drugs. By collecting and analyzing data useful for the improvement of pharmacotherapy, we also obtain information for the many other factors essential for the rational health care.

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## Identifying patients with suicidal ideation using transcranial sonography (TCS)

M. Budišić, D. Karlović, Z. Trkanjec, A. Lovrenčić-Huzjan, I. Zavoreo, V. Šerić. V. Vrabec & V. Demarin

University Department of Neurology, University Department of Psychiatry University Hospital ``Sestre Milosrdnice'' Vinogradska cesta 29, Zagreb, Croatia

E-mail: mislavbudisic@yahoo.co.uk

Aims: Recent TCS studies showed that disruption of echogenic midbrain line corresponding to basal limbic system and raphe nuclei (RN) within might represent functional marker for the development of depression (irrespective of diagnostic category). Also, depression is the most common psychiatric disorder associated with suicidal ideation.

Still there is lack of evidence that, at patients with suicidal ideation, TCS might record same RN alteration. Therefore, we initiated this study to test the possibility of TCS to disclose suicidal risk at patients with major depressive disorder (MDD).

**Methods:** Altogether 90 subjects: 30 patients with MDD, 30 patients with MDD who also reported suicidal ideation and 30 healthy controls where studied using TCS. Severity of the disease was measured according to Hamilton Depression Rating Scale (HDRS) and clinical global impression scale (CGI). Examination was performed by standardized semi quantitative protocol.

**Results:** Reduced raphe echogenicity was found in 16 of 30 (53%) of the patients with MDD but only in 6 of 30 (20%) controls. In patients with suicidal ideations that finding was even more pronounced 22 of 30 (73%), with the highest frequency of completely not visible TCS RN finding 20 of 30 (67%).

Conclusion: Our results showed that alteration of RN is frequent TCS finding in depressive states. That finding is rare in healthy subjects; however, in suicidal patients such alteration was even more pronounced. Finding of completely disrupted RN line was frequently associated with suicidal ideation. These data suggest that TCS might be novel method for the detection of patients with suicidal risk.

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## Burn-out syndrome and suicide ideation in psychiatry residents

Nikolina Jovanovic<sup>1</sup>, Julian Beezhold<sup>2</sup>, Martina Rojnic Kuzman<sup>1</sup>, Olivier Andlauer<sup>3</sup> & Cecile Hanon<sup>4</sup>

<sup>1</sup>University Hospital Centre and School of Medicine, Psychiatric Clinic, Kispaticeva 12, 10000 Zagreb, Croatia, <sup>2</sup>County Acute Service, Hellesdon Hospital, NWMHFT Norwich NR6 5BE, UK, <sup>3</sup>University of Franche-Comté, CHU Saint-Jacques, Department of Psychiatry, 25000 Besançon, France, <sup>4</sup>EPS Erasme, 143 av Armand Guillebaud, 92160 Antony, France

Residency is a stressful period when residents face extremely high job and educational demands. In order to identify risk factors specific for psychiatric profession, we designed The International Psychiatry Resident / Trainee Burnout Syndrome Study (BoSS). It

is the first large-scale international study with 26 countries included and this is report from Croatia and France, the first two to complete it. Study sample consisted of 224 residents - 54 from Croatia (54% response rate) and 136 from France (34.1%). The BoSS questionnaire collects data on demographics, education, work circumstances, The Maslach Burnout Inventory (MBI-GS), The Suicide Ideation and Behaviour Questionnaire. The Areas of Worklife Survey and The Patient Health Questionnaire. Mean age of participants was 28.7 years (SD = 3.5), majority were female in the first half of the training. They showed moderate level of burnout. Being single, fewer working hours and vacation days, and higher workload significantly predicted higher emotional exhaustion and higher cynicism. We found that 49 (27%) reported lifetime suicide ideation and these were significantly more the French (48/136 vs. 1/54). Ideators scored higher on exhaustion, lower on cynicism and signficantly lower on professional efficacy scales (P = 0.002.). There were 5 (3.7%) persons (all French) who attempted suicide. We showed that psychiatry residents are at high risk for burnout and suicide ideation (higher than in similar studies). This is first comparative study between Croatian and French psychiatry residents and we found very specific differences that should be taken into account when creating national residency programs and interventions.

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## Self-help groups in programs for treatment and rehabilitation of addicts – Croatian model of psychiatry in community

V. Golik-Gruber, R. Ljubičić, V. Gašpar, Z. Zoričić, R. Torre, D. Buljan & L. Maršić

Department of Psychiatry, University Hospital, Sestre Milosrdnice, Vinogradska 29, Zagreb, Croatia

Department of Psychiatry of the University hospital "Sestre milosrdnice" in Zagreb has a long-standing tradition in working with dependencies. Within the segment of social-psychiatric action it is prominent in establishing and expanding the network of selfhelp groups based on the model established 45 years ago, with the founding of the first Club of treated alcoholics (CTA), by Professor Vladimir Hudolin. Many experts developed his model and together with treated alcoholics founded an entire territorial network across Croatia that today numbers 220 CTA. CTA are non-profitable non-government organizations founded with the aim of treatment and rehabilitation of alcoholics and their families. Experts are included into CTA work, doctors, social workers, nurses, psychologists. CTA represent a high quality and most rational view of treatment and rehabilitation in the community, and also have a large preventive effect. The model for clubs of treated alcoholics has also been modified for other dependencies. In 2001 first clubs of treated drug addicts were formed. Today there are 7 active clubs for treated drug addicts, 4 in Zagreb, and in Split, Slavonski Brod and Imotski.

Furthermore, based on the same model, the first club for gambling addicts was founded 2 years ago. Four such clubs are presently active in Zagreb. Self-help groups (citizen organizations) are a showcase model for psychiatry in community. They have a substantial therapeutical and social potential which is amplified with the cooperation between expert and clients themselves. They represent an important factor in improvement of mental health in the community and as such we are recommending them as an unavoidable link in treatment and rehabilitation of addicts.