i.e., acquired deviations in organisation and reorganisation of cortico-cortical connectivity during development, might become reactivated by a multiplicity of factors in later life. In our study, the schizophrenics showed lower delta-theta EEG centroids, and higher alpha and beta EEG centroids, suggesting a functional dissociation, and partial similarities in EEG delta-theta and beta reactivity with the 11-year olds, and in EEG alpha reactivity with the 13-year olds. Within the framework of the model, our results suggest multifactorially elicited imbalances in the level of excitability of neuronal networks in schizophrenia, resulting in network activation at dissociated complexity levels, partially regressed and partially prematurely developed. It is suggested that age- and/or state-inadequate representations for coping with realities become activated, and thus become manifest as productive schizophrenic symptoms. This constitutes partial support for the neurodevelopmental hypothesis.

W03. Euro PoP 3rd Meeting: Education and training in Psychiatry Europe (undergraduate teaching and training)

Chairs: A.H. Ghodse (UK), C. Höschl (CZ)

W03.01
PROBLEMS OF THE UNDERGRADUATE TRAINING IN PSYCHIATRY IN THE CZECH REPUBLIC

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The major objectives of undergraduate education in psychiatry are to impart knowledge, to educate attitudes and to train skills. The balance among these three goals is a matter of discussion and often also controversy. The undergraduate programmes at particular medical schools depend in a substantial part on tradition of the department and experience of the faculty.

This paper will present the outline of the Programme in psychiatry for medical students at one of 7 Czech Medical Schools as a model which will reveal the strong and weak points in the current standard system.

Psychiatry is taught in a course that spans two terms: the summer term in the 4-th year of the Medical School (8th term) and the winter term in the 5th year (9th term) of the curriculum. In both terms a total of 99 hours are available. They include 16 hours of formal lectures, and the rest is alloted for practical training and seminars. The formal lecture are supposed to cover the whole area of clinical psychiatry and include a thorough instruction in "general" and "special" psychiatric topics: psychopathology, methods of diagnostics and treatment, major ICD 10 diagnostic groups and individual categories. The lectures are presented for the whole class. Practical training is organized in 7 or 10 distributed blocks, that last 4 hours. Students work with patients at wards of the Psychiatric Clinic (60 beds) in groups of 4–8 persons.

The strength of this programme may be the focus on a careful evaluation of psychopathology and a comparatively thorough discussion of patients during practical training. The weakness is its knowledge-centered quality, with fluctuating and sometimes

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only marginal levels of training in skills. The appreciation of the importance of attitudes is mediated only by lectures and it is often insufficient. It lacks the elements of personal involvement in problems and solution seeking on the part of students. The improvement is especially needed in the area of liaison – consultation psychiatry, that can provide the experience of psychiatry as a medical discipline closely linked with problems of other branches of medicine.

Among the main problems associated with this rather entrenched structure and content of the programme are a lack of opportunity for activity of students, lack of involvement in problem-solving situations and also of an independent. in depth inquiry into a particular problem.

Among means to overcome these shortcomings are seminars in small groups conducted so as to afford maximum discussion and activity by students, discussion of essays, eventually elective courses in narrow specialized topics. The prejudice that the instruction of students in an ever growing body of knowledge is necessary and sufficient condition to meet the requirements of a good medical practice should be gradually replaced by the more problem oriented and integrative approach to the programme. The good point to start with would be rethinking the evaluation of students, putting stress on their practical skills and ability to solve problems and the use of knowledge in a less scholastic manner.

W03.02

UNDERGRADUATE STUDIES IN PSYCHIATRY IN THE PROBLEM-BASED LEARNING MEDICAL CURRICULUM AT UNIVERSITY OF TAMPERE

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Since 1994, the University of Tampere applies the problem-based learning method in basic medical education (PBL). In PBL, the emphasis is on the students' active gathering and processing of information and their ability to analyse problems and retrieve information. The curriculum is based on blocks with integration of various fields of medicine. Patient contacts are established from first weeks of basic medical education, and in addition to assessments as to knowledge, skills and ability to communicate are assessed. Mental health topics are accordingly integrated with the other fields of medicine. Of the blocks in the first 4 years, mental health topics are learned in "Man as individual and member of community", "Prevention", Diagnosis and therapy", "Fatigue" and "Emergency situations", planned as a joint activity of teachers from various fields of medicine. During clinical courses, mental health and psychiatry are studied in General Practice, Psychiatry, Child Psychiatry, Psycho-geriatrics and Rehabilitation. A series of seminars during clinical terms integrates topics of psychiatry with for example neurology, dermatology, ophtalmology, anesthesiology, oncology and basic biomedical and social sciences. This helps to overcome the often seen tendency of separating unfruitfully between the mental and the physical in working for the health of ???

W03.03

EDUCATION IN LIAISON PSYCHIATRY

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In the last two decades an increasing interest in practical as well as scientific aspects of Liaison Psychiatry became observable. In many European countries liaison models have been developed. In most of the Western European hospitals you will fred Liaison units. Furthermore various autonomous medical subspecialities were created in this field as for example psychosomatic internal medicine, psycho-oncology, psychodermatology, etc.. Despite all these developments, there are no current standards or at least guidelines for liaison training within general educational programs in European psychiatry. Such training programs should be established according to the particular goals and needs in daily liaison practice. Following the North american guidelines the objectives of such programs should be the development of clinical knowledge about psychiatric care of the medical ill or physically disabled (including alternative models of crisis intervention, short time psychotherapy, consultee-oriented consultation, etc.) and the development of clinical expertise in the care and management of the various types of patients seen in the general medical practice. Furthermore a broad didactic knowledge in the field of Liaison Psychiatry is required through extensive exposure to the core literature in this field (e.g. psychosomatic medecine, behavioral medicine, bio-pscho-social approaches). Other main points should be an advanced understanding of the medically ill patients with emphasize on nonpsychiatric medication and the interactive effects of psychotropic medications and the development of knowledge and skills in psychotherapy and crisis intervention methods. Such training programs should also include an education in research methodology in Liaison Psychiatry and last not least the development of organizational and administrative skills needed to finance the stuff and manage liaison services, and to build up a stable cooperation between the different medical disciplines involved in liaison work. These objectives can be reached by participation in special liaison training programs which may include rounds, supervision, didactics and seminars.

W03.04

EDUCATION & TRAINING IN PSYCHIATRY IN EUROPE: UNDERGRADUATE TEACHING AND TRAINING IN TURKEY

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The number of universities in Turkey have strongly increased in the last decade. Currnetly, there are more than 70 universities and many of them have medical schools. So, almost all cities in Anatolia have their own higher education facilities. The total number of new medical graduates is appr. 5000 every year. Although there is a standart curriculum for undergraduate training there are some differences in the content of lectures and clinical training between these medical schools depending their opportunities. The oldest medical schools with a large training staff are in Istanbul, Ankara and Izmir. However, the quality of education is in many new established medical schools as good as that of these older ones, despite their currently limited number of academic staff. One reason of this positive development is the smaller number of students and more education friendly and newly established facilities in these new schools. Medical students attend lectures in psychiatry first in their fifth year of medical education. Besides a total of 40 hours lectures, they have appr. 10 hours clinical training. 3 days of of this 20 day psychiatry rotation is used for child psychiatry. At the end of this training which they attend as groups of 20–30 students, they have to pass an exam. In the sixth year of medical School one month internship is obligatory for all students. Currently, this is the worst part of undergraduate training in psychiatry in Turkey, as the rather high number of medical students do an efficient internship program impossible. The curriculum of psychiatry in the fifth year includes propedeutics such as semiology,

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