Asian Pearls

A synopsis of original research projects published in scientific database in the Russian Federation

Daria Smirnova [a,*], Alexey Pavlichenko [b], Olga Karpenko [c], Liubov Schmeleva [d], Petr Morozov [e]

[a] Department of Psychiatry, Narcology, Psychotherapy and Clinical Psychology, Samara State Medical University, Nagornaya str., 78, 443078 Samara, Russian Federation
[b] Department of Psychiatry, Psychotherapy and Addiction, Moscow State University of Medicine and Dentistry, Moscow, Russian Federation
[c] Department of Systemic Research in Psychiatry, Moscow Research Institute of Psychiatry, Moscow, Russian Federation
[d] Department of Psychiatry and Narcology, Saint-Petersburg State I. Pavlov Medical University, Saint Petersburg, Russian Federation
[e] Department of Psychiatry, Faculty for Advanced Medical Studies, N.I. Pirogov Russian National Medical Research University, Moscow, Russian Federation

A R T I C L E   I N F O

A B S T R A C T

The article describes the current state of scientific publications in the field of psychiatry in the Russian Federation. Issues of academic dissertations, lack of access to recent Russian language research in foreign databases, and recent reforms in the Ministry of Education and Science for overcoming these limitations are discussed in detail. Four exemplary dissertation studies published in Russian language are summarized. The first research examines the contribution of patient's verbal behavior to the reliable diagnosis of mild depression, identifying objective signs for distinguishing it from normal sadness; the mood component influenced the whole mental status and was represented in both structure and semantics of patients' speech. The second paper describes the course of panic disorder with agoraphobia, with the notable results that debut of panic disorder with full-blown panic attacks, often declines to a second accompanied with agoraphobia, which after several years gives way to limited symptom attacks and decreased agoraphobic avoidance. The third study describes the high prevalence of affective and anxiety disorders in patients with diabetes mellitus type 1 and 2, and the role of personality traits in adherence to treatment in patients with poor glucose control. The fourth project uses functional MRI for probing the features of neuronal resting-state networks in patients with temporal lobe epilepsy; the association with affective symptoms provides a model for investigating the pathophysiology of mood disorder.

© 2015 Elsevier B.V. All rights reserved.

1. Introduction

1.1. Psychiatric science in Russia: academic reforms and dissertation database

The Russian Federation had until recently five state research psychiatric centers and more than 40 psychiatry departments at medical institutions (Pavlichenko and Smirnova, 2012). However, a major reform in 2014 led to consolidation, i.e. of three former research institutes in Moscow now comprise the Federal Medical Research Center of Psychiatry and Addictions, which is now the largest such institution in the Federation. Although consolidation resulted in fewer thesis committees in psychiatry, the over-riding objective was to optimize funding, and make psychiatry research in Russia more competitive.

During 2000–2011, 2.6% of all medical dissertations in Russia were defended on the specialty of "Psychiatry" (Evdokimov and Chehlaty, 2012), to a total of 1449 dissertations. There was a mean of 121 ± 5 monographs per year, including 19 ± 1 (16%) dissertations of Doctoral Degree in Medicine, and 102 ± 5 Candidate of Medical Science (PhD) dissertations. The peak output of dissertations was in 2004–2005 ($R^2 = 0.76$, $p < 0.001$). Overall, a third of dissertations were prepared within two research disciplines (specialties). The candidate must complete the monograph, as well as an inventory patent, and publish full-length papers in journals approved by the Supreme Attestation Commission of the Russian Federation. Since 2013, the standard has entailed two papers for a PhD degree, ten for a Doctoral degree in Medicine (2013).

* Corresponding author at: Krasnoarmeyskaya Street 119-29, 443030 Samara, Russian Federation. Tel.: +7 927 2026699.
E-mail address: daria.smirnova.phd@gmail.com (D. Smirnova).

Each scientific center publishes its own psychiatric journal online, and journals of major medical universities are reviewed by the Supreme Attestation Commission. While articles are published in Russian language, they include English abstracts. Unfortunately, these remain unlisted in international data bases, with the exception of the Journal of Neurology and Psychiatry n.a. Korsakoff. The Russian Science Citation Index (RSCI) established by the eLIBRARY.RU project lists Russian language publications (RSCI, 2005). Many foreign journals are indexed in RSCI, including the Asian Journal of Psychiatry. The eLIBRARY.RU project plans for introduction of the 1000 best Russian journals into the Web of Science later this year.

Reforms in the Ministry of Education and Science oblige all researchers to compile annual reports on scientific indicators in accordance with RSCI, Scopus and Web of Science. Administrative regulations of the Russian Academy of Sciences Presidium (2010) govern the metrics to assess impact of research institutions, notably in recording the number of publications in foreign journals and those indexed in RSCI, citation index according to the number of employed researchers, impact factor, and Hirsch index.

Because academic dissertations are published in Russian language, they seldom reach an international audience. Nonetheless, the quality of Russian PhD research was highly regarded by international faculty at the 2013 European College of Neuropsychopharmacology (ECNP) seminar. From among 150 submissions, 50 young Russian researchers were invited to report their results in English to International Faculty (Professors Arango, Serretti, Davidson). We review four dissertation research projects undertaken from those among winners of the ECNP Seminar. These studies highlight the most innovative topics and approaches in psychiatric research in contemporary Russia.

2. Selected research projects

2.1. Research "Clinical and psycholinguistic features of mild depression" from Samara State Medical University

The dissertation published by Smirnova (2010) investigated the contribution of proper clinical interpretation of patient's verbal behavior to the correct diagnosis of mild depression as distinct from normal sadness, identifying objective linguistic signs. Reportedly high rates of depression are sometimes viewed with skepticism due to the questionable reliability of psychiatric diagnoses, especially with respect to the differentiation of ordinary sadness and depression (Horwitz and Wakefield, 2007; Maj, 2011). In spite of influential clinical and linguistic studies in affective states (Bucci and Freedman, 1981; Gawda, 2008), speech analysis in mild depression had not hitherto been presented in Russian and international academic literature.

In total, 402 speech samples from right-handed Russian native speakers (124 patients and 77 healthy controls, including 35 cases of normal sadness) were studied using standardized psycholinguistic procedures. Statistical evaluation included descriptive methods and nonparametric discriminate analysis. Three clinical subgroups were distinguished (depression with anxiety (A), fatigue (F), melancholic features (M)). The lexical-stylistic sublevel of speech in depression demonstrated verbosity, and dominance of narration and descriptive style over reasoning. The conversational discourse in patients was marked by increased number of colloquialisms and greater number of rhetorical figures (metaphors, comparisons, ellipses). Decreased quality of speech style was reflected in greater number of tautologies. The lexical-grammar sublevel demonstrated impoverishment of speech content and self-fixation in greater use of pronouns (predominately personal singular) and reporting of past and incomplete

activities with verbs in the continuous and past tenses. The syntactic-stylistic sublevel showed prevalence of simple sentences (clipped, impersonal), constructed in inverse word-order. Component analysis revealed the qualitative distortion and reduction of semantic content through loss of meanings and altered life priorities. Disturbed semantics was frequent in M, superficial speech level was disrupted in F, and greater cognitive adaptability was observed in A. Depressive states and normal sadness were differentiated by clinical and linguistic criteria (λ-Wilks = 0.0007; $p < 0.001$). Affect influenced the whole mental status and was represented both in structure and semantics of speech.

The author concluded that verbal behavior is a key diagnostic markers in mild depression, and that, practitioners should attend not only to what the patient says, but how it is spoken. Further transcultrual studies could generalize language diagnostic criterion. The author hypothesized that linguistic studies in psychiatry have implications for non-pharmacological treatment of depression obtained through cognitive training of language structure.

2.2. Research "Panic disorder with agoraphobia: diagnostic issues and comorbidity" from Moscow State University of Medicine and Dentistry

A popular staging model in schizophrenia and bipolar disorder (McGorry et al., 2006; Berk et al., 2007) has not yet been applied to panic disorder. In the second study, Pavlichenko (2012) investigated the course of panic disorder (PD) with agoraphobia. The study group consisted of 59 inpatients with the diagnoses "Agoraphobia" and "Panic Disorder without Agoraphobia" according to DSM-IV criteria. Age of onset for PD was 37 ± 11 years. Dynamics of PD was either episodic (34%) or chronic but waving (66%), and three phases were identified for the course of PD. Phase I, lasting up to three years after first episode, was characterized by situationally triggered panic attacks (PA) that were accompanied by somatic and cognitive symptoms, but also conversion signs (31%) and social phobias (10%). Most cases (81%) avoided traveling alone on public transport, and had illness phobia (54%), subclinical generalized anxiety disorder (37) and subclinical secondary depression (27%). Coping strategies included traveling with relatives, and also acute substance abuse. Phase II, usually 2–5 after onset of PD, patients experienced significant agoraphobic avoidance even while driving or remaining alone outside the home. Spontaneous PA were accompanied by somatic symptoms. Comorbid disorders included somatoform disorders (31%), generalized anxiety disorder (27%) and alcohol abuse (20%). Avoiding going out alone and dependence on relatives were frequent coping strategies. Phase III, some four years after onset, consisted of attenuated panic symptoms and decreased agoraphobic avoidance. Comorbidities (10–15%) included obsessive–compulsive disorder (OCD) marked by aggressive impulses, pathological doubts, personality disorders (dependent and histrionic), and major depression. Coping strategies dependent on predominant comorbidities.

Favorable prognosis of PD was linked to provocation of PA by a stressful event, the presence only of somatic PA symptoms, absence of agoraphobia, late age of onset, and generalized anxiety disorder as the only comorbid condition. Poor prognosis was linked to absence of situational triggers at onset of PA, presence of depersonalization and fear of losing control during PA, significant agoraphobic avoidance, and comorbid OCD and histrionic personality disorder.

This prospective follow-up study revealed the natural course of PD, declining from full-blown PA, through agoraphobia, to attenuated symptom severity, and showed associations between PD and comorbid conditions. The fact that PD, agoraphobia, illness phobia and generalized anxiety disorder frequently occur together suggests that they may represent variable aspects of a specific syndrome.