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### Decreased pain threshold caused by less correlation between pain intensity and depression in chronic pain

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**Introduction:** Central sensitization is one of the major conditions that constitutes chronic pain, and is influenced by various kinds of biopsychosocial factors. Pain intensity and anxiety will increase hypersensitivity to experimental pain stimuli, while depression will decrease it. Although it is well known that there is high comorbidity between chronic pain and major depressive disorder, it is still difficult to evaluate the pathological condition of chronic pain because of its heterogeneity. In this research, we investigated the relationship between pain intensity and depression which caused the change of pain threshold. **Methods:** We studied 76 patients with chronic non-malignant pain. Pain intensity and depression were assessed by Short-form McGill Pain Questionnaire (SF-MPQ) and Beck Depression Inventory (BDI). Electrical pain tolerance thresholds (PTT) were measured at asymptomatic regions, and subjects were divided into low PTT group and the others group by 10th percentile values for PTT in controls. **Results:** The low PTT group accounted for 22% of the subjects. Within the demographic and psychological data, there were no significant differences when compared between two sub-groups. Pain intensity significantly showed positive correlation with depression in both all subjects and the others group, but not in the low PTT group. **Conclusions:** In this study, the decrease of PTT reflected less correlation between pain intensity and depression. Thus, PTT at asymptomatic regions can be a good indicator of the central sensitization formed by the effects of depression in chronic pain.

### Data analysis of psychosomatic medicine consults from a trauma medical-surgical floor

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**Introduction:** There is limited research associating trauma surgery patients and psychiatric illness. The purpose of this chart review is finding and classifying characteristics of patients that received a psychiatric consultation after admission by the trauma surgery service from 2009 to 2010. **Methods:** The data source came from the electronic medical record from Yale New Haven Hospital. The platform in use at the time was Sunrise Clinical Manager. Eligible charts required a psychiatric consultation placed by the trauma surgery service at Yale New Haven's East Pavilion 6-4. A retrospective data analysis of the charts with psychiatric consults was done and common characteristics among the consults recorded including: nature of trauma event, psychiatric diagnosis associated with the consult, psychiatric medications received before and/or after consultation, percentage of alcohol or illicit substances as the

culprit of the psychiatric consultation or trauma event, and disposition after the consultation. **Results:** Notable results from this review include: alcohol involved in some aspect of the consultation 26%, illicit substances 21%, antipsychotic medications were recommended 24%, and 37% of the consults during this time interval were delirium evaluations. **Limitations:** Limitations included a large variability of information recorded in the consultation as some consults were more thorough than others.

### Prevalence and correlates of depression among patients attending a HIV/AIDS clinic in a teaching hospital in South East Nigeria

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**Introduction:** Depression is one of the commonest psychiatric complications associated with HIV/AIDS and is five times more common among People Living with HIV/AIDS (PLWHA) than in the apparently healthy population. The aim of this study was to determine the prevalence and factors associated with depression among HIV patients attending clinics in a tertiary hospital in South East Nigeria. **Methods:** A cross-sectional descriptive survey carried out on 271 patients aged 18 years and above receiving Highly Active Antiretroviral Treatment (HAART). Socio-demographic questionnaire and Patient Health Questionnaire-9 were used to collect information about the patients. **Results:** About 39.1% of the respondents were identified as depressed, out of which 24.5% were mildly depressed, 50% moderately depressed, and 24.5% were severely depressed. Mean age of diagnosis was higher among males ( $38.7 \pm 11.2$  years) than females ( $32.7 \pm 7.9$  years) ( $p < 0.002$ ). A higher proportion of males (76.5%) were married while more of the females were widowed ( $p < 0.0001$ ). **Conclusions:** The relatively high prevalence of depression among attendees at the HIV/AIDS clinic underscores the need for routine depression screening.

### Depression and anxiety as risk factors for bladder pain syndrome

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**Introduction:** Bladder pain syndrome (BPS) is a chronic and debilitating disorder characterized by pelvic pain/discomfort accompanied by urinary urgency or frequency. It is considered a psychosomatic disorder and therefore remains a diagnosis of exclusion. We aim to study the association between depression/anxiety and BPS. **Methods:** Papers about the association between depression/anxiety and BPS were searched on the PubMed database. Ninety papers were retrieved, 39 were deemed relevant and included in this article. **Results:** Recent research shows that BPS may constitute a systemic syndrome, as it is associated with many coexisting psychiatric (i.e., depression, anxiety, childhood traumatic events) and physical conditions (i.e., fibromyalgia, chronic fatigue syndrome, irritable bowel syndrome). The extent of psychiatric/non-urolological physical symptoms appears to correlate well with BPS symptom severity. Depression and anxiety disorders tend to occur before the onset of bladder symptoms. Both depression and anxiety have been implicated in the pathogenesis of chronic visceral pain, as they enhance bladder nociceptive responses. Patients with higher activity in the amygdala complex and right primary somatosensory cortex experience more mood disorders, central pain amplification, and urological symptoms. Authors provide a brief illustrative case report. **Conclusions:** There seems to be an association between depression/anxiety and the development of BPS and other psychosomatic disorders. Maladaptive coping strategies (e.g., catastrophizing) are associated with psychosomatic symptoms (e.g., BPS and non-urolological physical symptoms), sexual/social function problems, and ultimately quality of life decrement. It remains to be proven prospectively whether there is progression from BPS to a systemic pain syndrome.

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### Psychoeducational training to enable clinical laboratory technicians who perform medical examinations to understand the psychological status of patients

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**Introduction:** Successful communication between patients and medical staffs is important for high quality health care. Psychoeducational training for clinical laboratory technicians can improve communication skills. The objective of this study is to explore the effectiveness of psychoeducational training to improve staff ability while performing medical examinations to understand the psychological status of the patients. **Methods:** Fifty-three clinical laboratory technicians attended a two day training program. "Successful Self", a psychoeducational program to promote better mental health, was used to improve communication skills and to develop teamwork strategies for health care professionals. After a lecture was given on the importance of understanding the patients' psychological status, the use of role-playing was practiced to initiate better counseling methods and communication dialogue. Afterwards, the participants evaluated their own achievements via a scale and summarized their future attitudes and behavior approaches. **Results:** The participants reported a better understanding of the importance of patients' psychological status. They also acknowledged how improved communication skills could help when explaining and consulting in medical

examinations. The participants expressed further desires to provide hope and positive meaning for medical treatment and health care. **Conclusions:** The psychoeducational training effectively improved knowledge about the psychological status of patients, it motivated clinical laboratory technicians to better communicate with patients, and increased their ability and confidence to explain medical examinations.

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### Collaborative medical treatment of a patient suffering from type-1 diabetes mellitus with depression

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**Introduction:** Consistent self-care for patients suffering from type 1 diabetes mellitus is often difficult. Some patients try to find alternative medicine to treat their diabetes rather than taking insulin. In Japan, recently, a collaborative care approach between primary care physicians and diabetic specialists has been recommended to improve better adherence of treatment for diabetic patients. **Case description:** A sixty-year-old diabetic man suffering with severe thirst and depression was presented. He had been diagnosed five years before with type-1 diabetes mellitus and was being treated with insulin by a primary care physician. Recently, for two weeks, he decided to treat his diabetes with ion-based water rather than insulin, which resulted in his being hospitalized with high blood glucose and depression. A clinical psychologist began psychotherapy and insulin injections were started again. His blood glucose returned to near normal levels and his depression gradually lessened in the following weeks. The patient became more positive and cooperative in his self-care, and his HbA1c decreased from 13.3% to 6.7% within six months. His continued collaborative treatment by a primary care physician, a diabetic specialist, and a clinical psychologist has proved benefits in maintaining better blood glucose levels. **Comment:** Psychological treatment for diabetic patients with depression is important for improving blood glucose control and mental stress. A collaborative team medical approach among primary care physicians, diabetic specialists, and clinical psychologists may help and be effective in the treatment of diabetic patients.

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### Comorbidity of depression with heart disease among adults seen in emergency departments in a large Asian-American and Pacific Islander sample, 2000-2010

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**Introduction:** Coronary heart disease (CHD) is the leading cause of death in the United States with approximately 450000 people dying each year from CHD. As many as one in two patients with cardiovascular disease suffer from a mental illness. Recent studies

suggest mood disorders are the most common. However, relatively minimal research has been done in this area, especially regarding ethnically diverse populations such as Asian Americans, Native Hawaiians, and Pacific Islanders. There are important implications for such research given the potential human toll of the comorbidity of heart disease and depression, and given that the population of Asian Americans, Native Hawaiians, and Pacific Islanders is the fastest-growing in the United States. **Methods:** This study used a quantitative, epidemiologic methodology that utilized secondary data from virtually all emergency department admissions (n = 562703) of adult patients in Hawai'i. The emergency room data were obtained from the Hawai'i Health Information Corporation (HHIC) Emergency Department Database. Emergency department records from January 1, 2000 to December 31, 2010 were utilized for adults (18 years of age and above) with a diagnosis of specific types of heart disease (i.e., heart failure, cardiac arrest, complications of heart, cardiomyopathy, coronary atherosclerosis, acute myocardial infarction, and other ischemic heart diseases) and depression (i.e., major depression, single episode and major depression, recurrent episode, manic depressive episode). Mental health and heart disease diagnoses were coded according to the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Ethnicity was based on self report of a single identity. Logistic regression analyses were used to analyze the data. **Results:** Heart disease was comorbid with depression among adults admitted to emergency rooms for Hawai'i's ethnically diverse population. The estimated adjusted odds ratio of any heart disease diagnosis with depression for adults under 65 was 2.68 (95% CI 2.54 - 2.83) and for adults 65 years and over was 4.31 (95%CI 3.70 - 5.02). In both age groups, association of heart disease with depression was greatest among Pacific Islanders. **Conclusions:** Although the temporal relation between the cardiac diseases and depression is unclear, the findings are consistent with recent research showing that heart disease may be predictive of depressive disorders.

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### Alleviating somatic symptoms of anxiety using sulpiride as adjunctive therapy

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**Introduction:** this clinical case study demonstrates the potential use of sulpiride as an adjunctive therapy for improving somatic symptoms in anxiety. **Methods:** cases presented were chosen from the patients who visited Psychosomatic Clinic Omni Hospital in Tangerang, Indonesia, with a diagnosis of Panic Anxiety Disorder or Generalized Anxiety Disorder with predominant physical or somatic complaints. We asked 20 patients to fill the somatic subscales of Depression and Anxiety Somatic Symptoms Scale (DSSS) before giving them the therapies for anxiety. We only gave them serotonin antidepressant in the morning and sulpiride 50 mg at night without using benzodiazepine. After a week treatment, we asked them again about the somatic complaints using the DSSS. **Results:** We founded that 16 patients with somatic complaints related to gastrointestinal and neurologic symptoms such as dizziness and vertigo like syndrome were improving. They also reported the improvement in anxiety symptoms. **Conclusions:** In Indonesia, sulpiride is marketed as a drug for relieving somatic

symptoms related to stress. It is also approved for the patient with functional dyspepsia, vertigo like syndrome and other psychophysiology symptoms. The present results are consistent with these indications.

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### Developing psychosomatic medicine awareness in developing country

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Psychosomatic Medicine (PM) is a new subject in medical specialty field in Indonesia. Although it is known as Consultation Liaison Psychiatry (CLP) in Psychiatry, most of the people in Indonesia even with medical background do not familiar with the term of CLP. Before 2008, there was no psychosomatic medicine clinic conducted by psychiatrist in Indonesia. Omni Hospital opened a psychosomatic medicine service for public conducted by a psychiatrist as a chairman in October 2008. We provided services especially for patients with psychosomatic symptoms. We planned to get awareness from public about this particular condition. We had collaboration with media to begin awareness of mind and body connection. We also encouraged people awareness using social media like Blog, Facebook, Twitter, Youtube and lately we launched website psikosomatik.net. Roughly, we tried to measure the impact of promoting psychosomatic in media using the number of visiting outpatient to our psychosomatic clinic every year. We also surveyed social media user about their perspectives of our social media. There is an increasing amount of visiting patients in our clinic measured by the number of visiting patients every year. Most of the respondents in our survey said that our social media were helpful and had benefits to their knowledge. We found out that these strategies have some benefits not only to the awareness of people but also to the number of patients who visit our clinic.

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### The features of dental treatment in patients with mental health problems in the outpatient dental department.

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**Introduction:** This study has the aim to reveal features of dental treatment to patients with mental disorders in outpatient dental department, to analyze the features of history taking in patients with mental disorders in outpatient dental department, to analyze drug interactions between medicines, that patients with mental disorders should take, and medicines, prescribed by a dentist. **Methods:** One-hundred and fifty dental patients' medical records for medical consultation of conflict committee in dental clinics of Moscow region were analyzed. We also studied the interaction among drugs prescribed to patients with mental disorders and drugs planned by dentist for local anesthesia as well as drugs prescribed to treat dental diseases using Register of medicines in Russia. **Results:** Psychological and mental status of dental patients was not registered in medical records of dental clinics. Drugs, used for

patient comorbidity, were not registered in 94.3% of the medical records. Psychotropic drugs, interacting with local anesthetics and drugs prescribed by the dentist, can increase the effects of local anesthetic drugs, reduce the effect of epinephrine, lead to blood pressure's fall, to hemorrhagic syndrome, to convulsive seizures, to increase toxicity of other drugs. **Conclusions:** Mental health problems of patients needing dental treatment should be better assessed and diagnosed. Psychological and mental status of the patients should be taken into account and should be inserted in medical records. Taking into account interactions of pharmacological agents might avoid complications in the outpatient dental treatment.

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## Psychic tension modification techniques for patients receiving out-patient treatment

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**Introduction:** Dental interventions are often accompanied by pain both during and after the visit. Distress or fear felt by patients can lead to the increased blood pressure and heart rate. Patients suffering dentophobia are often infrequent attenders which can ultimately lead to the advancement of dental disease. The present study aims at providing support to the use of motivational interviewing during therapeutic treatment in order to carry out complete dental treatment of dental phobic patients. **Methods:** A total of 90 people aged from 18 to 57 years experiencing intense fear and anxiety of dental procedures were enrolled. Patients were divided into 2 groups: the study group, which consisted of 51 subjects (22 men and 29 women), and the control group of 39 subjects (21 men and 18 women). Spielberger-Hanina scale of personal and reactive anxiety was administered; OMRON M3 monitor was used to measure blood pressure; and analysis of salivary catecholamine level before and after each visit was conducted. **Results:** Application of motivational interviewing led to  $50.15\% \pm 4.53$  ( $p \leq 0.05$ ) reduction of reactive anxiety level in the study group compared to  $21.99\% \pm 1.42$  ( $p \leq 0.05$ ) reduction among patients in the control group after 5 visits. Functional parameters in both groups did not show significant differences. The level of salivary catecholamine among study group patients tended to decrease significantly after the 4th and 5th visits in contrast to the level of control group patients. **Conclusions:** The use of motivational interviewing allows to carry out effective and safe dental operations. It also generates commitment to future dental procedures.

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## Effectiveness of a multifactor educational intervention on delirium incidence and length of staying in patients with cardiac surgery

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**Introduction:** Delirium is a common problem among patients with open heart surgery admitted to intensive care units. This study aimed to assess effectiveness of a multifactor intervention on delirium prevention and length of staying in patients with open heart surgery. **Methods:** In this semi-experimental study, we first recruited 195 patients. Among them, 15 patients were excluded during the study due to different reasons. Participants were divided into study groups. The implemented intervention included staff education, environment changes, and installation of guideline reminding on ward. Patients were assessed for delirium twice a day using the CAM-ICU scale. Demographic characteristics as well as disease and sleep items were completed by the researchers a day before surgery. Moreover, length of staying was recorded by the researchers. Data were analyzed using Pearson Chi-Square, Independent Samples, and the Fisher's Exact Test. **Results:** A significant decrease was found in the incidence of delirium in the intervention group: 11.1% vs 35.6% ( $p < 0.05$ ). Average length of staying in the control and intervention groups was 6.23 vs 6.30 days, respectively. Length of staying among patients with delirium and patients without delirium was 7.5 vs 5.8 days, respectively. Patients with delirium were aged 55 years and more in both groups. **Conclusions:** Multifactor intervention was effective in decreasing the prevalence of delirium. Educational interventions are recommended to improve staffs' knowledge and environment changes.

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## Prevalence of overweight and obesity among Mongolian adolescents

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**Introduction:** Mongolia is experiencing changes in its unique nomadic lifestyle in the last two decades with accompanying increase in obesity rate. The aim of this study is to determine the prevalence of overweight and obesity among Mongolian adolescents. **Methods:** The study included a population-representative sample of 610 students (300 males and 310 females) between 10 and 17 years of age who are studying at the secondary and high schools in Mongolia. The sample was selected using multistage stratified random sampling technique. Anthropometric measurements including weight, height, and triceps and subscapular skinfolds were taken on the adolescents. Age was verified against school records. To minimize inter-observer error, weight and height were taken by one person while skinfold was taken by two trained persons (one for each sex). **Results:** The obesity and overweight in boys was lower than in girls (14% in males and 17% in females). Hence, the prevalence of obesity among Mongolia was high in girls. It was compared with the WHO recommended criteria (which BMI for age and skinfolds for age percentiles were estimated to 15% in boys and 18% in girls). **Conclusions:** The overweight and obesity rate in Mongolia were increasing annually, it could be the risk factor of the several illnesses.

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## Depression and disability in chronic kidney disease in Nigeria: a case control Study

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**Introduction:** Depression and chronic kidney disease have been found to frequently coexist, thereby leading to poorer outcome of both conditions. The objectives of this study were to determine the prevalence of depression and disability in Chronic Kidney Disease (CKD) patients and the association between stages of CKD and depression in the University College Hospital, Ibadan. **Methods:** One-hundred and sixty CKD patients were matched by age and gender with 160 subjects from the General Out Patient Department (GOPD). CKD patients were staged according to the study center criteria. The Mini International Neuropsychiatry Interview was used to elicit the diagnosis of depression, and the WHODAS 2.0 to assess disability. All analyses were carried out using (SPSS version 16.0). **Results:** Prevalence of depression was 17.5% in CKD versus 4.4% in control group,  $p < 0.001$ . Median disability score was higher among the cases ( $p < 0.001$ ), median WHODAS score for depression in CKD was higher than in GOPD ( $p = 0.01$ ). There was no statistically significant difference between stages of CKD and depression. Predictors of disability were: stages 3 and 4 of CKD (OR = 1.9; 95% CI 1.3-3.0), and depression (OR = 8.5; 95% CI 1.8-38.5). **Conclusions:** There is a need for effective consultation liaison work in the general medical department in order to assist in early detection and treatment of patients with depression in CKD.

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## Illuminating the alexithymia construct using bifactor modeling and network analysis

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**Introduction:** Alexithymia is defined as a multifaceted personality construct with four salient components: difficulty identifying feelings (DIF), difficulty describing feelings to others (DDF), externally oriented thinking (EOT), and restricted imaginal processes (IMP). Some researchers, however, have debated the components comprising the construct and suggested that IMP and EOT may reflect constructs somewhat distinct from alexithymia. In this investigation we attempt to clarify the components and their inter-relationships. **Methods:** Data were obtained from a large heterogeneous multi-language sample ( $n = 839$ ) to whom the Toronto Structured Interview for Alexithymia (TSIA) was administered. The analyses involved two distinctly different but complementary methods -- bifactor modeling and network analysis. **Results:** The confirmatory bifactor model and related reliability estimates supported a strong general factor of alexithymia; however, the majority of reliable variance for IMP was independent

of this general factor. In contrast, the results of the network analysis were based on a network comprised of only substantive partial correlations among TSIA items. Modularity analysis revealed three communities of items, where DIF and DDF formed one community, and EOT and IMP formed separate communities. Network metrics supported that the majority of central items resided in the DIF/DDF community and that IMP items were connected to the network primarily through EOT. **Conclusions:** Taken together, the results suggest that IMP, at least as measured by the TSIA, may not be as salient a component of the alexithymia construct as are the DIF, DDF, and EOT components.

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## The gender paradox of internalizing and externalizing difficulties in adolescence

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**Introduction:** Gender differences in prevalence rates for common mental health problems are well established. When there is an unequal gender ratio in the prevalence rates for a disorder, the 'gender paradox' predicts greater severity and poorer outcomes for the subgroup of individuals from the opposite (i.e., lower prevalence) gender people who are afflicted by the disorder. In the case of adolescents with internalizing and externalizing difficulties, the gender paradox predicts that boys who exhibit internalizing symptoms, and likewise girls who exhibit externalizing problems, have a higher probability of being more severely affected. The current study assessed whether or not this pattern is valid when assessing common risk factors contributing to comorbid difficulties in young people. **Methods:** Structural equation modelling was used to investigate a common vulnerability etiological model within a large ( $N = 1902$ ) adolescent Scottish school sample (age 14 – 15 years). Risk factors tested include life stressors, interpersonal discord, and rumination. **Results:** All of the etiological risk factors were significantly associated with comorbidity in both genders and the models were well-fitted to the data observed. Significant gender differences emerged when comparing the mediational role of rumination in the path linking interpersonal discord and comorbid difficulties. Consistent with the gender paradox, boys had higher levels of rumination than girls and the latter indirect path was stronger. **Conclusions:** Gender can be an informative risk factor when evaluating adolescents with comorbid problems because if an individual presents with difficulties that are inconsistent with typical patterns, it may be an indicator of more serious problems.

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## A new integrative instrument (AIDOC): impact on teaching and clinical research

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**Introduction:** Our aim is to use a new assessment instrument in oncologic patients testing its integrative qualities in order to be used

in teaching and clinical research. **Methods:** All patients were collected in inpatient departments in a general hospital. A total of 177 patients with a mean age of 51.85 years were evaluated by trained psychologists. The patients were referred for the psychologist by the physicians, nurses, or psychiatrist, and were not compromised cognitively. The assessment was done by a clinical interview and AIDOC (Integrative assessment and intervention for the complex medical ill), based in a bio-psycho-social perspective. All patients were assessed according to DCPR criteria. **Results:** We found that oncologic patients with worse physical condition (by WHO) present more somatization (25.0%), higher demoralization (39.7%) and desire for hastened death (27.9%). We did not find any statistical differences in attachment styles or family support. We also did find that patients with worse physical condition perceive less support from the health professionals, and they had more unmet needs of information concerning treatment and the course of the disease. The referrals for psychological and psychiatric evaluation were mainly from nurses in the worse physical condition group, while in the other group the physicians made more referrals. Other interesting result is that the psychologist suggests more interventions in the worse physical condition group. **Conclusions:** AIDOC provides useful information in a sequential and practical way providing a wide and integrative assessment of oncologic patients, mainly in explicating the main suffering domain of the person, and allowing an easy case management by a multidisciplinary team in the frame of biopsychosocial.

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## Psychosocial factors in systemic lupus erythematosus

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**Introduction:** Our aim was to study the prevalence of psychosocial factors in systemic lupus erythematosus (SLE) patients, and their relationship with clinical variables. **Methods:** A total of 97 Sequential SLE patients (ACR criteria) in an faculty ambulatory specialized consultation, with an average age of 41.20 years were assessed by means of clinical interview and by the following questionnaires: AAS-R, TAS-20, BSI, HADS, ESSS, and SF-36. All patients were diagnosed according to the criteria adopted internationally, the clinical variables assessed were: length of disease, SLICC, SLEDAI, and medication. All patients were not compromised cognitively. **Results:** We found high prevalence of alexithymia (48.9%), depressive symptoms (47.9%), insecure attachment, and somatization. As in previous studies, we did not find significant correlations between psychopathological symptoms and alexithymia with clinical variables. We did find an association with the need to be dependent and SLEDAI. We also found interesting results concerning quality of life and SLEDAI, positive correlations with vitality. We did find a negative correlation between alexithymia, psychopathological symptoms, and social support. SLE patients exhibit higher levels of alexithymia and psychopathological than the healthy volunteer control group. **Conclusions:** We found high levels of impairment in psychosocial factors, such as psychopathological symptoms, alexithymia and

attachment style but we did not find an association with the clinical variables.

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## Efficacy of a training program in relational skills

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**Introduction:** Relational skills in a psychosomatic framework assumes an increasingly prominent role in achieving quality care for patients and their families. There is evidence that communication/relational skills can be improved by training. We developed a relational skills training program for the residents of the University Hospital of Lisbon centered on the principles of patient-centered care and relational ethics. The aim of this study was to assess the effects of a communication/relational skills program. **Methods:** Fifty-two internal medicine residents were randomized to a 3-sessions intervention (3 hours each), which included instruction, role-play techniques with clinical relevant simulated patients on two main issues (breaking bad news and discussion direction of care), video-taping and self-appraisal, discussion constructive feedback, reflexive exercises and formative assessment, accompanied by written material. Each participant performed two consultations with simulated patients for each training session (a total of 6 consultations). Videos-recorded consultations with simulated patients were analyzed with Verona Coding Definitions of Emotional Sequences and Health Provider Responses. Trained residents were compared at baseline, after five days and three months following training. **Results:** The results showed an improve on: 1. gathering data to better understand lifestyle and psychosocial issues; 2. building a relationship to development a rapport and responsiveness to the patient's emotions, including respond to their concerns with more legitimize patients' emotions and empathic statement; 3. facilitation and patient activation to enhance patients' capacity to engage in the consultation; and 4. organizing the consultation sequence based on the patients' cognitive understanding and their emotional cues and concerns. **Conclusions:** This training program demonstrated to be effective on residents' availability to attendance psychosocial aspects, better preparation for bad news and better ability to respond empathically to the patient's emotional cues and concerns in the frame of a biopsychosocial approach.

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## Prevalence of DCPR syndromes in patients suffering from various chronic diseases

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**Introduction:** Holistic recognition of human nature within the biopsychosocial approach leads to a broader perception of the

causes of diseases and their treatment. The Diagnostic Criteria for Psychosomatic Research (DCPR) proposed by an international group of psychosomatic investigators are an operationalized tool for the assessment of psychosomatic syndromes in medical patients. The aim of the study was to present the occurrence of psychosomatic syndromes in various groups of Polish patients, with particular regard to their associations with coexistence of comorbid diseases, disease duration and age. **Methods:** A total of 359 patients with heterogeneous medical disorders were administered an ad hoc Polish version of the Structured Interview for DCPR. **Results:** A DCPR syndrome was identified in 70% of the subjects. Health anxiety and illness denial were the most frequently reported syndromes. A rate of 26% of the patients were diagnosed with one syndrome, 44% with two or more syndromes. Differences in occurrence of particular syndromes were found with regard to the type of the disease. Health anxiety occurred most frequently in the group of patients with viral hepatitis, illness denial, and conversion symptoms in cardio-vascular disease and asthma patients, and alexithymia in asthma and GP patients. The comorbidity of other diseases differentiates the frequency of particular psychosomatic syndromes. What is more age correlated positively with the number of existing syndromes. **Conclusions:** Psychosomatic syndromes, as measured by DCPR, occur in Polish patients. These findings underscore the importance of psychosomatic assessment and the usefulness of taking DCPR syndromes into consideration during treatment.

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### **An efficient and effective use of buprenorphine in the management of opioid addiction: the West Virginia model**

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The Centers for Disease Control and Prevention has declared that opioid drug overdose is a United States epidemic. Over the last two decades, opioid overdose has become the leading cause of injury, surpassing both injuries from firearms, and motor vehicle accidents. Misuse of prescription analgesics accounted for the sharpest rise in these deaths with rates nearly quadrupling from 1999 to 2013. More recently, death rates associated with heroin have been sharply climbing. The U.S. state of West Virginia has been particularly hard hit by this epidemic, consistently ranking as one of the top two states suffering from opioid overdose and addiction. From 1999 to 2004, West Virginia experienced the nation's largest surge in the drug poisoning death rate with a 550% increase. In 2000, the U.S. Congress passed the Drug Abuse Treatment Act allowing physicians to prescribe Buprenorphine for the treatment of opioid addiction. We describe our experience in the evolution of a sustainable program using Buprenorphine in a group therapy setting at West Virginia University. Since 2004 we have treated over 2000 patients and currently are providing care for 400 patients. This model, which includes individual counseling and twelve step participation, moves participants through three "stages" of treatment: Beginner, Intermediate, and Advanced. We have found this model to be highly effective in keeping patients therapeutically engaged and increasing the quality of life for those suffering from the disease of addiction.

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### **Strategies to wean off benzodiazepines**

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**Introduction:** This 10-case series demonstrates an efficient method for weaning patients from benzodiazepines. **Case description:** This review involves the evaluation of 10 patient case reports and describes the methods used to wean these individuals off benzodiazepines. In 5 of these cases, a single-blind benzodiazepine-placebo trial was initiated. Patients were given a month's supply of medication including partial placebo replacement and were asked to keep a diary detailing how they felt each day. Patients were seen on a monthly basis. Using information collected in the diary, a greater number of days were replaced with an increasing proportion of placebo after each follow-up when it became clear that the patient could not clearly distinguish between days with a placebo and days without. In this way, the benzodiazepine dose was gradually decreased. Following review of the data, it was found that patients on this weaning method required less time to reduce their dose to zero and reported feeling greater wellbeing on more placebo days. This is in contrast to alternative methods that include replacing the benzodiazepine drug with zopiclone (2 cases) and simply slow and gradual benzodiazepine dose decrease (3 cases). **Comment:** Some individuals are able to stop taking benzodiazepines without any difficulty, experiencing only minor withdrawal effects. However, many find too difficult to cope with withdrawal. Based on this case series, the single-blind placebo method described above is very successful but also labor intensive. We are now using this approach in clinical practice quite regularly.

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### **Children with somatic symptom disorders: is attachment investigation a key aspect for the diagnostic and intervention process?**

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**Introduction:** somatic symptom disorders (SSD) are characterized by multiple and variable physical symptoms without demonstrable pathophysiological processes. Literature has investigated the role of several psychological variables in SSD, with inconclusive data. Moreover, there is a paucity of studies on middle-childhood and early adolescence. The aim of this study was to evaluate the role of attachment as indicator of socio-emotional functioning in a sample of young patients with SSD. Specifically, we examined quality of attachment using different measures: 1) a narrative, evaluating the 'state of mind' of children; 2) a projective measure examining the 'style' of attachment; 3) a questionnaire, evaluating the 'perception of security' to parents. **Methods:** Sixty consecutive Italian patients aged from 8 to 15 years, previously diagnosed with SSD, were administered a battery of tools to investigate the attachment: Child Attachment Interview, Separation Anxiety Test, Security Scale, Inventory of Parent and Peer Attachment. Furthermore, they were administered WISC-IV to have a homogeneous sample on verbal

comprehension index. **Results:** Insecure attachment was found in more than half of the patients with SSD. In addition, an overrepresentation of disorganized state of mind was observed. The perception of security to parents was not high. **Conclusions:** these findings support the utility to further investigate the attachment for a better evaluation of the disorganization aspects surrounding the SSD in children and adolescents. The clinical implications for future research directions are discussed.

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### Psychological features in adolescent with medically unexplained cutaneous sensory symptoms: a single case study

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**Introduction:** this single case study aims to consider psychological features as fundamental elements to be assessed in the evaluation of “pseudo” dermatological disorders. **Case description:** the case illustrates a rare skin disease, which occurs in comorbidity with somatic symptom disorders in a young patient, aged 15. It was administered a battery of tools to investigate the personality profile, Child Attachment Interview (CAI), Separation Anxiety Test (SAT), Inventory of Parent and Peer Attachment (IPPA), Emotion Regulation Questionnaire (ERQ-CA), Trauma Symptom Checklist for Children (TSCC-A), and WISC-IV. **Comment:** somatization, defined as the “conversion” of psychological conflicts and overwhelming emotions into more acceptable physical symptoms, is encountered among a wide range of syndromes in dermatology. These syndromes include medically unexplained cutaneous sensory symptoms, which represent the sensory component of a traumatic experience, and may be associated to dermatological manifestations. This case was carried out to demonstrate that the psychological side of this clinical condition has been poorly investigated and further evaluations are required. The clinical implications for pediatric care are discussed.

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### The Cognitive Behavioral Analysis System of Psychotherapy (CBASP) for chronically depressed elderly patients

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**Introduction:** Specific psychotherapeutic interventions turned out feasible and effective for the treatment of elderly patients. In addition, the amount of non-responder is substantial. Hence, by the use of recently developed psychotherapy procedures especially designed for the non-responder to traditional psychotherapies enlarged possibilities of treatment also arise for older patients. CBASP is the first treatment tailored to the particular needs of

chronically depressed patients and has proven efficacy in randomized controlled trials and case studies. Currently no study could be found regarding the feasibility and effectiveness of CBASP in older chronically depressed patients. **Methods:** A first analysis addressing this question uses the data of an open study in a CBASP inpatient program. **Results:** The analysis of the subgroup 55-70 years (n = 14) revealed that one patient in the treatment dropped out (7.1%), 8 patients reached remission (57.1%) and 5 showed response (overall response 92.8%). In addition, only 4 patients (28.6%) at 6 months and 5 (35.7%) at 12 months had a relapse. The correlation between chronological age and the percentage improvement in HAMD proved to be significant (r = 0.283; p = 0.023). **Conclusions:** These first results emphasize clinical experience and point out that CBASP might be indeed useful and effective in elderly patients.

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### A validation study of the Pain Self-Efficacy Questionnaire in dental care patients

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**Introduction:** self-efficacy can be defined as the degree of confidence that the individual has to perform something successfully. This is important in determining behavior of people with pain. Individuals with higher self-efficacy are more active and present better resources to deal with pain. The aim of the study was to evaluate the psychometrics properties of the Pain Self-Efficacy Questionnaire (PSEQ) when applied to dental care patients. **Methods:** Two-hundred and sixty-four patients seeking dental care at the Brazilian public university (83.7% women, mean age 39.4 ± 11.1 years) completed the PSEQ. This instrument is composed of 10 items (unifactorial). The validation study was conducted using confirmatory factor analysis. The psychometric sensitivity was indicated by the skewness (Sk) and kurtosis (Ku). The fit indices chi-square over degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), and root mean square error of approximation (RMSEA) were used. The convergent validity was performed by the average variance extracted (AVE) and the reliability by Cronbach's alpha coefficient ( $\alpha$ ) and composite reliability (CR). **Results:** the sensibility of the items was adequate ( $|Ku|$  and  $|Sk| < 3$ ). The fit indices of PSEQ to the sample were inadequate ( $\lambda = 0.54 - 0.87$ ;  $\chi^2/df = 5.088$ ; CFI = 0.929; GFI = 0.875; RMSEA = 0.125). After inserting two correlations between the errors of the items (LM > 20.0; p < 0.001), the fit of the model was adequate ( $\lambda = 0.54 - 0.88$ ;  $\chi^2/df = 3.462$ ; CFI = 0.960; GFI = 0.923; RMSEA = 0.097). The PSEQ presented adequate convergent validity (AVE = .57) and reliability ( $\alpha = 0.94$ ; CR = 0.93). **Conclusions:** the Pain Self-Efficacy Questionnaire showed adequate psychometric properties when applied to the sample of patients seeking dental care.

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### Psychometric characteristics of the Portuguese version 20-item Toronto Alexithymia Scale when applied to adults - preliminary study

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**Introduction:** alexithymia integrates many investigative models in psychosomatic. The 20-item Toronto Alexithymia Scale (TAS-20) is the most widely used instrument to measure this variable. The objective of this study was to estimate the metric properties of the TAS-20 in Brazilian adults. **Methods:** Two-hundred and four individuals seeking dental care at the Brazilian public university participated in this study. The average age of participants was 40.0 ± 11.2 years and 83.2% were females. The TAS-20 was applied by personal interview. The psychometric sensitivity of the items was estimated. The confirmatory factor analysis was estimated using the indices chi-square over degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), and root mean square error of approximation (RMSEA). The convergent validity was evaluated by the average variance extracted (AVE). The internal consistency was estimated by Cronbach's alpha coefficient ( $\alpha$ ). **Results:** The sensitivity of the items was adequate ( $|Ku|$  e  $|Sk| < 3$ ). The fit of the three-factor model (Difficulty Identifying Feelings-DIF, Difficulty Describing Feelings to Others-DDF, Externally Oriented Thinking-EOT) was inadequate to the sample ( $\lambda = 0.13 - 0.74$ ;  $\chi^2/df = 1.754$ ; CFI = 0.855; GFI = 0.876; RMSEA = 0.061). The fit of model improved ( $\lambda = 0.35 - 0.69$ ;  $\chi^2/df = 1.677$ ; CFI = 0.926; GFI = 0.915; RMSEA = 0.058) when five items were removed ( $\lambda < 0.35$ ) and one correlation was inserted between the errors of the items (LM = 18.27;  $p < 0.001$ ). The scale showed low convergent validity (AVE = 0.21 - 0.38). EOT-factor showed low internal consistency ( $\alpha = 0.39 - 0.83$ ). **Conclusions:** The factorial validity was satisfactory but there was limitation of convergent validity in the refined three-factor model of TAS-20 when applied to Brazilian adults. This result corroborates what has been reported in the literature.

### Satisfaction with Social Support Scale: validation study in the prison environment

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**Introduction:** Satisfaction with Social Support Scale (ESSS) is an instrument used to assess satisfaction with the support that individuals receive from family and friends. Social support can be a protective factor towards labor adversity. **Methods:** A total of 339 employees (age: 40.2 ± 8.8 years; male: 81.0%) of two Brazilian detention centers completed the Satisfaction with Social Support Scale (ESSS). Of the participants, 20.8% worked as prison escort and surveillance agents, 64.0% as correctional security officer, 3.9% as health care professional, and 11.3% as operational/administrative officer. The construct validity was estimated by factorial, convergent and discriminant validity. Confirmatory factor analysis was performed using the indices chi-

square over degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), and root mean square error of approximation (RMSEA). The convergent validity was evaluated by the average variance extracted (AVE) and the discriminant validity by correctional analysis. The reliability was assessed by Cronbach's alpha coefficient ( $\alpha$ ) and composite reliability (CR). **Results:** The sensibility of the items was adequate ( $|Ku|$  and  $|Sk| < 3$ ). The fit of the original four-factor model (Satisfaction with friendships; Intimacy; Satisfaction with family; Social activities) was inadequate to the sample ( $\lambda = 0.38 - 0.82$ ;  $\chi^2/df = 3.340$ ; CFI = 0.873; GFI = 0.896; RMSEA = 0.083). To obtain adequate fit of the model ( $\lambda = 0.45 - 0.86$ ;  $\chi^2/df = 2.759$ ; CFI = 0.914; GFI = 0.923; RMSEA = 0.073), one item was removed ( $\lambda < 0.40$ ) and one correlation was inserted between the errors of the items (LM = 20.397;  $p < 0.001$ ). The convergent validity (AVE = 0.41 - 0.49) and the discriminant validity ( $\rho^2 = 0.04 - 0.28$ ) were adequate. The ESSS was reliable ( $\alpha = 0.71 - 0.76$ ; CR = 0.72 - 0.76). **Conclusions:** the Satisfaction with Social Support Scale showed adequate psychometric properties for use in the prison working environment.

### Influence of combat related post-traumatic stress symptoms on quality of pain in Croatian war veterans with PTSD and chronic pain

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**Introduction:** Posttraumatic stress disorder (PTSD) is an extreme response to a traumatic event. Chronic PTSD is associated with various somatic illnesses including chronic pain, and up to 80% of PTSD veterans suffer from chronic pain state. The aim of this research was to investigate the influence of PTSD symptoms on quality of pain in Croatian war veterans who suffer from post-traumatic stress disorder and chronic pain. **Methods:** Study included 320 male war veterans. McGill Questionnaire for pain and Trauma Symptom Inventory were used for this purpose. **Results:** significant correlations were found between intensity of PTSD symptoms and affective and sensory pain (re-experience and sensory pain:  $r = 0.32$ ;  $p < 0.05$ ; avoiding and sensory pain:  $r = 0.21$ ;  $p < 0.05$ ; emotional arousal and sensory pain:  $r = 0.46$ ;  $p < 0.001$ ; re-experience and affective pain:  $r = 0.49$ ;  $p < 0.001$ ; avoiding and affective pain:  $r = 0.57$ ;  $p < 0.001$ ; emotional arousal and affective pain:  $r = 0.6$ ;  $p < 0.001$ ). The regression model indicates that re-experiencing the traumatic event, avoiding reminders, and emotional trauma were predictive of sensory pain ( $R = 0.525$ ;  $p < 0.001$ ) as well as of affective pain ( $R = 0.676$ ;  $p < 0.001$ ). The most predictive factor in explanation of sensory pain is emotional arousal ( $\beta = 0.365$ ;  $p < 0.05$ ), and the most predictive factor in affective pain is re-experiencing the traumatic events ( $\beta = 0.634$ ;  $p < 0.001$ ). Avoidance as a symptom of PTSD was not a predictive factor neither of sensory pain nor of affective pain ( $\beta = 0.011$ ;  $p = n.s.$ ;  $\beta = 0.15$ ;  $p = n.s.$ ). **Conclusions:** The results showed a synergistic effect of PTSD symptoms on quality of chronic pain and multidisciplinary while the effects of multimodal programme for treating PTSD patients with chronic pain must still be established.

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## A chronically depressed patient with personality problems being treated with CBASP: Advantages of using the alternative DSM-5 model for diagnosing and tailoring treatment

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**Introduction:** Chronically depressed patients often show comorbid personality disorders (PD). The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) features in Section III an alternative model for the diagnosis of PD focusing on impairments in personality functioning and maladaptive personality traits. The case example demonstrates how the alternative DSM-5 model converges with diagnostic and therapeutic strategies of the Cognitive Behavioral Analysis System of Psychotherapy (CBASP). **Case description:** The case is a 52-year old female patient with chronic depression (early onset, early trauma) and chronic pain disorder. In addition, she could be labeled as treatment-resistant. Concerning DSM-IV-TR / DSM-5 Section II, she fulfilled criteria for four PDs (i.e., avoidant, obsessive-compulsive, paranoid, and depressive PD). In contrast, the alternative DSM-5 model suggests the diagnosis of a PD trait-specified, with severe impairments in personality functioning (especially in the domains intimacy and empathy) and specific maladaptive personality traits (especially the domains detachment and disinhibition). The patient was treated within a research project and received 12 weeks of inpatient CBASP. By applying situational analysis with Interpersonal Circle and disciplined personal involvement, the problems concerning personality functioning and personality traits were directly addressed. These CBASP-strategies will be demonstrated (by video tapes). **Comment:** As CBASP is conceptualized as an integrative interpersonal learning therapy, there appear many theoretical and empirical links to the alternative DSM-5 model. The case highlights the clinical utility and the integrative potential of the alternative DSM-5 model from a psychotherapeutic perspective.

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## Psychological adaptation to breast cancer: A systematic review of longitudinal studies

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**Introduction:** Breast cancer (BC) can be a traumatic and stressful experience for women. Individual differences in the way women respond and adapt to BC may be associated with a wide range of factors. This review examined the extent to which demographic, disease-related, and psychosocial factors are associated with psychological adaptation to BC. **Methods:** A systematic review following PRISMA criteria was conducted. Database searches were

conducted in 9 different health-related databases from 2000 to September 2014 using relevant search terms. English, peer-reviewed articles with longitudinal designs that explored potential predictors of psychological adaptation were considered for inclusion. **Results:** Of 1453 abstracts, 31 studies fulfilled inclusion criteria. Results on demographic and disease-related variables were mixed. In regard to psychosocial factors, personality traits, namely optimism and trait-anxiety, and perceived social support were found to be statistically significantly related to depression, anxiety, psychological distress, and quality of life. Other psychosocial variables were related to psychological adaptation but were explored only by very few studies. **Conclusions:** Most of the studies established a significant relationship between psychosocial factors and psychological adaptation. These results point to factors that can help to identify women who are at risk for long-term psychological distress and to refer them to adequate psychological support after diagnosis in order to promote their psychological adaptation to BC.

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## The role of psychosocial moderator factors in the relationship between stress and multiple sclerosis: a case-control study

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**Introduction:** Many studies have shown that stress could be a risk factor for multiple sclerosis (MS) and affects disease progression, although it depends on different moderator factors, some of them potentially modifiable. These are the first analyses for “PsychoMSS Study: Stress and Psychosocial moderator factors in Multiple Sclerosis” a project developed in Osona, a region with increasing incidence of MS. The aim of this study was to investigate the role of different psychosocial moderator factors in the stress-multiple sclerosis relationship. **Methods:** Nineteen MS patients, paired by age and sex with healthy controls, were evaluated for early life stress (CTQ), coping style (Hofboll), alexithymia (TAS-20), anxiety (STAI), perceived social support (PSS), and stressful life events throughout their lives (SRRS). **Results:** Significant differences with higher scores in MS patients were found in alexithymia (55.8 vs 40.6;  $p < 0.001$ ) and anxiety (STAI-S 12.32 vs 22.93;  $p < 0.05$  and STAI-T 16.16 vs 26;  $p < 0.05$ ). Risk for MS was increased 11-fold in people with alexithymia (OR 11.70; 95% CI 2.08 - 65.6). Moreover, it was observed a significant tendency to use more avoidant coping strategies in MS patients. No significant differences were found in early life stress, social support, and stressful life events. **Conclusions:** The psychosocial moderator factors related with MS were those regarding to psychological individual characteristics. Noteworthy, alexithymia, anxiety, and coping style are factors potentially modifiable by psychological clinical therapy. More prospective observational and interventional studies focused on specific moderating factors are needed to elucidate these effects on the onset and progression of MS.

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## Visual illness narratives – using PRISM to elicit and understand the subjective experience of suffering

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Suffering, according to the seminal definition of Eric Cassell, is the experience of severe distress due to a severe impending threat to the person. For more than 15 years, we have used PRISM (the Pictorial Representation of Illness Measure) to assess suffering (quantitatively and qualitatively) due to illness or significant loss. This presentation will focus on three studies in particular. 1. In a study of people with systemic lupus erythematosus (SLE), PRISM identified three distinct patterns of adaptation to the diagnosis, differing in level of suffering, personal resilience, and post-traumatic growth. 2. In a sample of couples who had lost a baby born prematurely, the extent of suffering was inversely related to reported post-traumatic growth. Differences were found between some parents but importantly mothers' suffering was inversely related to the extent to which they perceived their partners to be empathic. 3. A recent study of people with chronic tinnitus used PRISM and EEG power analysis. Contrary to expectations, suffering did not correlate with perceived volume of the tinnitus, but correlated with pre-frontal brain activity. All three studies highlight ways in which PRISM can be used to elicit personally salient information to contribute to the understanding of suffering and the experience of illness. Drawing from these studies, implications for the treatment of suffering will be discussed. Using PRISM to visualize complex personal changes can enhance a person's capacity to adapt to illness or loss.

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## How do dentally anxious patients account for the onset of their dental anxiety?

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**Introduction:** The incidence, causative factors, and consequences of dental anxiety are well documented, and the link between traumatic dental experiences and the onset of dental anxiety widely is accepted. The process of anxiety acquisition and whether dental anxiety onset can be intercepted through appropriate aftercare following traumatic dental experiences is less well understood. The aim of this study was to explore the concept of anxiety interception through examining experiences of dentally anxious patients. **Methods:** A random sample of 362 adult patients attending a general dental practice completed questionnaires designed to obtain data regarding levels of dental anxiety, predisposing factors, and traumatic dental experiences. Nineteen dentally anxious participants were then interviewed and thematic analysis used to explore emergent trends. **Results:** About 9% of participants were classed as extremely anxious using the Modified Dental Anxiety Scale. The numbers of existing fears, and experience of traumatic dental events, were significantly greater ( $p < 0.001$ ) in extreme anxiety compared to lower anxiety groups. The impact of attitude and manner of dentists, and lack of communication and aftercare

were also highly prevalent in subjects with greater dental anxiety. **Conclusions:** These findings support suggestions that personality type and exposure to traumatic dental events are important predisposing factors in dental anxiety acquisition. Additionally, this study suggests that the manner and attitude of dentists, and lack of communication and aftercare also contribute to this process. According to dental patients, dentists do little to help alleviate anxiety onset following traumatic events while appropriate aftercare immediately after such events would reduce likelihood of dental anxiety formation.

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## How are depressive symptoms and social support associated over time in adults with diabetes? A test of competing models

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**Introduction:** Individuals with diabetes are at increased risk of elevated depressive symptoms, and social support has been identified as a key factor in promoting the health of this population. Associations between depressive symptoms and social support have been demonstrated in individuals with diabetes. Three classes of theoretical models differentially describe the direction of this association: 1. social support influences depressive symptoms; 2. depressive symptoms influence social support; and 3. a reciprocal association exists between depressive symptoms and social support. The aim of this study was to compare these three theoretical models. The model containing reciprocal associations between depressive symptoms and social support was expected to best fit the data. **Methods:** Depressive symptoms and social support were measured via telephone survey in a large cohort study of individuals with diabetes ( $n = 1754$ ) in Quebec, Canada. After baseline, data were collected annually for four years. The fit of four path models were compared with Akaike's information criterion (AIC). The first path model was a stability model, which contained only autoregressive effects. The remaining three path models represented each of the theoretical models. **Results:** The reciprocal model had the lowest AIC, so it was selected as the best fitting model. At all time points depressive symptoms predicted subsequent social support, and at most time points social support predicted subsequent depressive symptoms. **Conclusions:** It appears that the association between depressive symptoms and social support in people with diabetes is best characterized as a reciprocal relationship. Results underscore the importance of comparing competing models.

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## The cyclic relationship between depressive symptoms and diabetes distress: results from the Montreal evaluation of diabetes treatment study

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**Introduction:** Individuals with type-2 diabetes are at increased risk of depression. Individuals with elevated depressive symptoms tend to interpret events more negatively, and thus may view diabetes as more distressing. People with some health conditions, including diabetes, are more likely to exhibit depressive symptoms, suggesting that distress specific to the health condition may influence general affect. This study sought to determine if longitudinal cyclic relationships exist between depressive symptoms and diabetes distress in individuals with type-2 diabetes. **Methods:** Data came from the Montreal Evaluation of Diabetes Treatment study, which is a cohort study of individuals with type-2 diabetes (n = 1691). Depressive symptoms and diabetes distress were assessed at baseline, 1 year, and 2 years. A cross-lagged path model analysis with all autoregressive effects was utilized. **Results:** Across all consecutive time points, depressive symptoms were positively associated with diabetes distress and diabetes distress was positively associated with depressive symptoms. The effect of depressive symptoms at baseline on depressive symptoms at year 2 was mediated by both depressive symptoms and diabetes distress at year 1. The effect of diabetes distress at baseline on diabetes distress at year 2 was also mediated by both depressive symptoms and diabetes distress. **Conclusions:** The current study is the first to demonstrate that depressive symptoms and diabetes distress are cyclically related; one condition contributes to the maintenance and exacerbation of the other. Stress related to diabetes may contribute to the increased prevalence of depression among individuals with type-2 diabetes. Results may have clinical implications.

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## Biological dimension and comorbidities in psychosomatic medicine

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In traditional medical education, the term psychosomatic medicine alluded that psychological stress might have been major cause of somatic manifestation of disease, without clear mechanism of somatization process could be explained. It has been a clinical challenge how the disease manifest as illness when the pathology is invisible, or often illusive. In traditional sense of medical education, anatomical structure of pathology has been considered as disease, thus absence of morphological disease has been attributed as psychosomatic. As we redefine and expand the concept of disease to molecular and genetic level, invisible pathology becomes clearer as it manifest as clinical presentation. For instance, white coat hypertension or labile hypertension has been often interpreted as psychogenic due to lack of morphological presence of pathology, whereas essential hypertension was defined in the presence of microvascular pathology in the end organ. Similar analogy can be applied in Prinzmetal angina and coronary vasospasm causing chest pain in contrast to structural coronary atherosclerosis and stenosis. No longer is lack of visible pathology be looked at as absence of pathology, when the molecular level of functional abnormalities could be a part of disease, i.e. endothelial dysfunction causing vasospasm, due to inappropriate NOS activities. Receptor

physiology and distribution of beta 1 and 2 receptors causing cardiac dysfunction to catecholamine surge is becoming more plausible explanation for stress induced cardiomyopathy. Many invisible elements of pathogenesis have been revealing itself, which used to be often considered as psychogenic. Therefore, future psychosomatic education has to address how somatization process manifests itself to stressful stimulation leading biological manifestation of symptoms on the basis of demonstrable somatic pathogenesis. Moreover, it has to be reemphasized that comorbidities which have been often neglected in psychosomatic process as it reveals itself as clinical manifestation.

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## Associations between happiness and behavioral factors among school adolescents in Korea

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**Introduction:** Happiness has been associated with several behavioral and social factors. Even though there are a couple of studies about happiness, however few of them showed the relationship among Korean adolescents. The purpose of this study was to investigate the association between happiness and behavioral factors in adolescents. **Methods:** The subjects were 72435 middle and high school students (36655 boys and 35780 girls) recruited from stratified random cluster sampling of 800 Korean middle and high schools in 2013, Korea Youth Risk Behavior Web-based Survey (KYRBWS). Chi-square test and logistic regression analysis were ran to find out the relating factors with happiness. **Results:** The average age was 14.9 years in both sex, the boys tend to be more smokers, alcohol drinkers, obese, taking breakfast and adequate sleep, and happier than girls. Girls had depressed mood and stress more than boys. Adolescents who are under stress, drinkers, smokers, drug users, and depressed were less happier (OR=0.240, 0.939, 0.849, 0.633, 0.504, respectively, p < 0.001), and those who took breakfast, physical activity, adequate sleep, having both parents, being in higher family affluence scale and socioeconomic status were more happier (OR = 1.221, 1.344, 1.152, 1.121, 1.248, 2.214, respectively, p < 0.001). **Conclusions:** Happiness was associated with a variety of behavioral factors, stress and depression had most negative relations with it.

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## The spectrum of fear – specific phobias and their relationship to wellbeing

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Specific phobias are a fairly common complaint, but receive academic short shrift relative to agoraphobia and social phobias, which are often considered to be more debilitating, and therefore more worthy of treatment. Helping patients to “work through” as opposed to circumnavigate specific phobias can yield profound, wide ranging, and sometimes-unexpected benefits. The DSM Classification of phobias, and what this means for the clinician, will be illustrated. Current advances to evidence based treatment

modalities will be considered, and the meta-analytic findings concluding the superiority of in vivo exposure (relative to alternative modes of exposure) will be considered. With this in mind, techniques for ethically and effectively exposing patients to the different types of specific phobia (including animal, natural environment, blood-injection-injury, situational and other) will be outlined. Case studies of clients who have successfully overcome their specific phobias and the wide-ranging benefits this has conferred will be presented.

## Depression Anxiety Stress Scales: validation study

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**Introduction:** Psychometric scales have been widely used in epidemiological studies that aim to identify evidence of psychosomatic conditions. It is necessary to check the quality of measurement of variables such as the Depression, Anxiety and Stress. The aim of this study was to estimate the validity, reliability, and stability of the Portuguese version of the 21- Depression Anxiety Stress Scales (DASS-21) when applied to dental patients.

**Methods:** Two-hundred and five adult patients seeking dental care at the Brazilian public university participated in this study (age: 40.0 ± 11.2 years; female: 83.2%). The DASS-21 was completed by personal interview. The confirmatory factor analysis was performed using the indices chi-square over degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), and root mean square error of approximation (RMSEA). The convergent validity was evaluated by the average variance extracted (AVE). The reliability was assessed by internal consistency ( $\alpha$ ) and composite reliability (CR). The invariance of the model was tested in independent samples (6:4) by multi-group analysis ( $\Delta\chi^2$ ).

**Results:** The sensibility of the items was adequate ( $|K_u| < 7$ ;  $|S_k| < 3$ ). The items 2 and 4 were removed ( $\lambda < 0.50$ ) and was inserted correlations between the errors of the items 7-15 e 1-12 ( $LM > 11$ ;  $p < 0.001$ ). The fit of the refined three-factor model was adequate to the sample ( $\lambda = 0.53 - 0.79$ ;  $\chi^2/df = 1.956$ ; CFI = 0.931; GFI = 0.868; RMSEA = 0.069). The convergent validity (AVE = 0.50 - 0.75) and the reliability ( $\alpha = 0.79 - 0.88$ ; CR = 0.78 - 0.89) were adequate. The DASS-21 presented metric ( $\Delta\chi^2 = 12.001$ ;  $p:\lambda = 0.744$ ) and scalar ( $\Delta\chi^2 = 18.332$ ;  $p:Cov = 0.686$ ) invariance.

**Conclusions:** The refined three-factor model of the DASS-21 presented adequate psychometric properties and was stable in independent samples of Brazilian dental patients.

## Impact of body image in the quality of life of university students according to nutritional status

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**Introduction:** Studies show a significant impact of nutritional status on the perception/satisfaction with body image in specific contexts of life. We conducted this study to compare the impact of body image in different contexts of life of students with underweight, eutrophic, and overweight/obesity. **Methods:** a total of 264 students of Pharmacy-Biochemistry of a Brazilian public university (M<sub>age</sub>: 20.9 [SD = 2.5] years; 81.8% female) participated in study. The Body Image Quality of Life Inventory (BIQLI) ( $\chi^2/df = 3.50$ ; CFI = 0.91, NFI = 0.88, RMSEA = 0.09) was used to evaluate the self's body image and related quality of life. The body weight (kg) and height (m) were self-reported for the calculation of body mass index (BMI: kg/m<sup>2</sup>). The nutritional status was classified by BMI in accordance with World Health Organization. The average scores of the impact of body image in the contexts of life were compared according to nutritional status by Analysis of Variance (ANOVA) followed by Tukey's test with  $\alpha = 5\%$ . **Results:** Regarding nutritional status, 8.4% of students were underweight, 71.4% eutrophic, and 20.2% overweight/obesity. The individuals with overweight/obesity reported effect negative and significant of body image perception in relation to the following contexts: feelings of personal adequacy and self-worth ( $p < 0.05$ ), feelings of femininity/masculinity ( $p < 0.05$ ), interactions with people of the other sex ( $p < 0.05$ ), sexual life ( $p < 0.001$ ), ability to control feeding ( $p < 0.001$ ), body weight ( $p < 0.001$ ), attention with appearance ( $p < 0.001$ ), and satisfaction/happiness about life ( $p < 0.05$ ). **Conclusions:** the individuals with overweight/obesity had an effect negative and significant low perception of their body image in different contexts of life.

## Influence of body image in specific contexts of life of students of Pharmacy-Biochemistry: a validation study

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**Introduction:** The body image is an important aspect for understanding the behaviors and emotions that individuals have in certain life situations. The Body Image Quality of Life Inventory (BIQLI) is an instrument, composed by 19 items, used in several studies to evaluate the influence of body image in specific contexts of life. The aim of this study was to estimate the validity and reliability of the BIQLI when applied in a sample of Brazilian college students of Pharmacy-biochemistry. **Methods:** The students completed the Portuguese version of the BIQLI. Psychometric properties of BIQLI were estimated using confirmatory factor analysis (CFA). The fit of model was evaluated by factor weights ( $\lambda$ ) and by goodness-of-fit indices (Chi-square by the degrees of freedom [ $\chi^2/df$ ], comparative fit index [CFI], normed fit index [NFI], and root mean square error of approximation [RMSEA]). The reliability was estimated by composite reliability (CR) and by

Cronbach's coefficient alpha ( $\alpha$ ). **Results:** A total of 264 students (81.8% female) with mean age 20.9 (SD=2.5) years answered the BIQLI. The BIQLI presented an inadequate fit to the gathered data ( $\lambda = 0.46 - 0.81$ ;  $\chi^2/df = 8.60$ ; CFI = 0.70; NFI = 0.67; RMSEA = 0.17) in the Brazilian sample. To improve the goodness, Item 15 ( $\lambda = 0.46$ ) was removed and were insert 9 correlations between the errors of the items ( $LM > 11$ ;  $p < 0.001$ ). The refined BIQLI presented and adequate fit ( $\lambda = 0.54 - 0.80$ ;  $\chi^2/df = 3.50$ ; CFI = 0.91; NFI = 0.88; RMSEA = 0.09), and good reliability (CR = 0.94;  $\alpha = 0.94$ ) in the present study on a Brazilian sample. **Conclusions:** The BIQLI presented adequate validity and reliability to Brazilian university students of Pharmacy-biochemistry.

## Psychometric properties of the Multidimensional Pain Inventory and its application in different orofacial pain conditions

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**Introduction:** The presence of pain may have psychosocial and economic impacts, bringing damages to quality of life and to health of individuals. The pain has been evaluated using psychometric scales. The aim of this study was to assess the psychometric properties of the Multidimensional Pain Inventory (MPI) in Brazilian patients with orofacial pain. **Methods:** A total of 436 adult patients, with some type of orofacial pain, participated (74.5% female; age = 39.9  $\pm$  13.6 years). The Portuguese version of the MPI was used. This version consists of 50 items divided in three orthogonal parts. Confirmatory Factor Analysis (CFA) was conducted using  $\chi^2/df$ , CFI, GFI and RMSEA. Convergent validity was estimated by the Average Variance Extracted (AVE) and internal consistency by Cronbach's alpha coefficient ( $\alpha$ ). The stability of the models was tested between independent samples (test and validation) and between patients with dental pain and other types of orofacial pain. The factorial invariance was estimated by multigroup analysis ( $\Delta\chi^2$ ). **Results:** Factorial, convergent validity, and internal consistency were adequate in all three parts of MPI. For this, it was necessary to exclude the item 15 of Part I ( $\lambda = 0.13$ ). Discriminant validity was committed between factors "Activities outside the home" and "Social Activities" of the Part 3 of MPI in the total sample, validation sample and among patients with dental pain and with orofacial pain. A strong invariance was detected in the three parts of MPI between different samples. **Conclusion:** The MPI produced valid, reliable, and stable data for pain assessment among Brazilian patients with different orofacial pain conditions.

## Examining the relationship between physical illness and depression: is there a difference between inflammatory and non-inflammatory diseases?

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**Introduction:** Depression is probably the most well researched disorder in mental health. Nonetheless, the underlying pathophysiology has not yet been fully understood. Recent studies have proposed inflammation as an etiologic factor of depression. This study aims to examine the differences in the association between inflammatory versus non-inflammatory disorders and depression, in a sample composed of primary care attendees. **Methods:** Cross-sectional analysis was conducted in a subsample of the PREDICT study database. The sample included 5437 subjects from 9 primary care centers in Andalucía, Spain. Major depressive disorder was measured using CIDI and physical illness using the International Classification of Primary Care (ICPC-2). Analysis was adjusted by quality of life, age, gender, alcohol and drug misuse, lifetime depression, and socioeconomic status. **Results:** Three groups were identified: 1781 subjects with an inflammatory disease, 1699 with non-inflammatory illnesses, and 1897 healthy subjects. The disorders identified as inflammatory were: cancer, autoimmune diseases, metabolic syndrome, HIV, Hepatitis C and B, atopic, asthma, thyroiditis, and hypertension. The disorders identified as non-inflammatory were: GERD, OSAS, COPD, anemia, functional disorders, and chronic pain disorders. Neuropsychiatric disorders were excluded from the analysis (60 participants). The groups differed in the prevalence of known risk factors for depression, which will be accounted during the analysis. Specific measures of the strength of the association between depression and physical illness will be presented, including subgroup analysis. **Conclusions:** This is the first study that attempts to assess the association between physical illness, depression, and psychosocial risk factors by incorporating inflammation as a risk factor.

## Non-cardiac chest pain and physical activity avoidance

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**Introduction.** Non-cardiac chest pain (NCCP) affects 15 to 30% of the general population and accounts for more than 2.5% of emergency department consultations. NCCP limits the patients' ability to perform their activities of daily living, including physical activity. Compared to the unaffected population, patients with NCCP are reportedly twice as likely to be sedentary (10% vs 23%). These observations could be explained by physical activity

avoidance due to NCCP or its impact on patients' capacity for exercise. We run the present study to determine the prevalence of physical activity avoidance in patients with NCCP; to document the impact of NCCP on their engaging in physical activity; and to describe the psychological characteristics associated with physical activity avoidance. **Methods:** This study involved 445 patients who visited an emergency department for NCCP. Data were collected by a structured clinical interview and validated questionnaires. **Results:** About 33% of the patients reported that they avoided physical activity at least sometimes. NCCP limited the physical activity level in 30% of the sample. The patients who avoided physical activity had higher level of anxiety sensitivity and presented greater anxious and depressive symptoms scores than the patients who did not avoid it. **Conclusions:** NCCP appears to be associated with physical activity avoidance, a factor that may contribute to the persistence of symptoms. Such avoidance may be a marker of psychological distress in patients with NCCP.

### Somatic complaints, depressive symptoms and functional disability: a study in school aged children and adolescents

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**Introduction:** There is evidence that somatic complaints are often associated with psychopathological symptoms and activity limitations in childhood and adolescence. The purpose of the present study was to assess prevalence of somatic complaints as well as to examine the relationship between somatization, functional disability and depressive symptoms. **Methods:** Six-hundred and eighty-eight children and adolescents aged 7 to 14 years (mean age = 11.09; SD = 2.13) were recruited from primary and middle public schools of central Italy. Among youth participants, only 257 subjects reported a Children's Somatization Inventory (CSI) score higher than cut-off ( $\geq 4$  somatic symptoms) and were included in the final sample along with their parents. All students completed measures on somatization (CSI), on functional disability (Functional Disability Inventory; FDI), and on depression (Children's Depression Inventory; CDI). Parents ( $n = 236$ ) fill out the parental forms of CSI (P-CSI) and FDI (P-FDI), as well as the Child Behavior Checklist (CBCL). **Results:** Positive correlations between somatic complaints and functional disability were found both in C-FDI ( $\rho = 0.504$ ;  $p < 0.01$ ) and P-FDI scores ( $\rho = 0.456$ ;  $p < 0.01$ ). Significant correlation between CDI and C-FDI ( $\rho = 0.379$ ;  $p < 0.01$ ) as well as between CDI and C-CSI ( $\rho = 0.319$ ;  $p < 0.01$ ) confirmed our hypothesis of a presence of depressive symptoms in somatizer children. Furthermore, significant correlations between P-CSI, P-FDI, and CBCL were found. **Conclusions:** Findings of our study highlight a strong association between somatic complaints, emotional distress and functional disability in children and adolescents. Results indicate the need to promote physical and psychological wellbeing through health prevention programs, especially in school settings.

### Exploration on clinical diagnosis and treatment features of cardiac neurosis with Yin deficiency syndrome of heart and liver

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Cardiac neurosis belongs to psychosomatic disease, which is characterized by physical symptoms and neurological disorders in clinical. Based on Professor Zhao Zhifu drawing on predecessors' theory and experience, it is useful that psychosomatic disorder is treated with the theory of rigid-gentle differentiation of TCM in the clinical practice, especially in the treatment of Yin deficiency syndrome of heart and liver has a set of clinical features. The course of the disease in patients with more than one year and mainly because of the external social environment influence and inner affective disorder, leads to the pathogenesis of liver. Many negative stress resources are the leading incentives of the disease. So it is necessary to explore in detail psychosocial background and personality endowment of the incidence in collecting clinical data. The principle of treatment is based on soften the liver and nourish Yin and Calm the nerves. The characteristics of medication preferred pair-herb compatibility and attach great importance to nature flavor and channel tropism. It is selected as the medicine of *suan gan hua Yin, xian han zi yin, gan han yang yin* and harmonizing stomach and spleen.

### Mediation effect of social withdrawal on the relation between maltreatment/neglect and victimization in adolescents

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**Introduction:** There are many studies showing that maltreatment/neglect may predict peer victimization in adolescence. However, there is a paucity of studies explaining specific mechanisms between the variables. These variables are known to cause long lasting and severe harms to adolescents, and thus, it is important to investigate them further. The aim of this study was to examine the role of social withdrawal as a mediator in explaining the relationship between maltreatment/neglect and victimization, as well as to investigate the trajectories of the variables as a function of time. **Methods:** The participant sample was taken from Korean Child and Youth Panel Survey (KCYPs) and the data of 2311 adolescents in the period between 8th and 10th grade were analyzed through multivariate latent growth curve (LGM). **Results:** The trajectories of maltreatment/neglect and victimization have shown a decreasing trend with time. Also, all three variables represented significant individual differences in terms of initial value and rate of change. Furthermore, the initial value of social withdrawal was shown to partially mediate the initial effects of maltreatment/neglect on victimization. The initial

value of social withdrawal also partially mediated the effects of maltreatment/neglect on the rate of change in victimization. **Conclusions:** The adolescents who have experienced maltreatment/neglect were more likely to be socially withdrawn and victimized in the beginning. However, the influence of maltreatment/neglect on victimization decreased with time.

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### Issues in benzodiazepine and agonists use: selection, continuous high-dose use and new first line antianxiety

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Benzodiazepines and benzodiazepine receptor agonists are frequently used for the treatment of insomnia and anxiety in the medical setting, and they continue to rank among the most prescribed drugs of any class. Their several therapeutic effects, anxiolytic, hypnotic, anticonvulsant, and muscle relaxant, associated with low toxicity have led to their wide use. High-potency benzodiazepines have also been effective in treating panic disorder and panic attacks with or without agoraphobia and as add-on therapy to selective serotonin reuptake inhibitors in the treatment of obsessive-compulsive disorder, panic disorders and agitation. In contrast, benzodiazepine receptor agonists, zaleplon, zolpidem and eszopiclone have been given in the treatment of insomnia, and share as agonists on GABA A receptor complexes close or coupled to benzodiazepine receptor, a similar mechanism of action to the benzodiazepines. Differences in pharmacological potency, distribution and elimination half-life, and rate of absorption are important considerations when choosing a benzodiazepine or a benzodiazepine receptor agonist. Although as a class benzodiazepines and benzodiazepine receptor agonists are well tolerated, their use presents important clinical issues such as dependency, rebound anxiety/insomnia, memory impairment, and discontinuation syndromes. Clinicians must take these issues into consideration when prescribing and choosing a benzodiazepine or a benzodiazepine receptor agonist. Typically, long distribution and elimination half-lives are preferred for long-term use, while in short-term use the issues are more complex and their use should be guided by the risk of dependency.

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### Treating cardiac neurosis of liver depression and spleen deficiency type by the rigid-gentle syndrome differentiation of TCM: a case report

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**Introduction:** Cardiac neurosis is a typical psychosomatic disease. Clinical symptoms include flustered, chest tightness, chest pain, insomnia, and so on. It takes serious psychological and economic burden, several medical resources for patients and their families. Professor Zhao Zhifu, founder of psychosomatic medicine of Traditional Chinese Medicine (TCM), uses rigid-gentle syndrome differentiation treating psychosomatic disease, and treatment of

cardiac neurosis effect is remarkable. **Case description:** Female, 51 years old, palpitations from more than 1 year, an accountant. About 1 year before, heart palpitations began to appear, and dream more, flustered, chest pain, shortness of breath, insomnia. But, cerebral ultrasound, electroencephalogram, electrocardiogram and coronary CT did not show exceptions. Furthermore, she had job pressure and chronic stress for a long time. Western medicine diagnosis was cardiac neurosis. Symptoms were significantly relieved after taking medicine for 8 weeks. **Comments:** Clinicians who treat cardiac neurosis should pay attention to psychological social factors and physical factors. The rigid-gentle syndrome differentiation completely conforms to the pathogenesis. A correct cognitive and behavior style is also very important and need to be treated as soon as possible.

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### Type-2 diabetes – psychosomatic disease approachable through music therapy

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**Introduction:** Medical literature shows that there are numerous aspects in which stress is linked to diabetes. Type-2 diabetes implies that the abnormalities in glucose levels as a result of stress, are associated, on one side, with hormones who are involved in the metabolism of glucose, and on the other side, with stress-induced changes in eating habits. **Methods:** We investigated the variations of glycaemia after listening to music, on type-2 diabetic patients (40 subjects - experimental group) in comparison to healthy people (40 subjects - control group) and to diabetic patients who have not listened to music (40 subjects - control group). **Results:** There is a statistical difference ( $t = 6.585$ ;  $df = 39$ ;  $p < 0.001$ ) between glucose levels before ( $M = 197.75$ ;  $SD = 61.05$ ) and after listening to music ( $M = 158.93$ ;  $SD = 52.80$ ). The difference between the average level of glucose before listening to music ( $M = 105.68$ ;  $SD = 21.96$ ) and afterwards is of 1.95 among healthy subjects ( $M = 103.73$ ;  $SD = 15.89$ ). There is not a statistically significant difference (1.68%) between average glucose levels measured before ( $M = 177.80$ ;  $SD = 45.78$ ) and after ( $M = 174.80$ ;  $SD = 39.24$ ) for diabetic patients in relaxed conditions but without listening to music. **Conclusions:** The results of our study prove the obvious hypoglycemic role of classic music for type-2 diabetic patients, not taking into consideration the natural variations of glycemia. There is no doubt that besides psychological parameters altered through music, the improvement of somatic markers (glycemia) stands by the idea of using music in therapeutic purposes, for type-2 diabetic patients.

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### Attachment and coping style at parents of children with somatoform complaints

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**Introduction:** About 15% to 25% of all children report recurrent or continuous “medically unexplained symptoms”, such as dizziness,

headaches and fatigue. One of the hypotheses is connected to early attachment dysfunctional experiences to parental figures. This association seems to have an impact on a long run, as in adults, frequent somatic complaints have been reported to be connected to anxious attachment style and behaviors. **Methods:** Sixty participants, aged between 12-18 yrs, sex ratio females/males: 5/3, were admitted in the Obregia Psychiatric Hospital - Bucharest without major psychiatric diseases. The somatoform symptoms were screened through the Giessner Bogen Beschwerden Questionnaire (GBB-24), while the coping and attachment style of their parents was measured through the Cope Questionnaire and the Adult Attachment Style Questionnaire. **Results:** Secure parents used relatively more support-seeking strategies ( $p < 0.05$ ) whereas avoidant parents used more disengagement strategies. Insecure anxious attachment style of parents was significantly associated with more somatic complaints of their children ( $p < 0.05$ ). A passive coping style of parents correlated with higher scores of their children at the GBB ( $p < 0.05$ ). **Conclusions:** These results indicate a possible association between the less secure attachment style of parents and their children's attachment and vulnerability to somatoform disorders. This is supported by previous literature data which show that an abused or neglected child may be particularly prone to develop an image of the self as unworthy of support from others and an image of caregivers as unreliable and even dangerous – images that form the basis of fearful attachment style.

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### Temporomandibular disorder pain treated with behavioral therapy

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**Introduction:** Temporomandibular disorder (TMD) pain has a multifactorial aetiology. Sleep bruxism, daytime clenching, together with psychological stress, seems to contribute to it. Only a minority of studies have tested the effectiveness of psychological interventions in TMD patients. **Case description:** F. is a 39-year-old woman with no history of physical or psychiatric disorders. Six months after the birth of her son, she went to the dentist because of jaw muscle tenderness, jaw opening limitations, morning headache, tooth hypersensitivity. The dentist diagnosed TMD and encouraged F. to stop clenching and reduce the daily stress. After 2 weeks symptoms were unchanged and F. asked for a psychological evaluation. At assessment, no diagnosis emerged via the MINI International Neuropsychiatric Interview while allostatic overload was diagnosed according to the clinimetric approach. The patient was informed about the negative effects of distress on her neuromuscular habit patterns, of which clenching was a consequence, and invited to take note of the daily level of distress. At second session, F. referred to be always distressed since she has to balance her job with family duties and referred to have hired a domestic worker to reduce it. The next step was to teach F. to observe her neuromuscular patterns at specific times of the day and, if this was the case, switch from muscle tension to relaxation by dynamic muscle contraction. One month later, F. was free of symptoms and maintained this condition at 2 years follow-up. **Comment:** Therapy for TMD should be behavioural rather than mechanical.

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### Well-Being Therapy: next-step strategy in panic disorder patients who failed to complete CBT

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**Introduction:** Cognitive Behavioural Therapy (CBT) is first line choice to treat panic disorder. Treatment response is 65%. Non-responders are usually those who did not complete the intervention. Next-step strategies in the treatment of patients who failed to complete CBT should be found. **Case description:** L. is a 64-year-old woman who had two lifetime episodes of panic disorder with agoraphobia comorbid with major depression. The first episode was treated with paroxetine and the second with levosulpiride, in both episodes depressive symptoms and panic attacks disappeared but mild agoraphobia remained. L. asked for the visit because of panic attacks, after the assessment the following diagnoses were formulated: panic disorder with agoraphobia (according to DSM), Health Anxiety and Thanatophobia (according to DCPR). Clonazepam and CBT were prescribed. During the first 3 CBT sessions, a behavioral therapy was administered to reduce avoidance. Thereafter, cognitive restructuring was proposed to reduce panic, Health Anxiety, and Thanatophobia. However, after 2 sessions of cognitive restructuring, L. worsened: she was so engaged in identifying negative automatic thoughts to be always thinking to anxiety and having it. Thus, Well-Being Therapy (WBT) was proposed to increase her general level of well-being. After 6 WBT sessions, L. was improved and became able to run 3 sessions of cognitive restructuring after which she was completely free of symptoms. She maintained this condition at one year follow-up. **Comment:** WBT should be considered as next-step strategy in the treatment of patients who failed to complete the CBT intervention.

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### Withdrawal symptoms as a consequence of NaSSA discontinuation

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**Introduction:** Selective serotonin reuptake inhibitors and serotonin-noradrenaline reuptake inhibitors are widely used in clinical practice although they can induce withdrawal symptoms similarly to other CNS drugs. The present case shows that also the discontinuation of noradrenergic and specific serotonergic antidepressant (NaSSA) might induce withdrawal symptoms. **Case description:** S. is a 32-year-old woman. At 30 years of age, she presented depressed mood, panic attacks, avoidance. She was first treated with psychodynamic therapy and later with drugs (i.e., alprazolam, aloperidol, quetiapine, escitalopram, citalopram, fluvoxamine, venlafaxine, mirtazapine, valproic acid) with poor results. At first visit she was under valproic acid (1000 mg/die), sertraline (75 mg/die), mirtazapine, (30 mg/die), lorazepam (1 mg/die) from a 6-month period. Via the MINI International Neuropsychiatric Interview the diagnoses of panic disorder with agoraphobia and major depressive episode were formulated. The

patient did not have a history of bipolar disorder or recurrent depression. She complained about intense anxiety, nightmares, low mood. The psychiatrist discontinued valproic acid and lorazepam, tapered slowly and discontinued mirtazapine at the rate of 7.5 mg every other week, prescribed clonazepam (2 mg/die), and referred her to CBT. Despite slow tapering, once mirtazapine was discontinued, the patient experienced post-withdrawal disorders consisting of nocturnal panic attacks, agitation, mood swings, nightmares. The introduction of clonazepam faded away mood swings and panic attacks. After three months, S. still had nightmares, thus 2 CBT sessions were proposed to let her identify daytime thoughts on threatening situations and interrupt them. Nightmares slowly disappeared. **Comment:** NaSSA can induce withdrawal symptoms at discontinuation.

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### The contribution of general psychological acceptance and acceptance of pain to explain adjustment in females with endometriosis

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**Introduction:** A number of studies demonstrate that “acceptance of pain” is a significant predictor of different measures of adjustment in patients with chronic pain. One previous research suggests that “general acceptance” – acceptance of undesirable private experiences outside of the pain itself (e.g., negative thoughts and emotions) – may contribute to explain a significant percentage of the variation in adjustment beyond “acceptance of pain”. The objective of this study was to further examine the incremental validity of “general acceptance”, beyond “acceptance of pain”, to explain adjustment in females with endometriosis. **Methods:** Participants were 125 females with endometriosis and illness-related pain (M = 33.8 years; SD = 5.8) recruited through the Endometriosis Association of Italy. Participants completed measures of general acceptance, acceptance of pain, distress, psychological well-being, and daily functioning. **Results:** Hierarchical Multiple Regression analyses showed that “acceptance of pain” explained 5% to 19% of the variation across all measures of adjustment, over and above that accounted for background variables, and these increases were statistically significant for all criteria. “General acceptance” contributed significantly to increase the percentage of explained variance across all criteria (from 2% to 42%), over and above the variance accounted for by background variables and “acceptance of pain”. **Conclusions:** These findings support the unique role of “general acceptance”, beyond “acceptance of pain”, in the prediction of suffering and disability in females with endometriosis, and raise the question whether a broader approach to acceptance may increase the effectiveness of acceptance-based interventions in chronic pain settings.

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### Psychosis in patients with systemic lupus erythematosus

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**Introduction:** Systemic Lupus Erythematosus (SLE) is a chronic relapsing-remitting autoimmune disorder affecting multiple organ systems. Neuropsychiatric SLE (NPSLE) may affect patients physically, mentally and have an important impact on their quality of life. NPSLE may be highly prevalent, with studies reporting rates of 14% - 75%. Common neuropsychiatric manifestations in SLE are cognitive deficit, lupus headache, psychoses, seizures and cerebrovascular events. Authors aim to clarify the characteristics of psychosis in patients with SLE. **Methods:** Literature review using the PubMed/MEDLINE database with the keywords “systemic lupus erythematosus” and “psychotic disorders”. **Results:** The pattern of psychotic spectrum disorders in SLE is not systemically studied, but the most common form appears to be acute psychosis. These patients may have acute psychoses as a primary manifestation of central nervous system involvement or corticosteroid induced psychosis. Psychosis as a manifestation of NPSLE usually occurs early in the course of the disease and is associated with other clinical and biological features of SLE. Long-term outcome appears to be favorable after intensive immunosuppressive treatment. Corticosteroid-induced psychiatric disorders tend to occur in the first 6 weeks of treatment and are dose-dependent (uncommon at doses of < 40mg/d but increasingly more common at doses of > 80mg/d). **Conclusions:** Psychosis as a manifestation of NPSLE may primarily originate from the disease itself or the complications of the disease or be secondary to the therapy. More studies are needed to improve our knowledge and establish guidelines for the treatment of this complication of SLE.

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### The role of demoralization in the spectrum of psychopathology

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Various descriptions of demoralization have been offered and various scales have been proposed for its assessment. Recent research supports the view that demoralization involves two components, distress and subjective incompetence. As the stressful situation increases in severity or duration, subjective incompetence may progress to helplessness, hopelessness, and suicidality. This lecture will describe the clinical progression of demoralization and explain the differences between demoralization and passing or transient distress, non-specific distress and sub-threshold depression or anxiety, as well as the differences between demoralization and mental disorders such as major depressive disorder, dysthymic disorder, acute stress disorder, posttraumatic stress disorder, and adjustment disorder. Demoralization can occur by itself, and can be a risk factor for the manifestation of psychopathology, the prodromal phase of a mental disorder, or a trigger for exacerbation or recurrence of psychiatric distress symptoms. Recent research on the occurrence of demoralization in various clinical settings, such as oncology, cardiology, gastroenterology and endocrinology will be reviewed and discussed.

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## A study of subjective incompetence in patients with breast cancer

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Demoralization has been described as the state of mind of a person deprived of spirit or courage, disheartened, bewildered, and thrown into disorder or confusion, and recognized as the common denominator of complaints of many people who seek psychotherapy, whatever their diagnostic label. Demoralization has been interpreted as involving two components, subjective incompetence and distress as expressed by symptoms such as depression, anxiety or anger. Subjective incompetence has been identified as the clinical hallmark of demoralization. Ambulatory patients with breast cancer were studied using a number of scales to measure demoralization, subjective incompetence, depression, perceived social support, perceived stress, and resilience. Regression analyses were used to control for demographics and a number of clinical variables. Subjective incompetence and depression were found to be more likely to occur together when perceived social supports were weak or perceived stress was high, the converse being true when perceived social supports were strong or perceived stress was low. Resilience was found to be inversely correlated with subjective incompetence.

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## Patient-reported outcomes in endocrinology

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Self-administered questionnaires that allow detection of subjects' perspectives on a wide range of health domains, such as symptom severity, functional capacity, psychological well-being and quality of life, have been introduced in the evaluation of patients with endocrine diseases. According to the guidance issued by the US Food and Drug Administration, these instruments can be considered as "patient-reported outcome measures" (PROs). PROs may refer to the general health status (e.g., SQ, SF-36, PSI) or to distinct clinical manifestations of each condition. A number of clinimetric instruments have been designed and validated for evaluating self-perceived health status in patients with specific endocrine conditions. In the setting of endocrine disease, most of the available instruments refer to diabetes mellitus, while only few indexes are specifically tailored for the assessment of the impact of particular endocrine disorders. These include AcroQoL for acromegaly,

ThyDQoL for hypothyroidism, AddiQoL for Addison's disease, and HDQoL for growth hormone deficiency. Administration of PROs may be of use in assessing patients' illness behavior, whose health-related quality of life does not always go together with normalization of hormonal parameters. Their use is intended to support planning of therapeutic strategies according to patients' needs and priorities, thus promoting treatment adherence. PROs provide an important contribution for the development and licensing of new medications, with special reference to patients' global functioning. PROs data may supplement biomedical outcomes by providing incremental information both in clinical research and medical practice, with important diagnostic, therapeutic, and prognostic implications.

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## A clinical study of eating disorders in childhood and adolescence from the viewpoints of mood and developmental disorders

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**Introduction:** Eating disorders in childhood and adolescence often coexist with mood disorders and autism spectrum disorder (ASD). Eating disorders should be re-examined from the viewpoints of these disorders. **Methods:** The present study investigated 16 patients who were diagnosed with eating disorders that developed when they were 14 years old or younger. The patients' diagnoses, comorbidities, clinical characteristics, treatment, and outcomes were examined. Patients were divided into a childhood-onset group and an adolescence-onset group. **Results:** In childhood-onset group, all patients received pediatric inpatient treatment. These diagnoses did not change during the course of treatment. ASD was diagnosed in 5 patients. Other comorbidities comprised major depressive disorder, generalized anxiety disorder, and selective mutism. Effective treatment was achieved with antidepressant drugs in 2 patients and atypical antipsychotic drugs in 1 patient. Remission and improvement were achieved in 4 and 1 patient, while 1 patient showed no change. In adolescence-onset group, all patients were initially diagnosed with restricting-type anorexia nervosa. Final diagnoses comprised restricting-type (5), binge-eating/purging-type (2), and non-purging bulimia nervosa (3). Five patients underwent inpatient treatment. ASD was diagnosed in 3 patients, and major depressive disorder in 5 patients. Effective treatment was achieved with antidepressant drugs in all 5 of these patients. Remission and improvement were achieved in 5 and 2 patients, while 2 patients showed no change. **Conclusions:** The appropriate diagnosis of mood and developmental disorders in those who also have eating disorders enables a better understanding of each case, more specific therapeutic strategies, and more comprehensive approaches to treatment.

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## Interactive effects of chronic physical health and mental health conditions on disability: a population-based study

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**Introduction:** Independent associations exist between chronic physical health conditions and disability as well as with mental health conditions and disability in the general population. While chronic physical conditions and mental health conditions are uniquely disabling, individuals with comorbid physical and mental health conditions may be particularly vulnerable to experiencing disability. Yet, little research has examined this possibility. The present study has the aim to examine the interactions between chronic physical conditions and mental health conditions on general functional disability in a community sample. **Methods:** Participants were from the Epidemiological Catchment Area of Montreal South-West Study (n = 2202). Mental health conditions included 12-month major depressive disorder and 12-month generalized anxiety disorder, assessed with the World Mental Health—Composite International Diagnostic Interview. Physician-diagnosed chronic physical conditions were assessed via self-report. Disability was assessed with the World Health Organization Disability Assessment Schedule 2.0. **Results:** About 12% of the sample reported moderate to severe disability. Individuals with either mental health conditions or physical health conditions were approximately 2-3 times more likely than those without either condition to have moderate-to-severe disability; interestingly, those with comorbid physical and mental health conditions were almost 12 times more likely to report moderate-to-severe disability (OR = 11.96; 95% CI 5.86 - 24.42; p < 0.001). The synergy index for a biological interaction was SI = 2.99, 95% CI 1.17 - 7.69. **Conclusions:** A synergistic interaction was found between the presence of chronic physical health and mental health conditions, suggesting that having both types of conditions considerably increases the likelihood of disability.

## Intolerance of uncertainty predicts decreases in heart rate variability during worry-inducing tasks

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**Introduction:** Heart Rate Variability (HRV) refers to the temporal variations between consecutive heart beats. Low HRV and greater reductions in HRV during stress are autonomic indicators of emotion-regulation difficulties and of poor cardiovascular health. Low HRV is associated with elevated worry, though there is considerable between-person variability in HRV reactivity to worry. The goal of the present study was to examine the extent to which intolerance of uncertainty, a cognitive correlate of worry, predicts decreased HRV during worry-inducing tasks. **Methods:** Seventy six undergraduate students completed the Intolerance of Uncertainty Scale (IUS) and had their HRV monitored during a

resting period, a free worry period, and a worry Catastrophizing Interview (CI). The CI is a structured task that assesses feared worry consequences using a downward arrow technique. HRV data were log-transformed to ensure a normal distribution. Multilevel modeling was used to examine whether IUS scores predicted patterns of change in HRV during the tasks, controlling for age and sex. **Results:** There was a significant reduction in HRV from the resting period to the worry-inducing tasks ( $\beta = -0.07(0.02)$ , 95% CI -0.10 - -0.03; p = 0.001). A significant interaction was found between IUS scores and change over time in HRV ( $\beta = -0.002(0.001)$ ; 95% CI -0.004 - -0.001; p < 0.05), such that individuals with higher IUS scores had greater decreases in HRV than individuals with lower IUS scores. **Conclusions:** Individual differences in the extent to which people tolerate uncertainty predict autonomic responses during worry, which may be a potential pathway linking worry with cardiovascular risk.

## Negative affectivity and procoagulant markers in depressed patients with coronary artery disease – baseline findings from the SPIRR-CAD trial

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**Introduction:** Negative affectivity influences cardiovascular risk factors and seems to be an independent risk factor for incidence and mortality of CAD. It has been argued that depression stimulates autonomic imbalance or higher coagulation and influences different pathways of coronary sclerosis progression. In the present study, we wanted to examine associations of levels of anxiety and depression and procoagulant markers in the peripheral blood. **Methods:** In this multi-center psychotherapy trial, 450 men (78.94%) and 120 women (age 18-75 years) with HADS depression scores > 7 and any manifestation of CAD, were randomized into the intervention or control group. In this sub study we analysed 143 CAD patients (age < 61 y, 32 w, 111 m) at baseline focused on fibrinogen and D-dimer as well as other clotting factors and their correlations with anxiety and depression (HADS, PHQ, HAMD-21). **Results:** We found a highly significant correlation of fibrinogen with HADS anxiety ( $r = 0.27$ ; p < 0.001) but no statistically significant correlations of fibrinogen and D-Dimer with depression. In a regression analysis prediction of clotting factors was influenced by heart failure severity (NYHA), age and gender. **Conclusions:** As in former studies, we could show correlations of negative affectivity with clotting factors in CAD patients, which were influenced also by cardiac factors, age and gender. In a second step, we will examine if the reduction of anxiety and depression in a psychosocial intervention trial had positive effects on coagulation, as a possible mediator for CAD progression.

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## Non-pharmacological therapy of functional gastrointestinal disorders

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**Introduction:** The functional gastrointestinal disorders (FGID) represent a burden for both patient and physician. This category of conditions is susceptible to answer well not only to pharmacotherapy but also to psychotherapy and sometimes to alternative therapies. **Methods:** We present data obtained from a literature search on the use of psychotherapy in FGID and mainly Irritable Bowel Syndrome (IBS). We also present own data on counselling, expressive writing, psychotherapy and education in FGID. Beside this, we look on the evidence available on the use of probiotics in IBS and offer personal data. **Results:** Different trials including our experience recommend diverse psychotherapeutic interventions in patients with FGID and mainly in IBS. The role of probiotics is also increasing, as more data are available. **Conclusions:** Psychotherapy and administration of probiotics are useful in FGID and IBS. The efficiency of these interventions are however sometimes marginal, needing more insight and newer data.

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## Hypnosis and trainer appliance therapy replaces patient's DIY denture made from Ladies Acrylic Nails

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**Introduction:** This clinical case study demonstrates the use of hypnosis to reduce the sensitivity of the patient to this invasion of their personal space and their phobia in relation to dental treatment by a combination of prosthodontics and hypnotherapy techniques. **Case description:** Following the loss of a strategic tooth, the patient's removable partial denture was no longer retentive and impressions were required for a new appliance. To her great distress she found herself unable to tolerate impressions. After several unsuccessful attempts her dentist told her "not to come back", failing to offer comfort or onward referral. Feeling cast off by the dental profession and facing the embarrassing consequences of no longer having any upper teeth, this resourceful lady made an upper "dental appliance" out of modified ladies acrylic nails and pink denture repair acrylic. For the next 12 years she wore this arrangement 24/7, but it was far from ideal and had a deleterious effect on her wellbeing, making eating and all aspects of social interaction difficult. Via the internet, she was able to find a dentist to assist her in building up tolerance of a prosthesis constructed by a modified pour copy technique. A programmed schedule of exposure led to developing an ability to tolerate a normal design of complete upper denture. **Comment:** Hypnotherapy skills and dental anxiety management in conjunction with good prosthodontic practice increase the chances of success in overcoming a hypersensitive gag reflex.

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## Effects of pre-transplant depression and anxiety symptoms on mortality post-heart transplant: a retrospective cohort study

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**Introduction:** According to the 2012 United Network for Organ Sharing's report, one-year survival after heart transplant in the United States is 88%. This retrospective cohort study was designed to evaluate the effects of depression and anxiety on all-cause mortality after heart transplant. **Methods:** One-hundred thirty patients with heart transplants enrolled at Kaiser Permanente, a large, integrated health care delivery system in Northern California, between June 2005 and December 2013, were included in a retrospective electronic chart review. Baseline variables included depression, anxiety, and cardiac risk factors in the year before heart transplant. Depression and anxiety were determined by diagnosis, psychotropic medication, and/or self-report instruments when available. Statistical tests included chi-square, t-tests, and a Kaplan-Meier survival analysis. **Results:** In unadjusted analyses, overall survival at one-year post-heart transplant was 93.1%. The one-year survival for 50 patients with no depression and no anxiety was 100%, for 13 patients with anxiety only was 92.3% ( $p = 0.05$ ), for 22 patients with depression only was 90.9% ( $p < 0.05$ ), and for 45 patients with both depression and anxiety was 86.7% ( $p < 0.05$ ). The patients with both depression and anxiety before heart transplant had worse outcomes after transplantation. **Conclusions:** These findings suggest that depression and anxiety symptoms before heart transplant are associated with survival in the first year after heart transplant. A comprehensive evaluation and treatment of these symptoms before heart transplant are recommended.

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## Rational use of antidepressant drugs

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A rational use of drugs depends on the balance of potential benefits (emerging primarily from randomized controlled trials) and adverse effects (with observational studies as the main source of information) applied to the individual patient. The aim of this update was to suggest a rational use of antidepressant drugs (AD) based on such awareness that departs from current popular trends. Even though AD are effective in treating acute depressive episodes, they are less efficacious in recurrent depression and in preventing relapse. In a substantial percentage of cases, AD have been described inducing adverse events such as withdrawal symptoms upon discontinuation, onset of tolerance, resistance phenomena, and

switch and cycle acceleration. Unfavorable long-term outcomes and paradoxical effects (depression inducing and symptomatic worsening) have also been reported. The neglect of these phenomena in treatment selection leads to an irrational and often inappropriate use of AD, that is likely to yield iatrogenic comorbidity and chronicity. A rational use of antidepressant drugs that incorporates all potential benefits and harms is suggested. It consists in targeting their application only to the most severe and persistent cases of depression, avoiding their utilization in anxiety disorders (unless a major depressive disorder is present), and limiting their use to the shortest possible time.

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## Iatrogenic comorbidity in mental health

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A specific treatment may cause or precipitate lasting adverse effects on the course of illness. Such vulnerabilities, that are subsumed under the definition of “iatrogenic comorbidity”, may manifest themselves during treatment administration and/or after its discontinuation. The changes are persistent and not limited to a short phase, such as in the case of withdrawal reactions. Iatrogenic comorbidity plays an important and yet neglected role in mental health. There are several examples in psychopharmacology: bipolar course induced by antidepressant drugs in depressed patients who presented with allegedly unipolar features; persistent post-withdrawal disorders after long term use of SSRI and/or SNRI; tardive dyskinesia after long term use of antipsychotics. Iatrogenic comorbidity may occur also as a result of failed psychotherapies. It is thus of crucial importance to incorporate treatment history in mental health assessment. The concept of “iatrogenic comorbidity” may demarcate major prognostic and therapeutic differences among patients who otherwise seem to be deceptively similar since they share the same psychiatric diagnosis.

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## Emotional and instrumental marital support, pain, fatigue, and resistance to psychological suffering in women with systemic lupus erythematosus

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**Introduction:** Lupus Erythematosus Systemic (SLE) is a chronic and disabling autoimmune disease predominantly affecting women. Physical and psychological burden clinically expressed by tiredness, fatigue, pain, anxiety, and depressive symptoms represent a crosstalk between diverse pathophysiological mechanisms. Although SLE challenges patient's psychosocial balance, occasionally women with severe manifestations remain free of psychiatric disorders and reveal a remarkable capacity to deal with

the negative impact of the disease. Our aim is to study the role of marital satisfaction and doctor-patient relationship as resilience factors in a population of female SLE patients. **Methods:** Satisfaction with intimate relationship, fatigue, pain, anxiety, and depression was assessed in 81 female SLE patients through standardized instruments. Women's perspective of doctor's ability to communicate and support them during regular visits was also evaluated. Clinical and laboratory data were obtained from the clinical records. **Results:** Pain, fatigue, and depression were negatively correlated with marital satisfaction and the appraisal of partner as supportive ( $r = 0.435$ ;  $p < 0.05$ ;  $r = 0.467$ ;  $p < 0.001$ ;  $r = 0.387$   $p < 0.05$ , respectively). Longer relationships were less satisfactory. No association was found between the quality of doctor-patient communication and psychological, clinical, and laboratorial SLE assessment. **Conclusions:** The perception of the partner as trustful and caring contributes to better psychological health in women with SLE. Moreover, marital satisfaction also seems to be associated with lower levels of pain and fatigue. Although these effects need further clarification, interventions aiming to enhance the supportive quality of marital relationship appear encouraging.

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## Oxytocin and depression in the perinatal period – a systematic review

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**Introduction:** Postpartum depression (PPD) is the most common postnatal psychiatric disorder and represents a considerable problem to the health and well-being of women and their families. Several pathogenic mechanisms have been identified in PPD, and recently oxytocin, known to be involved in childbirth and lactation has drawn attention as a possible diagnostic and therapeutic target in this disorder. The aim of this review was to assess and summarize the current literature on the relationship between oxytocin and depression in the perinatal period. **Methods:** We conducted a literature search on four electronic databases (Pubmed, PsycINFO, Web of Science and Science Direct) by applying the following search terms: oxytocin AND (postpartum OR postnatal OR perinatal OR peripartum) AND (depression OR depressive). **Results:** Five studies were included, with a total of 612 pregnant women that were recruited and completed the follow-up. Depressive symptoms were evaluated using self-report scales, and in two studies the diagnosis of major depression was additionally confirmed using semi-structured interviews. Peripheral OT levels and depression were assessed during pregnancy and/or in the first weeks after delivery. Higher OT levels were associated with lower depressive symptoms, even if this association lacked statistical significance in two studies. **Conclusions:** Although some studies are beginning to shed light upon the complex nature of OT effect in depression, its role as a diagnostic and therapeutic tool in PPD is still unclear. Future research is needed to clarify the neuroendocrinological and psychosocial particularities of mothers with PPD and define a specific profile associated with OT dysfunction.

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## Psychometric evaluation of psychopathologic disorders in patients with atypical facial pain

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**Introduction:** Maxillofacial surgeons and dentists often (up to 10%) deal with the phenomenon of atypical facial pain (AFP) – painful condition of maxillofacial area without clear organic pathology. Psychopathological studies of this disorder are almost lacking. The purpose of this study was to reveal symptoms of psychopathological disorders in patients with AFP. **Methods:** The study used psychometric method. The validated scales used were HADS, STAI, Hypochondria WI, BPI, VAS, PCS. We included all patients with AFP examined in the clinic from October 2014 to February 2015, who gave Inform Consent. Patients with severe somatic disorders, psychoses, substance abuse were excluded. **Results:** Study sample consists of 48 patients: 42 women (87.5%) and 6 men (12.5%), 18-70 years old (mean age 39.6 ± 17.4 years). The severity of pain on average was moderate: 5.5 ± 2.05 (VAS) and 5.5 ± 1.5 (BPI max). Symptoms of anxiety and depression were detected in 79.2% and 64.6% of patients, respectively. High rates of reactive and personal anxiety were registered in 72.9% and 81.3%, respectively. Symptoms of hypochondria were found in 77% of patients. The mean pain catastrophizing score was 39.7 ± 7.1. **Conclusions:** Our data suggest that patients with AFP often have symptoms of anxiety, depression, and hypochondria. Further clinical psychopathological investigation with the assistance of psychiatrist are needed in order to determine nosological diagnosis and to elaborate an approach for psychopharmacotherapy and psychotherapy.

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## Daily activity level and health related quality of life in nine patients with severe chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME)

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**Introduction:** chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) is a severe, systemic, acquired illness characterized by a profound, debilitating sensation of fatigue, not ameliorated by rest, which results in a substantial decrease in the amount and quality of occupational, social and recreational activities disability and loss of work. Severe ME/CFS patients are homebound and often bedridden. This study aims to describe a few patients' daily activity level in relation to their health-related quality of life. **Methods:** Nine patients with severe ME/CFS were assessed with SF-36, EQ-5D, HADS and fulfilled a daily activity log for a week. **Results:** The patients (mean age: 32 years) were characterized by an extremely passive activity pattern. They had been ill between 2 and 12 years. Their overall health-related quality of life was extremely poor with a mean of 12.6/100 on EQ5D-VAS and -0.07 on EQ-5D. SF-36 outcome average were very low in all areas except emotional role and mental health. Anxiety scores were in the average range

for all patients. Five patients were independent in their self-care activities, but all needed assistance in daily activities such as food preparation. Seven patients did not perform any activity at all other than self-care and some leisure activity (i.e., watching TV). **Conclusions:** Patients with severe CFS/ME symptoms show an extremely poor quality of life and spend most of their time resting. Even though being extremely limited in the daily life, the patients did not have complaints regarding their mental health.

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## Smoking and post-infectious etiology in prevalence of irritable bowel syndrome

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**Introduction:** Irritable Bowel Syndrome (IBS) is a representative stress-related disorder. Smoking is one of maladaptive coping behaviors to psychosocial stress and smoking as risk factors for IBS is controversial. By contrast, acute gastroenteritis is an independent predictor for IBS. We hypothesized that smoking and acute gastroenteritis synergistically increase prevalence of IBS. **Methods:** Subjects were 1081 individuals in the general population. They were randomly sampled via mail all over Japan. Surveillance was performed with Rome III diagnostic questionnaire and demographic data including smoking status, post-infectious episode on acute gastroenteritis, and sleep quality. **Results:** Prevalence of IBS in the general population in Japan was 15.4%. There was no direct association between smoking status (non-smoker, past smoker, or present smoker) and IBS. However, prevalence of IBS was significantly associated with smoking status and duration after acute gastroenteritis ( $p < 0.001$ ). Especially high prevalence of IBS is evident within a half year of post-infectious episode. Multiple regression analysis showed that post-infectious state, smoking state, smoking free years, cigarette per day, and poor sleep were significantly independent variables for IBS ( $R = 0.283$ ;  $p < 0.001$ ). **Conclusions:** These findings support the hypothesis that smoking and acute gastroenteritis synergistically increase prevalence of IBS. In smokers, smoking cessation just after the infectious episode of acute gastroenteritis is likely to be critical to suppress the onset of IBS. Further studies on the mechanism how smoking synergistically with acute gastroenteritis increase the prevalence of IBS are warranted.

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## A survey on the problems Japanese occupational therapists perceive when diagnosing dementia

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**Introduction:** In Japan, the aging population is growing rapidly. Healthcare providers working in eldercare facilities currently face difficulties sharing client information. In this study, we surveyed

occupational therapists working in eldercare facilities to identify problems related to information sharing regarding patients with dementia diagnoses and to determine how the occupational therapists felt about these problems. **Methods:** A questionnaire was sent to 300 occupational therapists working within eldercare facilities in Japan. Names were sampled randomly from an applicable association list. Questionnaires were returned anonymously by mail. **Results:** There was a response rate of 36%. Only about 20% reported that most of their medical records contained the correct diagnosis for the patient's condition, while 57% stated the diagnosis was correct in only half of their medical records; 21% responded by saying the patient's condition was diagnosed inaccurately in almost all of the medical records. Additionally, only 12% of the respondents were familiar with late paraphrenia. In contrast, 40% of the therapists had examined a patient with a condition consistent with late paraphrenia. In their comments, occupational therapists who worked in facilities without doctors said coordinating with patients' doctors was difficult. They also felt uncomfortable questioning the doctors about diagnoses the doctors had already made. **Conclusions:** It was clear that the diagnosis rate of what was clearly dementia was not accurate within the eldercare facilities that were surveyed. Further, occupational therapists felt anxiety over these miscommunications but they were afraid to provide the patient's information and ask the doctor to diagnose the patient again.

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### The relationship between yoga involvement, mindfulness, and psychological well-being

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**Introduction:** The interest in complementary and alternative methods such as yoga for psychosomatic medicine has grown in recent years, as the positive effects for mental and physical health have become clearly established. As yoga practice is conceptualized as a way of living more than a mere relaxation technique, the positive connection of yoga with health might depend on how deeply an individual is involved with yoga. The aim of this study was therefore to examine how different levels of yoga involvement are related to different parameters of mental health and illness. **Methods:** A total of 455 participants (410 females) were investigated. A group of 362 yoga practitioners (327 females) rated their degree of yoga involvement on the Yoga-Immersion scale. A control group comprised 93 gymnastics practitioners (83 females). Furthermore, all participants completed the Multidimensional Inventory for Religious/Spiritual Well-Being, the Freiburger Mindfulness Inventory, and the Brief Symptom Inventory for psychiatric symptoms. **Results:** Highly involved yoga practitioners exhibited a significantly increased amount of mindfulness and religious/spiritual well-being (both  $p < 0.01$ ) and lower psychiatric symptoms such as depression ( $p < 0.01$ ) compared to those who were only marginally/moderately yoga-involved or were gymnastics practitioners. **Conclusions:** In accordance with the literature, yoga practice might have its biggest impact on mental health when it is part of a practitioner's world-view. Further

research focusing on the impact of yoga involvement in clinical groups is encouraged.

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### Transcultural adaptation of the Dental Environment Stress Questionnaire – DES

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**Introduction:** During the course of under-graduation, dental students experience high levels of stress for the acquisition of cognitive, clinical, and interpersonal skills. Thus, the identification of stress levels is an important strategy to minimize their damage. We conducted this work in order to perform the cross-cultural adaptation of the Dental Environment Stress Questionnaire (DES) so that it can be used in Portuguese-speaking countries. **Methods:** The face validity was analyzed through the translated version in English to Portuguese followed by back translation. A multidisciplinary team of knowledge area did review idiomatic, semantic, cultural, and conceptual instrument and the instrument was pre- tested for the misunderstanding index of items. Content validity was evaluated by 20 judges who reviewed the essentiality of each item of the instrument. Sixty students of Dentistry answered the questionnaire on two occasions with an interval of one week to evaluate reproducibility of the items. Reproducibility was estimated using kappa statistics with linear weighting (kp). **Results:** All items showed misunderstanding index  $\leq 20\%$ . Of the 38 items, 17 were not classified as essential by the judges. Reproducibility was adequate for all items (kp = 0.96 - 1.00). **Conclusions:** The cross-cultural adaptation process resulted in an instrument easy to understand with idiomatic and cultural equivalence suitable for Portuguese and with adequate reproducibility.

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### Comorbidity of bipolar disorder and heart disease among adults in Hawaii

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As many as one in two patients with cardiovascular disease suffer from mental illness and mortality in patients with bipolar disorder is greater compared to the general population. The diverse population of Hawaii provides a unique opportunity to investigate the relationship between heart disease and mental illness such as bipolar disorder in various ethnic groups and develop interventions to address the increasing rates of cardiovascular disease and mental illness in the US and the pacific islands. We conducted a quantitative, secondary data analysis using retrospective emergency room data with cardiac disease from January 1, 2000 December 31, 2010. These include medical records for adults 18 years of age and above with a diagnosis of specific types of heart disease (i.e., heart failure, cardiac arrest, complications of heart, cardiomyopathy, coronary atherosclerosis, acute myocardial infarction, and other ischemic heart diseases) and bipolar disorder. This allowed us to: compare the relationship of heart disease with bipolar disorder in

various age groups, compare the comorbidity of heart disease-bipolar disorder with depression and anxiety, and identify possible effects of ethnicity in patients with bipolar disorder and heart disease. Adults aged 26-34 years had the highest rate of bipolar disorder and adults aged 55-64 years had the highest rate of cardiac arrest, complications for heart disease, coronary atherosclerosis, acute MI, and other ischemic issues. As more evidence links these two conditions together, one can posit that some patients diagnosed with bipolar disorder in early adulthood may develop factors that can cause heart disease at a later age. Among adults below 65 years of age, the odds ratio of having cardiac arrest/ heart complications/ coronary atherosclerosis AND bipolar disorder is higher than in those with depression or anxiety. Among adults above 65 years of age with bipolar disorder, the odds ratio of having heart failure was higher compared to those with depression/anxiety. The nature of bipolar disorder as a disease may be unique from other mental illness (i.e., unipolar depression or anxiety), which may shed light to these observations. Lastly, regardless of the type of heart disease and age group, persons of European descent in Hawaii were more likely to have bipolar disorder. Given the ethnic diversity in Hawaii, one may wonder if psychiatric illness such as bipolar disorder is under/mis-diagnosed. Stigma on mental health in non-European population, somatization of psychiatric symptoms (i.e., those presenting as cardiac symptoms), and barriers on access to health care are among many issues that may contribute to diagnosis and treatment of psychiatric illness and comorbid medical conditions. It remains important to understand cultural factors that may influence attitudes towards mental illness in all ethnic groups in Hawaii.

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### Philosophical framework of Integrative Enhancements of perspective –taking and Virtual (ex-) bodiment in schizophrenia by psychosomatic CAST

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**Introduction:** Pharmacological efficacy in schizophrenia has limitations (one of four patients fail to respond to treatment with antipsychotics). Psychosomatic wellbeing is enhanced in Integrative Avatar schizophrenia Therapies by CAST (Computer Assisted Schizophrenia Therapy) that also develops a philosophical psychosomatic framework. **Methods:** Externalization of a “socialized” schizophrenic self by the exeroception of the patient in contact with his external avatar is the proposed method of this research: an alteration of embodied techniques of self-other. Already the Rubber Hand Illusion showed the reintegration of external artifacts as part of the body schema, bringing new insights into plasticity of the body image and plasticity of embodiment of self by strong influence of exeroception followed in Avatar enhancement therapy. **Results:** Schizophrenia is best analyzed as alienation of its own body. Disturbances of embodiment may be classified in two fundamental categories: 1. primarily affecting the subject body, prereflective embodied sense of self; 2. being related to the body-image, the explicit body awareness. CAST introduces

modifications in the plasticity of both notions of the self in embodiment and self-other relation. Selves can be socially embedded or exodied by self-technologies introducing change by Avatar-self technology. **Conclusions:** Every encounter is based on capacities to switch between your own embodied perspective and the perspective of others and at the same time to distinguish both perspectives to assert yourself in front of the other. CAST envisions, we technically inhabit and alter our own embodied “Avatar” of self, enhancing the distinction between me and an exodied schizophrenic Avatar.

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### Philosophical notes on Enhancement of perspective–taking and embodiment in Avatar based schizophrenia therapy

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Integrative psychosomatic approaches convey the idea of enhancement in concepts of health that include quantifiable medical treatment and subjective qualitative wellbeing. One of these recent developments is what can be called “Avatar Enhancements” in which we include as well Avatar Therapies in Virtual Clinical Reality in schizophrenia. This paper investigates the mechanisms that lie behind the fact that schizophrenia patients can improve their condition by the relation with a modelled externalized virtual agent with the philosophy of embodiment and perspective taking of the phenomenologist Thomas Fuchs and his concept of schizophrenia that is best analyzed as the alienation of its own body or as a “disembodiment”. We will combine the insights of Fuchs with recent neuroscientific research on the plasticity of perspective-taking and the body image and perspective-taking. Disturbances of embodiment may be classified according to Fuchs & Schlimme in two fundamental categories: 1. as primarily affecting the subject body or prereflective embodied sense of self; 2. as being related to the body image or explicit body awareness. For Thomas Fuchs every encounter is based on the capacity to switch between your own embodied perspective and the perspective of the other and at the same time to distinguish both perspectives that is to assert yourself in front of the other even in empathy to virtual agents. An avatar is usually seen as “medium through which one can inhabit a virtual world”. What if we inhabit our own “Avatar” of self that we permanently “reboot” and as such consider our “permanent” own body image, body ownership and mineness, existential feeling and affective tuning, own internal voice? The disconnected hallucinatory intervention of a schizophrenic self and the method of externalization of this schizophrenic self and re-embodiment of a virtual avatar by the exeroception of the patient as well as the patient’s the altered re-immersion after this experience of the contact with this external avatar (that can be altered by the therapist/doctor) is the proposed method of this research as an alteration of embodied techniques of the self and their external representations. Already in the classical Rubber-Hand-Illusion (RHI) the reintegration of external artefacts as part of the body schema while synchronically stimulating the hand and the visual rubber hand has brought new insights in the plasticity of the body image and the embodiment of self by a strong influence of exeroception that we will follow in Avatar enhancements in schizophrenia therapy. RHI is an illusion in the coordination of vision, touch, and posture, another form would be the coordination

of touch and proprioception that have to be considered as reasons why Leffs Avatar enhancement therapy can be successful.

## Recovery experiences and sleep problems as mediating mechanisms in the relationship between work stress and teacher burnout

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**Introduction:** Although the relationship between stressful work-related psychosocial factors and mental health problems has been well documented in previous studies, more research examining the mechanisms explaining this relationship is needed. The aim of this study was to examine potential mediating mechanisms in terms of recovery experiences and sleep problems in the relationship between effort-reward imbalance (ERI) and teacher burnout (BO). **Methods:** Seventy-six primary school class teachers (87% female) aged 44 years on average participated in the study. The participants completed questionnaires for the assessment of ERI, recovery experiences, sleep problems, and BO. **Results:** Adjusted for age, gender, and total working hours, the results of linear regression analyses showed that ERI was positively associated with BO and its three components (exhaustion, cynicism, and reduced professional efficacy). Additionally, ERI was negatively associated with relaxation experiences during leisure time, and positively associated with sleep problems in terms of nonrestorative sleep. Bootstrap analysis indicated that poor relaxation experiences mediated the association between ERI and reduced professional efficacy by 16%, and nonrestorative sleep mediated the association between ERI and exhaustion by 34% (calculated as ratio of indirect effect to total effect). **Conclusions:** Our findings suggest that ERI can be a risk factor for teacher BO, and that this association may be partly mediated by poor recovery experiences and sleep problems. Lack of restorative sleep and poor relaxation during leisure time can be considered potential warning signs for the development of BO in teaching.

## Temperament and metabolic control in patients with type-2 diabetes without depression

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**Introduction:** Long lasting characteristics, such as temperament, of persons with type-2 diabetes need to be more evaluated in its independent influence on metabolic control in populations without psychiatric diagnosis. The aim of this study was to search into the influence of excessive affective temperament by its own (adjusting for socio-demographic data, psychological adjustment to diabetes,

and coping). **Methods:** At the out-patient clinic of endocrinology has been unfolding a prospective 6 months study, enrolling patients with type-2 diabetes, aged between 18 and 65 years and able to self fill in the questionnaires. Those with severe chronic complications, any psychiatric diagnosis and pregnancy were excluded. Questionnaires used were TEMPS-A – affective temperament, ATT18 – psychological adjustment to diabetes, HADS – Hospital Anxiety Depression Scale, Brief Cope – coping and MINI – Structured Interview to Psychiatric Diagnosis. **Results:** We have yet preliminary results at baseline evaluation with 34 patients. The patients are 64.7% males, aged  $54.56 \pm 7.84$  years, with BMI  $31.74 \pm 5.47$ ; 46.9% taking insulin, 58.8 % with 3 or more years of diagnosed diabetes and HbA1c  $8.12 \pm 2.11$ . Patients with more excessive temperament have better metabolic control, but none significantly: depressive ( $8.81 \pm 2.56$  vs  $7.59 \pm 1.55$ ), hyperthymic ( $8.36 \pm 2.24$  vs  $7.21 \pm 1.29$ ), irritable ( $8.34 \pm 2.28$  vs  $7.29 \pm 0.99$ ), anxious ( $8.46 \pm 2.27$  vs  $7.19 \pm 1.26$ ) and cyclothymic ( $8.17 \pm 2.29$  vs  $8.02 \pm 1.71$ ). Depressive symptoms were not related to metabolic control (Spearman's rho = -0.001; p = n.s.). **Conclusions:** Although not significantly, the results point toward a baseline association between excessive temperament and better glycemic control, particularly with the depressive one.

## Hypnosis and simple techniques in rapport, communication and language

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The impact of dental phobia is wide ranging and dynamic. In the UK, the General Dental Council guidance states that: “Dentists have a duty and patients have a right to expect adequate and appropriate pain and anxiety control [and also that] in assessing the needs of an individual patient, due regard should be given to all aspects of behavioral management before deciding to prescribe or proceed with treatment”. There are a plethora of techniques and methods available to dentists that can help manage dental pain and anxiety, however historically there may have been missed opportunities for those focused on only a narrow range of these skills.

There is increasing evidence supporting hypnosis as being effective in pain and anxiety control yet the numbers of dentists who have trained in its use remain low. One author (MAG) has demonstrated a number of surgical dental procedures carried out under hypnosis with no local anesthetic, in each case the patients' reports of pain are low, which was supported by no significant change in heart rate throughout the procedures. It is considered that effective hypnosis requires the cornerstones of good rapport, communication and language skills, however it is also understood these factors also have a significant influence in the entire dentist/patient relationship and ultimately therefore, effective anxiety and pain control regardless of which other techniques are employed. The authors therefore conclude that basic rapport, communication and language skills should be more widely taught to dentists and dental students.

## Conditions of health behaviors among Polish female students

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**Introduction:** These studies demonstrate how health behaviors are associated with self-esteem, emotional intelligence, and coping with stress among Polish young women. **Methods:** The study sample consisted of 135 Polish female students aged from 19 to 23 years ( $M = 19.76$ ). The following methods were applied: The Rosenberg Self-Esteem Scale, The Emotional Intelligence Questionnaire (INTE), The Inventory for Measuring Coping with Stress (Mini-COPE), and The Catalogue of Healthy Behaviour (IZZ). **Results:** In the examined group of female students, health behaviors are chosen rarely or very rarely by 60.7%, sometimes by 27.4%, and often by only 11.8%. Three groups were distinguished by using K-means Clustering Analysis (named: A, B, and C). The clusters B and C are connected with low level of health behaviors. The cluster A is connected with high level of health behaviors and distinguishes itself by: high level of emotional intelligence, self-esteem, coping strategies (active coping, searching for support, acceptance, sense of humor), low level of other coping strategies: helplessness and religious coping. The results demonstrate that the assumed model explains 25% of health behaviors variability in the examined group and, as far as health behaviors of young women is concerned, the most conditioning factors are: coping with stress by using sense of humor ( $\beta = 0.23$ ) and using emotions in thinking and action ( $\beta = 0.30$ ). **Conclusions:** The obtained results indicate, that the control of own and other emotions and making jokes with difficult situations are associated with health behaviors among Polish young women.

## Psychological correlates of resilience in women with breast cancer

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**Introduction:** A diagnosis of cancer is a stressful event which has the potential to elicit psychological disturbances, especially depressive symptoms, and to decrease quality of life. Resilience may be crucial to preserve mental health in patients coping with cancer. The aim of this study was to examine the relationship between resilience and quality of life, depression and demoralization in oncology. **Methods:** One hundred and forty-two women with breast cancer (mean age  $53.4 \pm 10.8$  years; 75.4% with primitive cancer and 24.6% with metastatic cancer) underwent the following battery: Structured Clinical Interview for DSM-IV, demoralization section of the Structured Interview according to the Diagnostic Criteria for Psychosomatic Research (DCPR), Connor-Davidson Resilience Scale (CD-RISC), Short Form-36 Health Survey (SF-36), Beck Depression Inventory (BDI), and Demoralization Scale (DS). **Results:** Women with DSM-IV major depressive disorder (21.8% of participants) and those with demoralization according to the DCPR (24.6% of participants) had significantly lower levels of resilience (CD-RISC) than those without these diagnoses. Lower scores on the CD-RISC were significantly associated with higher levels of demoralization (DS) and depressive symptoms (BDI) and with a worse quality of life on all the SF-36 scales, except for "pain". **Conclusions:** Our findings

suggest a protective role of resilience against the development of depressive symptomatology, which was found to be significantly associated with a poor outcome in cancer patients. Enhancement of resilience, through specific psychological interventions, may be crucial to prevent depressive symptoms and to maintain quality of life in cancer patients.

## The relationship between demoralization and quality of life in breast cancer patients

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**Introduction:** Demoralization is a frequent psychological response to cancer. However, the impact of demoralization on quality of life in cancer patients has been virtually neglected by the literature. The aim of this study was to examine the relationship between demoralization and quality of life in cancer patients. **Methods:** A sample of 142 women with a diagnosis of breast cancer (mean age  $53.4 \pm 10.8$  years; 75.4% with primitive cancer and 24.6% with metastatic cancer) underwent the demoralization section of the Structured Interview according to the Diagnostic Criteria for Psychosomatic Research (DCPR) and completed the following self-report questionnaires: Demoralization Scale (DS), Psychiatric Epidemiology Research Interview-Demoralization (PERI-D), Subjective Incompetence Scale I and II (SIS-I and SIS-II), and the Short Form-36 Health Survey (SF-36). **Results:** Demoralization according to the DCPR was found in 24.6% of participants and was significantly associated with lower scores on all the SF-36 scales, except for "physical functioning" and "role limitations due to physical health". The DS, PERI-D, SIS-I, and SIS-II were negatively correlated with all the SF-36 scales: higher demoralization scores corresponded to a worse quality of life. **Conclusions:** Demoralization seems to play a detrimental role on satisfaction for one's own quality of life in breast cancer patients. It is also possible that a diminished quality of life may increase the vulnerability to demoralization. The use of psychotherapeutic treatments for demoralization could enhance quality of life in patients with a diagnosis of cancer.

## The experience of demoralization and dignity in Italian patients with cancer

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**Introduction:** Demoralization, as a continuum state from discouragement to despair has been repeatedly examined in cancer setting. The aim of the study was to explore the inter-relationship between demoralization dimensions and dignity among cancer patients. **Methods:** A series of patients with cancer ( $n = 164$ ), were submitted to a series of psychosocial instruments. Each patient was

submitted to the DCPR interview - demoralization module, the Demoralization scale (DS), the Patient Dignity Inventory (PDI), the FACIT spiritual well-being questionnaire, as well as the Prime MD Patient Health Questionnaire (PHQ-9) to assess depression. **Results:** In loss of meaning and purpose ( $\alpha = 0.893$ ), disheartenment ( $\alpha = 0.864$ ), dysphoria ( $\alpha = 0.653$ ) and sense of failure ( $\alpha = 0.739$ ) were found as part of the construct of demoralization. Dignity was associated with all the dimensions of demoralization, as well as to spirituality and depression. DS Disheartenment ( $B = 0.163$ ;  $p \leq 0.01$ ) and DS Helplessness ( $B = 0.170$ ;  $p \leq 0.05$ ) significantly predicted a DCPR diagnoses of demoralization, while loss of dignity was a predictor of demoralization and poor spiritual well-being. **Conclusions:** The study confirmed that Loss of Dignity was a significant predictor for development of demoralization and it was positively related with depression. Demoralization, in turn, represented a significant condition that a specific scale (DS scale) was able to define in all its variables (loss of Meaning; Dysphoria; Disheartenment; Helplessness; Sense of Failure), more than a semi-structured interview (DCPR demoralization).

### Dignity and spirituality in patients with severe psychiatric disorders

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**Introduction:** The concepts of dignity in psychiatry is usually related to the concept of stigma and the marginalization of mentally ill patients from the society. Starting from the definition of dignity as developed in palliative care as “the status of human beings entitling them to be respected and valued, we analyzed, in a broader study of chronic medical and psychiatric conditions, dignity and its related variable, value makes sense” has been investigated in several fields. The aim of the study was to explore the condition of dignity and its associated variables among patients with chronic medical conditions. **Methods:** Patients with severe psychiatric conditions ( $n = 250$ ) (schizophrenia, severe personality disorders, bipolar and affective disorders) were assessed to a series of psychosocial instruments, namely the Patient Dignity Inventory (PDI), the FACIT spiritual well-being questionnaire, the EURO-QOL to assess QOL, the Ryff Psychological well-being questionnaire, and the Edmonton Symptom assessment scale (ESAS). **Results:** Statistically significant associations ( $p < 0.001$ ) were found between dignity (and dignity dimensions) and both spirituality (meaning and purpose) and psychosocial well-being clusters. Physical and emotional distress symptoms were associated with lower dignity. Several dimensions of QOL, in terms of poor personal care and low performance status were related to lack of dignity and poorer psychological well-being. **Conclusions:** Meaning, purpose in life and sense of personal value were demonstrated to be significant components of dignity among mentally ill patients Existential burden faced by is extremely important and loss of dignity is a significant factor to be taken into a more specific consideration, as a particular construct, in psychiatric context hospital as a way to not forget both the physical

component of suffering in psychiatric patients and, at the same time, a person-centred approach that includes dignity.

### Scientific bases that support the relation between TCA and Obesity : A systematic review

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**Introduction:** The relationship between obesity and psychopathological disorders is fully proven; various papers of the 90s and the present century refer to obesity as a risk factor and/or associated with TCA. We hypothesized that the Obesity-TCA association is not just a matter of chance. We conducted a systematic review of the scientific literature of the last 10 years directed to show that obesity is a risk factor for developing TCA in its various clinical pictures. **Methods:** We used the database PubMed as main source; we selected papers published in the last 11 years about the relation between obesity and Anorexia Nervosa, Bulimia Nervosa and Binge Eating. **Results:** There are 66 papers in PubMed referring to obesity and eating disorders. In secondary sources, we found 13 papers about TCA-obesity; only 1 was about the relation between the two concepts. **Conclusions:** Many studies showed that an increase of overweight/obesity barely increased the prevalence of bulimia. We observed a tendency to use BMI as the only anthropometric variable in most of the papers. AFINOS study showed that percentiles  $>85$  of fat increased the risk of developing an eating disorder. Studies realized with candidates for bariatric surgery showed this relation with bulimia (4-12%) and TCA (14%). Studies about rs56149945 and TS6198 genes related to glucocorticoid receptors and rs9939609 gene implicated in obesity reinforce the thesis of a strong link between obesity and TCA.

### Psychological characterization of hyperandrogenic states in late adolescent and young women

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**Introduction:** The psychological implications of polycystic ovary syndrome (PCOS) phenotypes have been investigated in different patient populations, but little attention has been paid to adolescent and young women. The aim of this study was to evaluate the psychosocial correlates of PCOS and other hyperandrogenic states in a population of late adolescent and young females. **Methods:** This was a cross-sectional study involving high school female students, aged 16-19 years. The study protocol was designed with three possible levels of participation characterized by an increased level of commitment. For the specific purposes of this investigation, we focused on the subsamples of students whose

clinical state was assessed by medical examination (n = 835) and for whom additional laboratory tests were available (n = 394). Psychological evaluation encompassed psychological distress, levels of stress, well-being, illness behavior, and quality of life (as measured by the *Symptom Questionnaire*, the *Psychosocial Index*, and the *Psychological Well-Being scales*). **Results:** Significantly higher levels of psychological distress and impaired well-being and quality of life were found among late adolescent and young women with isolated clinical hyperandrogenism compared to their normal counterparts. Furthermore, females with PCOS showed significantly greater hostility/irritability compared to healthy control subjects. **Conclusions:** These findings highlight the importance of early recognizing and adequately managing psychological distress in such patients.

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### Clinical assessment of allostatic overload in adolescent and young women with hyperandrogenic states

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**Introduction:** The psychosocial correlates of hyperandrogenism in adolescent and young women are getting increasing attention. The aim of this study was to assess allostatic overload (AO), based on specific clinimetric criteria, and related psychological distress in a population of adolescent and young females with hyperandrogenic states. **Methods:** This was a cross-sectional study involving high school female students, aged 16-19 years. For the specific purposes of this investigation, we focused on the subsample of students whose clinical state was assessed by medical examination (n= 835). Psychological evaluation included three self-report questionnaires (Symptom Questionnaire-SQ, the Psychosocial Index-PSI, and the Psychological Well-Being scales-PWB). The presence of AO was determined according to clinimetric criteria. **Results:** One hundred eighty-four participants (22.5%) were classified as having AO. They showed significantly higher levels of psychological distress (on the SQ) and impaired well-being (on the PWB) compared to those who did not present with AO. A significant association was found between the presence of AO and hyperandrogenic states. **Conclusions:** These findings lend support to the clinical utility of the clinimetric criteria for the assessment of AO in medical settings and highlight the importance of psychosocial aspects of hyperandrogenism among adolescent and young women.

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### The effects of physical exercise on symptoms and quantity of ambulation in Japanese students with irritable bowel syndrome

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**Introduction:** Irritable Bowel Syndrome (IBS) has been associated with varying autonomic dysregulation. Physical exercise has begun to show efficacy in the treatment of IBS. Underlying mechanisms are unclear, but autonomic dysregulation may be involved in stress-related gastrointestinal dysfunction. The purpose of this study was to analyze the intervention outcomes of utilizing exercise in a university setting by quantity of ambulation and stress related heart rate variability (sHRV) analyses. **Methods:** Ten healthy controls and 20 untreated IBS subjects underwent daily walking and muscle stretching for 4 weeks. All subjects were underwent a brief lecture of ambulation, muscle stretching, and recording own ambulation activity by using pedometer. Changes in the Gastrointestinal Symptoms Rating Scale (GSRS), sHRV, and ambulation activity were compared between controls and IBS subjects. An analysis of variance with period (pre vs post) as the within-subject factor and group (control v. IBS) as the between-subject factors was carried out on sHRV, quantitative ambulation, and GSRS. **Results:** After the intervention, the IBS symptoms were improved compared with baseline in IBS with low quantity of ambulation (estimated less than 7000 steps per day, p < 0.05). sHRV showed no significant interactions between period and groups. **Conclusions:** Our results suggest that ambulation exercise is inefficacious in changing IBS pathophysiology indicated by sHRV. The intervention seems particularly tailored to IBS with low to moderate ambulation quantity baseline levels.

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### Omega-3 polyunsaturated fatty acids associated with risk of depressive symptoms in early pregnancy in a case-control study

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**Introduction:** Omega-3 polyunsaturated fatty acids (PUFAs), especially long-chain types such as docosahexaenoic acid (DHA), are important nutrients in pregnancy. Several epidemiological studies and clinical trials have investigated the effects of omega-3 PUFAs on perinatal and postnatal depression, but the results remain controversial. Japanese people are known to consume a large amount of fish compared to Western populations, although a recent National Health and Nutrition Examination Survey reported declining fish consumption in Japan, especially among younger generations. This study sought to examine the possible relationship between serum omega-3 PUFA levels and depressive symptoms among expectant mothers. **Methods:** The data and specimen samples examined were obtained in a birth cohort study started in July 2012 in Toyama prefecture as an adjunct study to the Japan Environment & Children's Study. Blood samples were collected between 9-14 weeks' gestation (75% of samples) or after 15 weeks' (25%). Subjects with a Kessler Psychological Distress Scale (K6)

score >8 were assigned to the depressive symptoms group (n = 283), and the control group (n = 283) was matched for age, educational level, and family income. Fatty acid composition was determined from serum samples by gas chromatography. Associations between fatty acid levels and incident depressive symptoms were evaluated by logistic regression. **Results:** After adjustment for possible confounders, eicosapentaenoic acid (20:5n-3) and docosapentaenoic acid (22:5n-3) showed inverse associations with risk of depressive symptoms, with respective odds ratios of 0.53 (95% CI 0.32 - 0.87) and 0.58 (95% CI 0.36 - 0.94) for the highest quartile. For DHA, only the third quartile showed a significantly lower odds ratio (0.59; 95% CI 0.36 - 0.97). **Conclusions:** This is the first study to report associations between some serum omega-3 PUFAs and risk of depressive symptoms in early pregnancy. Further research is required to verify the causality of these associations.

### Fatty acid composition of the postmortem corpus callosum of patients with schizophrenia, bipolar disorder, and major depressive disorder

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**Introduction:** Postmortem brain studies have shown abnormal levels of n-3 polyunsaturated fatty acids (PUFAs), especially docosahexaenoic acid, in the frontal cortex (particularly the orbitofrontal cortex) of patients with depression, schizophrenia, or bipolar disorder. We have previously measured PUFA levels in the postmortem medial temporal lobe including hippocampus, amygdala, and entorhinal cortex from patients with these psychiatric disorders; however, we found no significant differences between the groups except for small changes in n-6 PUFAs. In this study we investigated whether patients with schizophrenia, bipolar disorder, or major depressive disorder have abnormalities in PUFA levels in the corpus callosum. **Methods:** Brain tissue samples were obtained from the Victorian Brain Bank Network at the Florey Institute for Neuroscience and Mental Health. Fatty acids in the phospholipids of the corpus callosum were evaluated by thin layer chromatography and gas chromatography. Specimens were evaluated for patients with schizophrenia (n = 15), bipolar disorder (n = 15), or major depressive disorder (n = 15) and compared with unaffected controls (n = 15). **Results:** In contrast to previous studies, we found no significant differences in the levels of PUFAs or other fatty acids in the corpus callosum between patients and controls. Sub-analysis by sex also showed no significant differences. Oleic acid was significantly higher in suicide (n = 20) cases than in non-suicide (n = 39). **Conclusions:** These psychiatric disorders might be characterized by very specific fatty acid compositions in certain areas of the brain, and corpus callosum might not be involved in abnormalities of PUFA metabolism.

### Experiences of people diagnosed with psychogenic syncope

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**Introduction:** Psychogenic syncope (PS) diagnosed via cardiology is not well investigated compared to non-epileptic attack disorder (NEAD) or psychogenic non-epileptic seizures (PNES), diagnosed via neurology specialty. Psychogenic syncope is a condition of collapsing or 'blackouts' that may be diagnosed within cardiology clinics via a process of exclusion of cardiac cause. No research to date has explored the experiences of patients who receive their diagnosis of psychogenic syncope via cardiac services. We aim to understand patient experiences in order to help provide better management of identified needs. **Methods:** The study utilized six semi-structured interviews with people who had received a psychogenic syncope diagnosis via a cardiology service pathway. Data was analyzed using Interpretative Phenomenological Analysis (IPA). **Results:** Peoples' descriptions highlighted a sense of disconnection between mind and body. An overarching uncertainty evolved with 'not understanding' a psychogenic syncope diagnosis. Equally, a "battlefield" was described in relation to fighting a "dissociative" condition, and experiencing a loss of self-identity. **Conclusions:** The insight into people's experiences of psychogenic syncope highlighted a harrowing struggle to make sense of their diagnosis. A new diagnostic term is called for to legitimize the condition in order to enable a more holistic person-centered recovery process.

### Psychological factors associated with psychogenic syncope and psychogenic non epileptic seizures

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**Introduction:** Psychogenic syncope (PS), psychogenic non-epileptic seizures (PNES), and non-epileptic attack disorder (NEAD) or non-epileptic seizures (NES) are a group of conditions that are medically unexplained that have in common a temporary loss of consciousness. PS, is diagnosed within cardiology syncope clinics. The majority of patients are diagnosed through the epilepsy route in neurology. Studies have widely acknowledged psychological distress, depression, and trauma in this patient group. No research to date has explored

the psychological factors across the unexplained syncope presentations. We aim to identify these psychological factors and their impact on people. **Methods:** This present review aimed to summarize the psychological factors that are reported to be associated with these conditions. A systematic review of four databases (PsycINFO, Medline, CINAHL, Web of Science) identified 11 studies. **Results:** The selected studies identified several factors associated with the conditions: dissociation, anxiety, stress, abuse, trauma, anger, depression, somatization, and bereavement. **Conclusions:** The findings concur with literature and highlight less investigated psychological and psychosocial factors. The factors found across the unexplained syncopal spectrum appear to be homogenous. There is a need for further research to address this, specifically within the cardiology specialty.

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## The relationship of Namake (a state of maladaptation to schoolwork) tendency and lifestyle in Japanese university students

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**Introduction:** This study clarifies the background of maladaptation to schoolwork by the relationship of Namake tendency and lifestyle. **Methods:** A total of 325 students of three universities were measured by the Laziness Tendency Scale (LTS) and the questionnaire about daily life. The participants were composed of students in the department of psychology, economics, pharmacology, sports. The relation of everyday lifestyle and LTS points was checked using two-way analysis of variance. **Results:** The questions such as “Can you concentrate on the morning class?”, “Did you finish your home schooling?”, “Do you usually exercise?”, and “Is there a teacher you can consult about worries?” showed main effects between departments. The question “Are you taking part in extracurricular activities?” showed main effects between departments and an interaction between departments and answers. **Conclusions:** Students of economics department showed the highest points on LTS. They blessed with time and money because they tend to live with their parents, and work part-time. Students of sports department showed the lowest points on LTS. They tend to exercise, engage in extracurricular activities, and learn quickly and intensively. It is suggested that Namake tendency will be influenced by environment factors.

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## Biomarkers derived from human reward system to guide psychotherapy

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Many patients respond well to psychotherapy. However, if they do not, clinicians usually do not try a different form of psychotherapy and provide patients with supportive psychotherapy, which lacks a clear focus and does not rely on specific therapeutic mechanisms. This practice may increase the patients' feelings of failure, lack of

focus and helplessness. Unfortunately, psychotherapies cannot be switched as easily as pharmacotherapies because each psychotherapy is based on a different therapeutic rational and attitude of the therapist. As a result, the identification of markers that predict response to specific psychotherapies would greatly enhance the effectiveness of psychosocial interventions. In this talk, I first will show how experienced psychotherapists tailor their treatments to individual patients. Second, I will speculate on how to enhance such psychological strategies by the use of neurobiological knowledge and biological measures. Since the human reward system is crucial in the development of both psychosomatic conditions and psychological resiliency, I will show how various dysfunctions of the reward system may affect response to psychotherapy. Such dysfunctions include psychological myopia, melancholic hyperopia, abnormal responses to social and nonsocial rewards, impaired habit formation and abnormal dopamine and oxytocin neurotransmission.

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## Gut microbiota play a critical role in the production of gut luminal serotonin

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**Introduction:** A series of our previous researches has demonstrated that gut microbiota modulates stress response and behavior profile of the host. Serotonin (5-HT) is a possible candidate molecule involved in such modulation. However, available evidence is limited because of the lack of actual data regarding the relation between gut microbiota and luminal 5-HT in vivo. The aim of this study was to examine the effects of gut microbiota on 5-HT level and 5-HT related gene expression in the gut lumen and the brain. **Methods:** Luminal 5-HT level and 5-HT related gene expressions were analyzed in germ-free (GF) mice and GF mice and gnotobiotic mice which were reconstituted with fecal microbiota of specific pathogen-free (SPF) mice on either 3 days (EX-GF3) or 21 days (EX-GF21) before the analysis. Monoamines and their metabolite levels were also measured in several regions of the brain. **Result:** The 5-HT level in the gut lumen was lower in GF mice than in EX-GF3 and EX-GF21 mice. The 5-HT transporter and tryptophan hydroxylase-1 mRNA levels of the intestinal mucosa were lower in EX-GF3 mice than in GF mice. The 5-HT type 3 receptor mRNA levels of the enteric plexus was higher in EX-GF21 mice than in GF mice. In the brain, monoaminergic turnover rate was changed after the reconstitution with SPF feces. **Conclusions:** These results indicate that gut microbiota affect not only 5-HT related systems in the gut but also monoaminergic systems in the brain.

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## Maternal relationship satisfaction during pregnancy predicts the risk for respiratory infectious disease in the offspring

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**Introduction:** Animal and human studies suggest that maternal emotional distress during pregnancy affects the offspring's immune functioning. Although marital conflict can be a major source of emotional distress, very few studies have investigated the relationship between marital quality among pregnant women and the risk of infectious diseases in their offspring. The aim of this study was to explore the degree to which relationship satisfaction during pregnancy predicts the risk of respiratory infectious diseases in infants. **Methods:** Data were obtained from the Norwegian Mother and Child Cohort Study, conducted by the Norwegian Institute of Public Health. Pregnant women (n = 61700) completed questionnaires concerning relationship satisfaction in week 30 of pregnancy. In follow-up questionnaires, the women reported whether their children had been subject to common cold, throat infection, bronchitis, RS virus, pneumonia, or croup. Associations between the predictor and outcome variables were assessed by logistic regression analyses. **Results:** After controlling for socioeconomic factors, social support, smoking, and breastfeeding, low levels of maternal relationship satisfaction, as compared with high levels, were found to predict significantly higher odds for all categories of respiratory infectious diseases. **Conclusions:** The results suggest that relationship quality during pregnancy affects the offspring's likelihood for respiratory tract infections during their first year of life.

## 11-Year stability of alexithymia in general population

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**Introduction:** Our aim was to investigate if alexithymia, a personality trait with difficulties in identifying and describing feelings and an unimaginative and externally oriented way of thinking, is stable in general population. **Methods:** In a nationally representative sample of Finnish people aged 30 and above (1674 women, 1332 men) alexithymia was measured with the 20-item Toronto Alexithymia Scale (TAS-20) in 2000 and 2011. Stability of

alexithymia was assessed with t-test and linear regression with following confounders (established in 2000): age, gender, marital status, years of formal education, physical functional capacity assessed by physicians, and 12-month depressive and anxiety disorders measured by diagnostic interviews. **Results:** The mean (SD) of the TAS-20 score was 44.2 (10.3) in 2000 and 44.2 (10.9) in 2011; there was no statistical difference. In crude regression analysis, TAS-20 score in 2000 (TAS-20-2000) explained a significant proportion of variance in TAS-20 scores in 2011: adjusted  $R^2 = 0.50$ ,  $p < 0.001$ , standardized beta coefficient for TAS-20-2000 = 0.71 ( $p < 0.001$ ). Controlling for all confounders increased the adjusted  $R^2$  only incrementally:  $R^2_{adj} = 0.54$ ,  $p < 0.001$ , beta coefficient for TAS-20-2000 = 0.64 ( $p < 0.001$ ). Other statistically significant predictors were higher age (beta coeff. = 0.15,  $p < 0.001$ ), lower education (beta coeff. = 0.10,  $p < 0.001$ ), male gender ( $p < 0.001$ ) and not being married ( $p = 0.025$ ). Depressive and anxiety disorders or physical functional capacity in 2000 did not significantly predict TAS-20 score in 2011. **Conclusions:** Our finding from the largest follow-up survey so far attests to the theory that alexithymia is a stable personality trait in adult general population.

## Effectiveness of training infirm elderly people using a machine with a cognitive dysfunction improvement system

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**Introduction:** The decrease in balance control in the elderly is an important risk factor for falls and markedly influences their activities of daily living (ADL) and quality of life (QOL). In a previous study, we reported a correlation between balance control and mental function in the elderly. In this study, we investigated the effectiveness of training using a machine with a cognitive dysfunction improvement system (mirgometer) for improving the physical and cognitive functions and mental state of infirm elderly individuals. **Methods:** The subjects comprised infirm elderly individuals using elderly facilities. Mirgometer intervention was monitored for 6 months, and the subjects were evaluated for motor function (i.e., balance ability and flexibility), mental function (i.e., cognitive function and psychological state), ADL, and QOL. Furthermore, the change of each function over time in the control group, which synchronized a condition, was compared with that in the intervention group. **Results:** At 6 months, the mirgometer score and cognitive function were significantly improved. The meaningful drop of the balance function was recognized in the exercise function in the control group. **Conclusions:** This intervention significantly improved cognitive and motor functions in the infirm elderly. Therefore, continual training could aid in improving and maintaining the physical and mental functions and QOL in infirm elderly people.

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## Associations between parents' perception of self-help groups and their children's social withdrawal in Japan

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**Introduction:** Given the high prevalence of social withdrawal (hikikomori) in Japan, there are many self-help groups for parents of children with this condition. Although it is possible that parents' perceptions of these self-help groups are related to the severity of social withdrawal in their children, this relationship has not yet been empirically tested. **Methods:** A total of 295 parents (204 mothers and 91 fathers) completed questionnaires assessing parental maladaptation and their children's social withdrawal. Participants also indicated their perceptions of self-help groups, which were divided into the following subcategories: communication with their children and supportive group members, acceptance of their children, education regarding social withdrawal, and information on social resources. **Results:** In each subcategory moderately or weak negative correlations were found between parents' positive perceptions of the self-help groups and their children's degree of social withdrawal. Moreover, children whose parents perceived improvements in communication and in acceptance of their children reportedly exhibited less social withdrawal and the parents showed less maladaptation. **Conclusions:** These results suggest that the effects of self-help groups on parents, particularly improvements in parent-child communication and supportive self-help group members, might decrease children's social withdrawal, as well as parental maladaptation. Increasing focus of self-help groups on variables that are influential in parents' perception, it is useful that the programs for self-help groups is improved.

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## The explore of the brain electrical physiological mechanism in treating cardiac neurosis by the rigid-gentle syndrome differentiation of Traditional Chinese Medicine (TCM)

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**Introduction:** Cardiac neurosis is due to central nervous system dysfunction, caused by the impact of cardiovascular autonomic function disorders arising from a kind of syndrome. Professor Zhao founds the rigid-gentle syndrome differentiation based on years of clinical experiences. The curative effect is remarkable in treating cardiac neurosis. **Methods:** One-hundred sixty patients with cardiac neurosis participated in the study. A placebo-controlled, single-blind design was used. In this study, we evaluated the participants by the brain electrical function before and after treatments. **Results:** There were some differences between the results before and after treatments. This result revealed the significant correlations between the brain electrical function and cardiac neurosis. **Conclusions:** The

research aims to the rigid-gentle syndrome differentiation of cardiac neurosis as the key point. Based on cerebro-electrophysiology, this research explores the changes of brain neurotransmitters, frequency band, power of brain region before and after herbal interventional treatment. It is considered that the changes of cerebro-electrophysiology may be the objective basis of the treatment of the rigid-gentle syndrome differentiation of cardiac neurosis. Moreover, the study gives the scientific evidence for psychosomatic medicine (emotion pathogenesis) of the rigid-gentle syndrome differentiation.

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## Differences between Depressive men with and without obstructive sleep apnea syndrome

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**Introduction:** Not uncommonly, cases were reported to be suffered from obstructive sleep apnea syndrome (OSAS) and depression. The patients with depression often visit sleep clinic with suspected OSAS. The purpose of this study was to verify if there are differences between depressive people with and without OSAS. **Methods:** The subjects were 108 men under treatment for depression. They were hospitalized for undergoing polysomnography (PSG) and answered the semi-structured interviews using the Hamilton Depression Rating Scale (HAM-D) before PSG. Sleepiness was assessed using the Epworth Sleepiness Scale (ESS) before hospitalization. Their characteristics were analyzed by the severity of OSAS. **Results:** By the apnea-hypopnea index (AHI) of PSG, these patients were categorized as follows: 23 men (AHI < 5, non-OSAS), 35 men (5 ≤ AHI < 15, mild OSAS), 23 men (15 ≤ AHI < 30, moderate OSAS), and 37 men (30 ≤ AHI, severe OSAS). Non-OSAS men were younger and firmer than mild and severe OSAS men, and had more difficulty in getting to sleep than severe OSAS men. Covariance analysis adjusted for age and waist length showed severe OSAS men had less difficulty in getting to sleep than non-OSAS men, although there was no significant difference in ESS score or HAM-D score. **Conclusions:** Obese depressive men in mature stage with depression who have no difficulty in getting to sleep might suffer from OSAS.

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## The emotional, personality and autonomic features of somatoform disorders in Taiwan

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Our series researches are performed in Taiwan. The topic is about the relationship between somatoform disorders (somatic symptom

and related disorders) and emotion, personality, and autonomic functions. The effects of distinct diagnostic systems and demographic factors are also explored. Up to now, we have had the following findings: the degree of anxiety/depression in somatoform patients is not lower than the one in patients with other anxiety/depressive disorders (such as panic disorder or major depressive disorder, MDD). In multivariate regression analysis which comorbidity is considered, somatoform disorders even show higher predictive meaning on Beck Depression Inventory-II (BDI-II) and Beck Anxiety Inventory (BAI) scores than panic disorder or MDD. For predicting the occurrence of somatoform disorders from the personality perspective, the most meaningful indexes is harm avoidance 4 (HA4, fatigability and asthenia) and reward dependence 3 (RD3, attachment) of Tridimensional Personality Questionnaire (TPQ). In subjects with somatoform disorders, the features of TPQ is related with the degree of hypochondriacal ideation or somatic complaints. The dimension harm avoidance total (HA) and reward dependence 2 (RD2, persistence) are highly associated with the severity of hypochondriacal ideation while the severity of somatic complaints can be estimated with HA4 and RD2. Heart rate variability (HRV), an index of autonomic modulations, is related with TPQ in male above 45 years old. Low parasympathetic function is correlated with high scores of HA\*novelty seeking 2 (NS2). The personality features are similar to type A personality, which is known to be a risk factor for developing cardiovascular diseases. High sympathetic modulation is correlated with high scores of HA\*reward dependence 1 (RD1, sentimentality). These factors are likely with alexithymia or type D personality. Therefore, our results can provide physiological explanations to the traditional psychodynamic theories. There are significant correlations between the diagnosis of somatic symptom disorder and old age, low educational level, and low sympathetic activity of HRV. From the standpoint of symptomatology, the severity of depression but not somatic distress or hypochondriacal ideation is associated with HRV values. The finding is only obvious only in male subjects. In other words, the "autonomic dysfunction" related with depression may be more important than with somatic complaints. The relationship between Diagnostic Criteria for Psychosomatic Research (DCPR) and above features are under gathering in Taiwan. We believe that DCPR will be helpful for the connection of psychiatric symptoms and biological functions, which is invaluable for a comprehensive understanding of somatoform disorders.

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### The effect of middle school students academic stress on somatization: affect-regulation ability as a mediating variable

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**Introduction:** The purpose of this study was to examine how emotional regulation that has been raised as one of the major variables influencing examination stress works in correlation between middle school students' examination stress and somatic symptoms. We formulated study questions for it as follows: first, what is the relationship between middle school students' examination stress, somatic symptoms, and emotional regulation? Second, does emotional regulation mediate in correlation between middle school students' examination stress and somatic symptoms?

**Methods:** This research was a survey to 450 first and second graders attending middle schools located in Yongin. As measuring tools, the examination stress scale, K-CSI, and emotional regulation scale were employed, and the data collected went through statistical processing with SPSS 18.0K through Cronbach's  $\alpha$ , frequency analysis, average, standard deviation, Pearson's correlation, and Sobel test. **Results:** regarding relationship between middle school students' examination stress, somatic symptoms, and emotional regulation, there was significantly medium and negative correlation between examination stress and emotional regulation, there was significantly high and positive correlation between examination stress and somatic symptoms, and there was medium negative correlation between emotional regulation and somatic symptoms. Second, emotional regulation seems to mediate the relationship between middle school students' examination stress and somatic symptoms. **Conclusions:** This study has verified the mediating effect of emotional regulation in the relationship between middle school students' examination stress and somatic symptoms, thereby finding the importance of emotional regulation.

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### Rigid flexible combination of syndrome differentiation of clinical behavior of cognitive therapy in the treatment of hypochondriasis depression syndrome

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**Introduction:** Hypochondriasis depression syndrome belongs to hypochondriacal neurosis. The patients are often accompanied by complicated physical symptoms and poor performance. Professor Zhao Zhifu have 40 clinical years learning experience, especially on the psychosomatic disease research, on the original rigid syndrome differentiation theory of TCM diagnosis and treatment. The clinical Curative effect is remarkable. **Case Description:** A 72-year old male patient suffered from insomnia two months. He has difficulty falling asleep, he was upset, nervous, very afraid of death, flustered, ha had shortness of breath, dry mouth, red tongue, thin yellow tongue coating, slippery pulse string. Zhao Zhifu had discriminated of heart and liver of yin deficiency and yang hyperactivity and choose modified Tianwangbuxin Dan. The patients was offered the traditional Chinese medicine in the treatment of Zhao, plus cognitive behavior therapy. **Conclusions:** Patients with hypochondriasis and depression tend to own health care too much and over use health facilities. Patients often must identify a disease to give up. Many social and psychological factors and personality defects might be involved and the treatment is relatively complex. Professor Zhao Zhifu psychosomatic disease treatment together with rigid flexible syndrome differentiation theory, combined with cognitive behavior therapy, psychosomatic balance, homology of yin and Yang, treatment heart and body, seems to ensure clinical efficacy.

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### A personal proposal for a behavioral classification of obese patients

Iamandescu IB

**Introduction:** Obesity has many roots, among them the psychosocial factors, being very important. Some literature data have suggested a mild/medium depressive state, provoking an impulsive food intake as a recompense response to the varied distresses. Common clinical observations have highlighted, however, other affective traits. In order to establish a possible presence of a behavioral profile of obese patients, there were explored some affective traits - as anxiety, depression, and resilience - in obese patients, and the results were correlated with their so-called "hyperphagic" behavior. **Methods:** The HADS (Hospital Anxiety Depression Scale), the Hyperphagic Behavior (HB) questionnaire, and a Well Being Scale were administered to 50 obese patients and 50 control (with normal weight) subjects. All obese patients had a mean increase of weights between 20% and 40%. Correlations of main indices of HB with anxiety, depression, and Well Being scores were statistically significant. **Results:** Anxiety was more frequently observed than depression, and well-being state was present in the large majority of anxious obese subjects and mostly in controls. Based on these results and on clinical observation, the author proposes a classification of patients with the "premorbid" obesity as: "cheerful obese" (i.e., with prevalence of anxiety, optimism, and friendly attitude) and "cramped obese" (i.e., depressive more than anxious, pessimistic/skeptical, and with a reticent attitude). **Conclusions** This simple classification may allow therapists to increase the communication possibilities toward obese patients and their motivation toward treatment acceptance.

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### Missing memories of death: dissociative amnesia in the bereaved the day after cancer death

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**Introduction:** The death of a loved one is one of the most stressful events in our lives. Such stress affects the physical and psychological wellbeing of the bereaved. Dissociative amnesia is characterized by an inability to recall important autobiographical information. However, dissociative amnesia in the bereaved who have lost a loved one to cancer has not been reported. **Case description:** A 38-year-old woman was referred for psychiatric consultation because of restlessness and abnormal behavior. Her 44-year-old husband had died of pancreatic cancer the day before the consultation. On the day of the death, she looked upset and developed hyperventilation. The next day, she behaved as if the deceased were still alive, which embarrassed her family. At her initial psychiatric consultation, she talked and behaved as if her husband were still alive in the hospital. Her psychiatric features fulfilled the DSM-V criteria for dissociative amnesia. The death of her husband had been traumatic for her and was considered to have been one of the causes of this dissociation. **Comment:** This report adds to the list of psychiatric symptoms in the bereaved who have lost a loved one to cancer. In an oncology setting, we should consider the impact of death, defense mechanisms, and background of the families.

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### Association between religiosity and depression among elderly Buddhists in India, China, and Thailand

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**Introduction:** We previously reported the results of a survey of depression among residents of 3800m above sea level in Ladakh, India and 3700m in Qinghai, China who were 60 years of age or older. The implicit aim was to test the hypothesis that high-altitude hypoxia causes changes in the brain of residents that lead to higher rates of depression. We speculated that cultural factors inhibit the development of depression in these groups. Given that cultural factors play a role in the development of depression and that depression rates tend to be lower in Asian populations, a test of the effect of hypoxia would require a comparison of depression prevalence between their samples and comparable lowland Asian populations. **Methods:** This study investigated the cross-cultural relationship between depressive state, subjective quality of life (QOL), and activities of daily living (ADL) among elderly people in communities in India, China, and Thailand. We studied 430 subjects aged 60 years or older in three Asian communities (114 subjects in Domkhar in India, 173 in Yushu in China, and 143 in Nakhon Pathom in Thailand). Data were collected from personal interviews using a structured questionnaire. All the participants were devout Buddhists. **Results:** The results showed that few of the elderly residents in these areas had depression. This finding suggests that cultural factors such as religious outlook and social support inhibit the development of depression. **Conclusions:** Further research on such factors may help the development of strategies for preventing depression in elderly adults in the future.

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### The novel epigenetic research on the psychosomatic traditional Chinese medicine

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**Introduction:** Nowadays, epigenetic medicine has become an important subject in biological science, the relevant theory and research methods provide new perspectives and methods for psychosomatic medical research. This article summarizes the epigenetic research on the psychosomatic traditional Chinese Medicine (TCM). **Methods:** The epigenetic research on psychosomatic traditional Chinese Medicine is being researched in the databases of MEDLINE (1950-2015), Embase (1980-2015), China biology medicine (CBM) (1994-2015), China national knowledge infrastructure (CNKI) (1989-2015), Weipu (VIP) (1995-2015), and Wanfang (1989-2015). Studies were included according to the presence of a relationship with methylation or acetylation and depression or anxiety. **Results:** After preliminary screening, 13 English articles were found in the international databases and 435

Chinese articles were found in the Chinese databases. Only 1 English article was about the TCM diagnosis, the other ones were about the TCM drug's therapeutic effects. Only 4 Chinese articles were about psychosomatic TCM. **Conclusions:** These findings indicate that the epigenetic method is widely used in TCM, which means it is very suitable for TCM's theory and clinic system. Besides the epigenetic method can elaborate the psychosomatic medicine's characteristic, it should be improved and popularized in the psychosomatic traditional Chinese Medicine.

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## A regulatory perspective on psychological treatment: improving patient safety or barking up the wrong tree?

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Improved access to psychological treatment in health care underscores the necessity to ensure that the treatments delivered are safe. Psychological treatment might intuitively seem harmless, but the limited research available suggests that unwanted effects can occur in a significant number of patients. The regulatory agencies in Sweden are currently addressing this complex issue. Key questions include how unwanted effects should be defined, detected and prevented; how patients should be informed; requirements on training and supervision of therapists; and if the safety culture needs to be improved. In an initial literature review we found that adverse effects are not systematically monitored and reported in randomized controlled trials of psychological treatment. In order to bring attention to patient safety and stimulate more research we initiated a dialog with Swedish researchers, psychological associations, and patient organizations. Several research projects have been initiated as a result. We are currently preparing a brief manual on patient safety specifically intended for staff providing this kind of treatment. Lessons learned from this ongoing work will be presented.

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## Buffering effect of spiritual intelligence on suicide ideation in young adults exposed to childhood emotional abuse

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**Introduction:** Spiritual intelligence is defined as a set of mental capacities which contribute to the awareness, integration, and adaptive application of the nonmaterial and transcendent aspects of one's existence, leading to such outcomes as deep existential reflection, enhancement of meaning, recognition of a transcendent self, and mastery of spiritual states. The purpose of this study was to explain the protective effect of spiritual intelligence on suicide ideation in young adults exposed to childhood emotional abuse. **Methods:** A total of 247 undergraduate students in Seoul completed the instruments assessing childhood emotional abuse, spiritual intelligence, and suicide ideation. The age ranged from 18 to 27 years, with a mean age 22.81 (SD 1.93) years. The demographic variables in this study were family income, education level, and health status. **Results:** Suicide ideation scores were

entered into a two-way analysis of variance with abuse exposure (high exposure to emotional abuse vs low) and spirituality level (high level of spiritual intelligence vs low) as the between-subjects factors. There was a significant main effect of abuse exposure ( $F(1, 105) = 21.68; p < 0.001$ ), but no significant main effect of spirituality level. However, there was a significant abuse exposure x spirituality level interaction effect ( $F(1, 105) = 9.59; p < 0.005$ ). Simple main effect analyses of spirituality level were conducted with Bonferroni adjustment. For the group of high exposure to emotional abuse, suicide ideation was significantly lower in high level of spiritual intelligence (mean = 12.14) than the low level of spiritual intelligence (mean = 19.76) ( $F = 7.60; p < 0.01$ ). On the contrary, for the group of low exposure to emotional abuse, suicide ideation did not differ significantly in each spirituality level. **Conclusions:** Our findings demonstrated an adaptive role of spirituality in individuals exposed to childhood emotional abuse and suffering from suicide ideation.

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## Graded exercise therapy for chronic fatigue syndrome utilizing behavioral approach using video game exercise programs

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**Introduction:** This clinical case study demonstrates an efficient method of treating chronic fatigue syndrome (CFS) patients with continuous graded exercise therapy. **Case description:** The case illustrates the combined use of behavioral therapy and video game exercise programs. The patient recorded daily behavior (e.g., sleep, bed stay, meals, walking) and the symptoms on a weekly diagram chart. Meanwhile, the patient played video game fitness exercises, beginning from easy and light courses, and got feedback of the calculated energy consumption. Variety of graded exercises in the program were pursued successively, and graded exercises were performed constantly for more than three years, which consequently improved daily activities, activation records, and severity and frequency of the symptoms. **Comment:** It is known that the graded exercise therapy is one of the few possible effective treatments for CFS patients. However, the graded exercise is often difficult to continue due to the fatigue symptoms and the burden of repeated monotonic exercises. Behavioral approach using video game exercise possibly motives patients providing variety of attractive exercise experiences with a wide range of energy consumption as a behavioral reward, encouraging patients to persevere the long-term succession of graded exercise therapy.

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## The effect of socio-economic status on mental health among Korean adolescents

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**Introduction:** There are increasing trends in adolescent suicide in Korea. This study investigated whether socio-economic status affects mental health, especially depression and suicidal idea or plan. **Method:** This study was based on the data from the 2013

Korea Youth Behavior Web-based Survey (KYRBS). The subjects included 36655 boys and 35790 girls in middle and high school. To evaluate the mental health, the questions were as follows: "Over the past year, did you feel sadness or despair for more than 2 weeks enough to stop your daily living? Have you ever seriously think about suicide? Have you ever planned a suicide? Have you ever tried a suicide?" **Results:** Smoking, alcohol, drug use experience, and sexual contact were positively correlated with sadness or despair and suicidal idea or plan. In socio-economic status, self-rated "below the middle" group showed higher odd ratio but on the other hand higher FAS score group demonstrated higher odd ratio in sadness or despair and suicidal idea or plan. In addition, the more they feel stressed, unhappy, insufficient sleep and unhealthy, the more they felt sadness or despair and had suicidal idea and plan. **Conclusions:** In this study, the more they feel subjectively poor although they have high FAS score, the more negative impact on mental health they had. Therefore, the society needs to pay attention to adolescent's mental health regardless of social economic status and also variable factors including stress, degree of happiness, sleep sufficiency, and health perception should be managed.

### Influence of alexithymia on brain activity during rectal distention in subjects with irritable bowel syndrome

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**Introduction:** We aim to investigate the influence of alexithymia on the brain activity during visceral perception in Irritable Bowel Syndrome (IBS) subjects. **Methods:** Twenty six IBS subjects and 29 controls, matched for age and gender, participated in the study. Functional magnetic resonance imaging was used to acquire blood oxygen level dependent contrast images. Data were collected whilst subjects received balloon distensions to the rectum as well as during anticipation of the distension. Mechanical balloon distension at 40 – 60% level of discomfort for each subject was adopted as visceral stimulation. Alexithymia was assessed in each subject using the 20-item of Toronto alexithymia scale (TAS-20). **Results:** The averaged TAS-20 score of the 26 IBS subjects and controls were  $50.1 \pm 10.6$  and  $46 \pm 10.1$  (mean  $\pm$  SD), respectively. During anticipation interaction of TAS-20 by group (IBS and controls), analyses revealed that TAS-20 score was correlated positively more in IBS group than controls in the brain activity in the left parahippocampal gyrus, left superior orbital gyrus, left insula, anterior cingulate cortex, middle frontal areas, precentral gyrus, middle temporal gyrus, and superior temporal gyrus. During distension, the TAS-20 score was positively correlated with the brain activity more in IBS than controls in the bilateral insula, thalamus, right pallidum, right inferior frontal cortex, right

supramarginal gyrus, mid-cingulate cortex, inferior frontal gyrus, right inferior parietal lobule, and postcentral gyrus. **Conclusions:** The influence of alexithymia on the brain activity was different between controls and IBS. Alexithymia may contribute to abnormal visceral pain processing in the brain of IBS subjects.

### Underlying mechanisms of the interrelationship between sleep apnoea, depression, and fatigue in clinical conditions

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Obstructive Sleep Apnea (OSA) is a common sleep breathing disorder characterized by sleep-related decreases (hypopneas) or pauses (apnea) in respiration. The prevalence of depression in patients with OSA ranges from 5% to 63%. High comorbidity rates amongst OSA, depression and fatigue have been detected in clinical settings. The clinical symptomatology of depression and OSA overlap, resulting in an under-diagnosis of OSA in depressed patients. Fatigue, Excessive Daytime Sleepiness (EDS), impaired alertness, inattention, psychomotor retardation, working memory deficits, irritability, and mood disturbances are symptoms which are detected in both OSA and depression. Sleep fragmentation and hypoxemia, which result from OSA, are considered two main underlying causes of EDS, fatigue, and depressive phenomenology. Hypoxia may be associated with depression, as depressive symptoms are significantly reduced in patients with OSA post oxygen therapy. CPAP treatment of OSA may alleviate depressive symptoms however, it is not possible yet to clearly distinguish improvement of the depressive disorder per se from remitted fatigue and EDS. Undiagnosed OSA may be responsible for antidepressant treatment failure. Finally, the clinical phenomenology of OSA and depression may emanate from a dysregulated HPA-axis activation which has been detected in both disorders. A multifaceted clinical approach is proposed in order to clinically discern OSA from depression as their overlapping symptoms obscure the accurate diagnosis of the primary disorder. Increased knowledge of the interrelationship between OSA, depression, and fatigue may significantly increase the possibility to treat OSA and its complications.

### Shift workers' job strain and stress biomarkers in laboratory and field

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**Introduction:** Work-related stress impacts fourth of employees and over 50% of sickness absences are related to psychosocial factors at work. Much of knowledge is still lacking how stress contributes to well-documented adverse health effects, e.g. cardiovascular diseases. Changes in stress biomarkers can reveal early signs of negative health effects. This study explored the association of job strain with salivary cortisol and  $\alpha$ -amylase (sAA) in shift working health care professionals in laboratory and field. **Methods:** The 95 study participants of an ongoing epidemiological cohort were recruited from hospital wards belonging either to the top (high job strain, HJS,  $n = 42$ ) or bottom quartiles on job strain (low job strain, LJS,  $n = 53$ ) by Job Content Questionnaire. Employees' own estimation of job strain had to be at least as high or low as their ward's average estimation. The saliva samples were collected during the Trier Social Stress Test (TSST) in laboratory and during pre-selected one morning and one night shift and a day off. **Results:** There was a larger increase in salivary cortisol concentration in the HJS than the LJS group (2.27 vs 1.48-fold, respectively, non-significant) in the TSST. The HJS group had higher sAA levels 30 minutes after awakening in the morning shift ( $p < 0.05$ ) and lower cortisol awakening response on the day off than the LJS group ( $p < 0.05$ ). The other stress biomarker responses and total secretion were similar in both job strain groups. **Conclusions:** In this data, job strain in shift workers is weakly associated with early signs of negative health effects as indicated by changes in stress biomarkers.

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### Relationship between pain tolerance threshold and psychological trait in patients with chronic pain.

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**Introduction:** Chronic pain is a heterogeneous condition characterized by heightened sensory sensitivity and cognitive bias. Fluctuations in sensory thresholds at non-affected locations reflect central mechanisms responsible for various forms of chronic pain. The purpose of this research is to study the relationship between psychological characteristics and pain tolerance thresholds at non-affected sites in chronic pain patients, and evaluate the usefulness of pain thresholds in evaluating heterogeneous forms of chronic pain. **Methods:** Quantitative sensory testing was used to measure pain tolerance thresholds (PTT) with electrical stimulation at non-affected sites in 29 patients with chronic pain, then these patients grouped with cluster analysis. The Short-Form McGill Pain Questionnaire was used for self-evaluation of diseased area pain. The Minnesota Multiphasic Personality Inventory (MMPI) was used for measuring psychological characteristics. **Results:** Participants were grouped into a characteristic low-PTT group and a non-low-PTT group. The MMPI profile of the neurotic triad was significantly more common in the low-PTT group, and the conversion V profile significantly more common in the non-low-PTT group. Multiple regression analysis of MMPI clinical scales associated with both groups showed a positive correlation between hypochondriasis and all participants, but a negative correlation with those in the low-PTT group. **Conclusions:** This study demonstrated that chronic pain patients may be classified according to PTT in non-affected sites, and that a characteristic psychological profile

exists for the low-PTT group. Therefore, PTT at non-affected sites is likely useful for evaluating heterogeneous forms of chronic pain.

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### The outcome of treatment for anorexia nervosa inpatients who required urgent hospitalization

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**Introduction:** This study was done to determine which psychosocial factors are related to the urgent hospitalization of anorexia nervosa patients (AN) due to extremely poor physical conditions and to evaluate their outcome after inpatient treatment. **Methods:** A total of 133 hospitalized AN patients were classified into an urgent hospitalization ( $n = 24$ ) or a planned hospitalization ( $n = 109$ ) group. Multiple regression analysis was done of clinical features, body mass index (BMI), psychological tests (the Minnesota Multiphasic Personality Inventory - MMPI), alexithymia, relationship with parents, and the Eating Disorder Inventory (EDI). The effectiveness of treatment was prospectively determined two years after discharge by the Global Clinical Score (GCS). The hospitalized weight gain and the frequency of outpatient visits were evaluated. **Results:** Of the factors assessed, only BMI at admission was related to the necessity of urgent hospitalization ( $\beta = -1.063$ ;  $p < 0.001$ ). The urgent group had significantly more weight loss after discharge and poorer social adaptation on the GCS, even when the patient had a sufficient increase in body weight during inpatient treatment and an equivalent number of outpatient consultations. **Conclusions:** None of the parameters of the psychosocial tests studied were significantly different between the groups. The outcome of the urgent group was poor. Two years after discharge they had difficulty maintaining weight and continued to have poor social adaptation.

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### The association of abuse experience and independence among aged people in Korea

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**Introduction:** Korean society has been rapidly aging for decades and elder abuse is on the increase along with the growth of elder population. The purpose of this study was to investigate the association between abuse experience and independence in aged people in Korea. **Methods:** This study was based on the data from the Living Profiles of Aged People Survey 2011. The study subjects were 3962 males and 5924 females older than 60. For the assessment of the independence, K-IADL was used. The group who answered not needing any assistance at all according to the K-IADL items referred to as "independent" group. The questions about the abused experience were physically abused, emotionally abused, and family neglect. **Results:** The total number of any abuse experienced

group was 1144 (11.6%), emotionally abused group 1010 (10.2%), family neglect group 306 (3.1%) and physically abused group 46 (0.5%). Physically abused experience did not show significant correlations with independence ( $p=0.257$ ). However, emotionally abused experience, family neglect, and any abused experience were significantly associated with dependency. Family neglect group had higher odd ratio (OR = 2.00, 95%CI 1.51 - 2.65 ;  $p < 0.001$ ) on dependency than emotionally abused group (OR = 1.40, 95%CI 1.16 - 1.68;  $p < 0.001$ ) and any abuse experienced group (OR = 1.44, 95%CI 1.20 - 1.72,  $p < 0.001$ ). **Conclusions:** We verified that any abuse experience gave lack of independence, especially abuse from family. Because of an increasing number of elderly people living alone with rapidly aging phenomenon, we keep watch elderly abuse and give support to remain independence of the elderly that is necessary for living alone, especially from family.

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## Integrative Medicine and Yoga Therapy

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**Introduction:** The number of yoga therapy research papers is increasing on the PubMed site, from 1927 papers in 2012 to 2439 in 2013. In December 2014, there were 2798. All the papers examine the effects of Yoga practice such as asana (physical practice), pranayama (yogic breathing exercises), and other various yogic meditation methods. From the clinical Integrative Medical perspective, we need more analysis of the causes of illnesses as they relate to the mind-body relationship of each patient who suffers from psychosomatic disorders. **Methods:** In traditional yoga philosophy there are theories of the human structure, such as the Five Sheath Theory in the Taittiriya Upanishad and the Human Function Theory in various yogic scriptures such as the Yoga Sutras of Patanjali. We used these theories to develop our new Semi-Structured Interview Manuals (SSIM) and used them to clinically assess psychosomatic patients, and then counseling/treatment was designed based on the assessments. **Results:** This traditional yogic assessment-treatment method using SSIM for psychosomatic patients is in its beginning stage. We will introduce some case studies. **Conclusions:** The mental assessment of psychosomatic patients is complex and needs an Integrative Medicine approach using both Western psychotherapy and traditional methods from Asian and other traditions. We need statistical analysis to develop more tangible and effective assessment methods using traditional yoga philosophy.

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## Alexithymia, social stress and desire for alcohol in social drinkers

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**Introduction:** Alexithymia is a complex personality construct comprising difficulty in identifying and describing emotions and externally oriented thinking. Its role in heavy and problematic alcohol consumption is well documented, together with its relationship with social distress. However, little research has investigated alexithymia in social (non-problem) drinkers, and its

possible links with social stress and desire for alcohol. In this experimental study, we explored the relationship between alexithymia and desire for alcohol in anticipation of, and response to, an experimental stressor. **Methods:** One hundred and thirty eight social drinkers (56.53% females, mean (SD) age 31.76 (10.71)) completed a self-rating measure of alexithymia, and a stress-inducing task. Desire for alcohol was measured at three time points (baseline (Time 1), anticipation of stressor (Time 2) and recovery (Time 3)). **Results:** Repeated Measures ANOVA demonstrated a significant group effect of alexithymia,  $F(2, 135) = 15.65$ ;  $p < 0.001$ ; together with a significant time x alexithymia interaction effect on desire for alcohol  $F(3.0, 202.7) = 7.30$ ;  $p < 0.001$ . Post hoc tests revealed that alexithymics presented significantly higher desire for alcohol at anticipation of the stressor task compared to non-alexithymics (49.88 (SD 32.81) versus 17.11 (SD 22.50)). **Conclusions:** The findings demonstrate increased desire for alcohol in anticipation of a social stressor among alexithymics. This offers some explanation for the relationship between alexithymia and alcohol consumption, and may serve as a pathway to intervention to prevent problematic alcohol consumption in this personality type.

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## Effective management of somatization

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Chronic somatization is common in non-psychiatric settings. However, treatment of somatization is challenging because it cannot be treated according to the existing biomedical model. Therefore, special skills and strategies are required by non-psychiatric physicians to facilitate acceptance of psychiatric treatment for managing chronic somatizing patients effectively. Literature related to this topic was reviewed. Somatizing patients need explanations and understanding, above expectations for support and for tests and diagnosis. Psychological interventions for somatizing patients include referral by physicians and management by trained physicians or psychiatrists using cognitive behavioral techniques. The importance of interview techniques has been stressed in the identification and management of these patients. In particular, medical students and non-psychiatric physicians should learn how to refer the patient for psychiatric or psychological assessment. The educational programs include positive criteria for somatization, understanding the role of anger management style and mood in somatization, and skills training in biopsychosocial history taking. Role playing can be effectively used to improve communication skills for assessing and managing patients with somatization. Psychiatric consultation can also be used as therapeutic strategy. In addition, psychopharmacological intervention needs to be included in management of somatization. Physicians need to adopt patient-centered care with an emphasis on illness experience as a way of helping somatizing patients. A combination of cognitive behavioral therapy and psychopharmacotherapy along with psychiatric consultation is recommended in management of somatization.

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## Cross-cultural differences in the processing of fearful and painful vocalizations by Japanese and Canadian listeners

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**Introduction:** In psychosomatic medicine, understanding cross-cultural differences in the recognition for fear and pain would be very important for accurately understanding the mental state in different cultures. However, to our knowledge, no study has investigated cross-cultural differences of fearful and painful vocalizations. We aimed to investigate cross-cultural differences in the processing of fearful and painful recognition in different cultures. **Methods:** Thirty Japanese and 30 Canadian listeners participated in the present study. The Montreal Affective Voices (MAVs), consisting of a database of non-verbal affect bursts portrayed by Canadian actors, were used to evaluate fearful and painful vocalizations. The subjects rated emotional intensity, valence, and arousal for each vocalization. **Results:** Regarding arousal, no significant difference was observed for the recognition of fearful and painful vocalizations between Japanese and Canadian listeners. Notably, for intensity and valence, a significant difference was observed in the recognition of fearful vocalizations, whereas no significant difference was found in terms of painful vocalizations. **Conclusions:** Our results demonstrate that painful vocalizations are a sharable emotion beyond the culture, whereas fearful vocalizations are culture-dependent. These findings suggest that we have to consider the influence of cross-cultural effects in the evaluation of recognition of fearful emotions for different cultures.

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## Psychological factors that characterize PTSD and depression in high school students affected by the Great East Japan Earthquake

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**Introduction:** We examined which psychological factors characterize Post-Traumatic Stress Disorder (PTSD) and depression in students affected by the Great East Japan Earthquake.

Specifically, we examined automatic thoughts, negative appraisals of post-traumatic stress symptoms, and post-traumatic growth. **Methods:** We administered an inventory assessing these factors to 289 high school students (139 boys and 150 girls) of Iwate Prefecture who had been affected by the Great East Japan Earthquake. We then performed a discriminant analysis to examine which patterns of these factors predicted PTSD and depression. **Results:** Fifty-eight students showed high PTSD levels greater than the cut-off of 19. Similarly, 63 students exhibited severe depression levels higher than the cut-off (> 16 points). Both the PTSD and depression scores were significantly higher than normal levels. Our results suggested that negative appraisals of post-traumatic stress symptoms and post-traumatic growth predicted PTSD, while automatic thoughts and post-traumatic growth predicted depression. **Conclusions:** The present results can inform the development of preventive approaches; for example, cognitive restructuring would be useful for decreasing students' negative appraisals of their post-traumatic stress symptoms and increasing post-traumatic growth, which would facilitate their recovery from disaster traumas and reduce the likelihood of their developing PTSD.

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## The contribution of psychosomatic medicine to psycho-oncology in Japan

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**Introduction:** Psycho-oncological practice is carried out mainly by psychiatrists as a part of liaison psychiatry all over the world. In Japan, psychosomatic medicine has been developed specifically in internal medicine. We set up a new outpatient service for cancer patients in our department. The aim of this study was to evaluate the contribution of psychosomatic medicine to psycho-oncology by analyzing the role of this specified outpatient service. **Methods:** Multiple factors such as age, sex, cancer site, clinical symptoms, main reasons for consultation, psychiatric diagnosis (according to DSM-IVTR) of cancer patients who visited our specified outpatient service for psycho-oncology during the period of April 2013 to December 2014 were analyzed. Hospital Anxiety Depression Scale (HADS) was completed by the patients for the assessment of psychological distress. **Results:** Breast cancer and lung cancer patients most frequently visited the psycho-oncology outpatient service. Main physical symptoms were appetite loss, general fatigue and pain, whereas depressive mood, anxiety and insomnia were the most frequently reported psychiatric symptoms. In addition, psychological support for receiving bad news, operation and chemotherapy, and for spiritual pain and family care were requested for psychosomatic medical doctors. **Conclusions:** These findings support that psychosomatic medical doctors can serve an important role for both the physical and psychological aspects of cancer treatment. The advantage of a specific outpatient service for psycho-oncology is that it can provide an open door to both cancer patients and their family members.

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## Personality correlates of breast cancer patients

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**Introduction:** Previous studies about personality correlates of cancer patients led to inconclusive results. Studies by Kreitler et al. showed that focusing on theoretically-relevant factors provides new insights into personality correlates of cancer patients. The study was done in the framework of the Cognitive Orientation (CO) theory of health behavior and wellness which enables identifying relevant factors in cancer patients. The goal was to examine whether personality tendencies grounded in the CO theory can be identified in breast cancer patients. **Methods:** The participants were 250 breast cancer patients and 180 matched healthy controls. They were administered the CO questionnaire of breast cancer. The questionnaire included items assessing beliefs of four types (i.e., about oneself, others and reality, norms, and goals) referring to themes identified in pretests as relevant in regard to breast cancer. **Results:** Discriminant and logistic regression analyses showed that patients and controls differed significantly in the scores of the four types of beliefs and in most themes, including concern with controlling oneself and others, dependence on others' evaluations, emotional blocking, perfectionism, and conflicts about self identity and giving to others. Some of these variables were related to medical features, none to demographic ones. **Conclusions:** There exists a relevant set of psychological correlates of breast cancer patients that could serve as basis for psychological interventions accompanying medical treatments and needs to be examined in other cultural settings.

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## PRISM as a valid measure for assessing suffering in the context of palliative care

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As a person-centered model of care has gained more acceptance in health care contexts, suffering assessment has become of increased interest. Particularly, in palliative care (PC), as it deals with chronic and advanced conditions and emphasizes on suffering prevention and relief from a bio-psycho-social and spiritual perspective. Suffering entails a severe stress experience associated with threats to integrity and a feelings of exhaustion as regulatory processes become insufficient to cope. Thus, accurate assessment of suffering is essential to accomplish the goals of PC. Pictorial Representation of Illness and Self Measure (PRISM) is a commonly used instrument for the assessment of the impact of the illness on the self. It is a nondirective instrument regularly used for assessment of suffering in multiple populations with acute and chronic illnesses and other health problems. Its psychometric properties have been repeatedly confirmed. PRISM methodology is conceptually coherent with current definitions of suffering and has showed, not only to be the most valid and reliable instrument to assess suffering,

but to have characteristics particularly important when assessing suffering in frail patients with advanced illnesses. Two aspects will be discussed in detail: 1. its psychometric properties and unique characteristics, and 2. its use within the palliative care field.

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## Anaphylactoid reaction as a conversion disorder following anaphylactic shock: a case report

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**Introduction:** Anaphylactic shock is a serious allergic reaction and diagnosed on the basis of the presenting symptoms. Some patients having experienced anaphylactic shock, later go on to mimic their previous symptoms. It is important to identify the authenticity of such symptoms before deciding any treatment strategy; this can be difficult. **Case description:** A 28 year-old woman developed anaphylactic shock. She suffered from the typical symptoms of anaphylactic shock and was admitted for treatment; after receiving drug treatment she again developed the same symptoms. After this incident, she feared that she would suffer from anaphylactic shock in the future and became depressed. During the treatment of her depression, she showed anaphylactoid reactions many times. Her condition showed the typical symptoms but it looked like conversion disorder. However, despite many diagnoses by specialists, we were unable to completely rule out anaphylactic shock, and physical treatment was carried out many times. On the premise that such anaphylactoid reactions would happen in the future, we discussed with the patient and her family how to deal with such possible situations. Also, we contacted her local hospital and discussed a strategy whereby, in the event of her experiencing an anaphylactoid reaction, they would accept and treat her symptoms as anaphylactic shock. As a result, the incidents of anaphylactoid reaction decreased and her depression improved. **Comment:** Anaphylactic shock treatment is usually started without careful investigation. This strategy might be promoting frequent anaphylactoid reaction as a conversion disorder. Psychiatric intervention would be needed to prevent this process.

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## The mental health of pregnant women in Japan

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**Introduction:** It has become clear that 10-20% of women have post-partum depression, and many mothers rearing infants felt strong stress. Moreover, pregnant women having problems with mental health were considered to increase. In this study, the mental health of pregnant women in Japan was studied, and the relationship between depression and other factors was examined. **Methods:** The Scales used were Edinburgh Postnatal Depression Scale (EPDS), General Self-Efficacy Scale (GSES), Stress Coping Scale (SCS), and Help-seeking Preference Scale (HSPS). Edinburgh Postnatal Depression Scale was used to measure depression of women after birth. Following the previous studies, EPDS was used to measure depression of pregnant women. The participants were 49 pregnant women (M = 31.82, SD = 4.28

years), and 78% was primipara, and 60% not employed. **Results:** The mean score of EPDS was 5.73 (SD = 5.15), and the result of EPDS suggested that 18% of participants were suspected of depression. The result of t-test showed that SCS scores of "avoidance" was higher and "social support seeking" was lower in the participants who felt more depression (avoidance:  $t = 0.27$ ;  $p < 0.01$ ; social support seeking:  $t = 2.38$ ,  $p < 0.02$ ). Also, "concerning to help-seeking" and "concerning to achievement" were higher in those participants (concerning to help-seeking:  $t = -2.24$ ;  $p < 0.03$ ; concerning to achievement:  $t = -2.93$ ;  $p < 0.01$ ). It became clear from this study that depressive pregnant women took coping behaviors which increased stress. The result of regression analysis indicated that "concerning to help-seeking" and "social support seeking" were influenced to depression. It was also suggested that avoidance to help-seeking and social support affected the depression of pregnant women.

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### No pain, no gain: objective and subjective adverse effects in the behavioral treatment of insomnia

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Historically, there has been little systematic investigation of adverse effects in psychotherapy. Cognitive Behavioural Therapy for Insomnia (CBT-I) is the most effective treatment for chronic poor sleep, and involves targeting thoughts and behaviors presumed to maintain insomnia. One component of CBT-I is Sleep Restriction Therapy, which standardizes bed and risetimes and limits time in bed to help promote consolidated sleep. Recent work by our group reveals that Sleep Restriction Therapy, while effective, engenders subjective and objective daytime impairment during acute implementation. Our work has important implications for patient safety and suggests there may be an element of "no pain, no gain" in the behavioral treatment of insomnia.

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### Hyper arousal of central nervous system in insomnia during daytime: resting state qEEG study

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**Introduction:** Hyperarousal theory is the most promising theory of insomnia. The theory emphasizes 24 hour hyperarousal of CNS is not only a source of the insomnia, it also is a maintenance factor. Numerous studies confirmed CNS hyperarousal in sleep. Still, evidence of daytime hyperarousal is unsatisfactory. Thus, in the present study we identified daytime cortical hyper arousal in insomniacs through resting state qEEG of whole scalp area. **Method:** Age, sex matched 13 comorbid-free insomniacs (mean age: 28, SD 7.21 years) and 7 healthy controls (mean age: 24.14, SD 1.57 years) participated to the study. We exclusively recorded EEG from 11 AM to 3 PM for appropriate data of daytime EEG pattern. Resting state EEG was recorded on both eye open and eye closed conditions. **Results:** There was no difference on low frequency range oscillation of insomniacs and healthy controls. However, Insomnia patients showed significantly higher amplitude of high

frequency EEG over 15Hz than healthy controls on whole scalp area. This showed on both eye open and eye closed conditions. **Conclusions:** High frequency EEG is considered as index of neuronal activation. The elevation of high frequency amplitude on whole brain area of insomnia could be considered as a strong evidence for 24-hour hyperarousal theory.

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### Effects of balance in possible selves on motivation for the anxiety students

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**Introduction:** Individuals with public speaking anxiety, a subtype of social anxiety, present themselves and their performance negatively. The possible selves is the self-concept related to motivation which accelerates the process on selective information to achieve the goal and connect the future regarding cognition and motivation. Therefore, the possible selves activates the effort on behavior, and by connecting the attention and plan, it becomes the potential stimulant to the behavior. **Methods:** After screening 162 individuals, 62 who rated high on public speaking anxiety participated in the study. They were first asked to complete PSQ, then randomly assigned to 3 conditions to activate the possible selves. In each condition, participants watched a video of a person delivering public speaking exceedingly (positive), poorly (negative), or decently (balanced). The video was showed 3 times total. After every session, participants completed K-SAS, STA, and VAS. Finally, participants rated public speaking anxiety. **Results:** Individuals with high public speaking anxiety reported lower positive self and motivation than those who score low. There was a significant difference on public speaking anxiety before and after activating the possible selves. Throughout 3 sessions, anxiety and motivation increased significantly. The thoughts on public speaking remained the same, but the biased perception on public speaking was decreased. **Conclusions:** By activating the possible selves, the biased socially-anxious-self becomes balanced. Balancing the possible selves does not only decrease the perceived anxiety, but also increases the motivation. This study claims that the possible selves could be applied to treat other mental disorders besides anxiety.

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### Prevalence of depression and impact of social support on glycemic control in diabetic patients

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**Introduction:** Prevalence of depression in patients with diabetes is higher than in the general population, different studies have reported rates of up to twice of depression in diabetic patients than in the normal population. The aim of this study was to investigate the relationship between depression and social support and their impact on glycemic control and quality of life in diabetic patients. **Methods:** A total of 158 type-2 diabetic patients who attended outpatient health clinics and endocrinology clinics were enrolled in this study. The patients were under treatment. **Methods:** We used a

questionnaire that consists of four sections. In the first section education, monthly income, type of medication (i.e., insulin, metformin, glibenclamide, Gliclazid), age, sex, marital status, race, hemoglobin A1C and the number of doctor visits were asked. In the second section signs of depression are investigated using a standardized *Patient Health Questionnaire (PHQ-9)* that consists of 9 questions based on nine symptoms of depression according to the DSM-IV. In the third section, social support was measured using a standard *MOS social support survey*. In the fourth section the amount of drug adherence was measured using the *Morisky Medication-Taking Adherence Scale-MMAS (4 item)*. **Results:** In the present study it is shown that the MOS score and the score of the PHQ-9 are associated. But the correlation between the scores obtained from the Morisky scale and these two points are not found. Also it is shown that women had less social support. In fact, the average MOS scores were significantly lower in women than men. MOS scores with the scores of the PHQ-9 had negative correlation and solidarity ( $R = -0.408$ ;  $p = 0.001$ ). In other words in person with higher rate of social support the chance of getting depression was lower. **Conclusions:** Based on this study, the prevalence of depression is higher in diabetic patients, especially in people suffering from chronic diseases. However, in those with higher social support the rate of depression is lower and glycemic control is better and have a lower number of doctor visits. Regarding the relation between quality of life and mental health, a high prevalence of psychological problems was found in diabetic people. Thus, improving mental health of these patients can improve their quality of life.

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### Relationship between stop drinking controllability, hopelessness, social activity, and suicidality

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**Introduction:** Alcohol use disorder (AUD) relates to suicide and AUD patients suffer from suicide problem more than general population. Hopelessness is a determinant factor for AUD suicide behavior. Stop drinking being at the center of AUD patients' life is important in AUD patients' mental health. Social activity is a protection factor which increases the sense of belonging which is a well-known risk factor for suicide. This study aimed to examine the relationship of suicidality with stop drinking controllability, hopelessness, and social activity in an alcohol use disorder population sample and identify how AUD subjects attempt the suicide. **Methods:** All participants had a diagnosis of AUD and answered questionnaires assessing stop drinking controllability, hopelessness, social activity, and suicidality. The data of 252 were analyzed through regression analyses. **Results:** The hopelessness was shown to fully mediate the relationship between stop drinking capability and suicidality. The stop drinking capability had only an indirect effect on suicidality. The social activity was shown to adjust significantly the relationship between hopelessness and suicidality just in lower level of hopelessness.

**Conclusions:** The AUD patients losing control at their drinking problem and stop drinking were more likely to feel hopelessness. Hopelessness can lead to suicidal ideation or suicide attempt. However, participating in social activity moderated AUD patients

suicidality. These findings suggest that hopelessness needs to be treated and stop drinking capability should be considered as preventing suicide behavior among AUD patients.

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### Comorbidity of anxiety with heart disease among adults seen in emergency departments in a large Asian-American and Pacific Islander population

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**Introduction:** Coronary heart disease (CHD) is the number one cause of death for women and men in the United States. Recent studies suggested that depression and anxiety are strongly associated with an increased risk of CHD. However, there have been relatively few studies on the role of anxiety in CHD, especially in ethnically diverse populations such as Asian Americans and Pacific Islanders. **Methods:** This study used a quantitative epidemiologic methodology that utilized secondary data from emergency department admissions ( $N = 790934$ ) of adult patients in Hawai'i. Emergency department records from January 1, 2000 to December 31, 2010 were utilized for adults (18 years of age and above) with a diagnosis of specific types of heart disease (i.e., heart failure, cardiac arrest, cardiomyopathy, coronary atherosclerosis, acute myocardial infarction, and other ischemic heart diseases) and anxiety (i.e., anxiety states, panic disorder without agoraphobia, generalized anxiety disorder, phobic disorders, obsessive-compulsive disorder, and posttraumatic stress disorder). Mental health and heart disease diagnoses were coded according to the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Ethnicity was based on self report of a single identity. **Results:** Heart disease was comorbid with anxiety among adults admitted to emergency rooms for Hawai'i's ethnically diverse population. The estimated adjusted odds ratio of any heart disease diagnosis with anxiety for adults under 65 was 2.72 (95% CI 2.65-2.79) and for adults 65 years and over was 3.33 (95% CI 3.17-3.50). In both age groups, association of heart disease with anxiety was greatest among Pacific Islanders. Although the temporal relation between the cardiac diseases and anxiety is unclear, the findings are consistent with recent research showing that heart disease may be predictive of anxiety disorders. **Conclusions:** This study provides further support to previous findings that anxiety is strongly associated with cardiovascular disease. There are important prevention and intervention implications for this finding. In addition, special consideration should be given to efforts regarding Pacific Islanders, given our finding of a stronger association between heart disease and anxiety for this ethnic group in our study.

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### Psychosomatic epigenetic education of medical students

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Medical Students experience stress daily, thus the role of stress in health and disease has an immediacy for them. The role of genetics and epigenetics (e.g., SERT gene and childhood abuse vs learning good coping skills) in stress vulnerability and resilience can be taught with maximum effect as well as the role of memory (memes) arising from culture and personal experience. Changes in telomere length associated with stress and stress management can illustrate the psychosomatics of longevity itself. As applied to patients, this approach is best illustrated through a narrative story of the patient's life rather than the traditional inventory of disparate story lines such as present illness, past psychiatric history, past medical history, substance use history, social history. The narrative story leads to an integrated biopsychosocial formulation of the patient as a person, with emphasis to the intertwined causal gene x meme x environment interaction leading to the present, and a rational three-dimensional management plan.

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### Turkish Baths: eliminating real or imagined toxins in a psychotic, vulnerable adult

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**Introduction:** This clinical case demonstrates the effectiveness of exercise combined with a culturally sanctioned therapy, the Turkish Bath, for a patient who had the delusion that a person caused him to lose muscle mass by giving him estrogens. **Case description:** A 28-year old practicing Muslim male was admitted for trying to burn down a Mosque. The patient was delusional that his muscles were wasting away. He claimed he developed fatigue and weakness because he was poisoned by its athletic director. When admitted, he was very remorseful of his inability to control his anger. However, he still felt that his career was ruined by the poisoning and that his muscles continued to waste away. He decided to seek solace by going to the gym daily followed by long visits to the Turkish Bath (suggested by the family). He "understood" that this was a way to cleanse the blood, eliminate poison from the body. While staff expressed concern over the possible dangers, the patient and family felt relieved that his muscles would be revitalized, that his body would be cleansed of this poison, and allow him to get some needed sleep. He was also able to take small doses of antipsychotics, which may have attained higher concentration due to volume loss due to the baths. He gradually improved to baseline. **Comment:** A literature review and history of Turkish Baths (often built next door to Mosques) is presented as well as a more in depth case study of this young man.

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### Inpatient psychosomatic medicine for the whole family – An example from Germany

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**Introduction:** The Psychosomatic clinic Waldmünchen is Germany's only psychosomatic hospital with a treatment plan for families. Admitted are parents with psychosomatic diseases with their children or vice versa both being burdened from age of 3 and

older. **Methods:** The present survey shows in the period from 01/2013 to 06/2014 both somatic and psychological diagnoses of the total of 820 hospitalized patients aged 3-73 years. The division of different age groups allows the monitoring of age-related change of somatic and psychological diagnostics according to ICD-10. **Results:** The first diagnosis of most of the children and young people up to the age of 14 is "disturbances of the social behavior". The age group of 14-18 year old young people shows a "transition phase" of the "disturbances of the social behavior" (20%) to major depressive disorders" (70%). Then, already over 90% of the adult patients from the age of 19 to the age of 73 have "depressive disorders" and half of them get second diagnoses like "personality disorders". **Conclusions:** The results relating to diagnosis in childhood and adolescence suggest that behind the diagnoses of the social behavior disorder a beginning or existing affective and/or personality disorder is hidden. Both the special behavior of children and young people with psychological symptoms and special behavior of adults with psychological symptoms can be rather inadequately covered.

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### A psychosomatic perspective on end of life care medical training

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Psychosomatic Medicine, as a novel approach to health and disease, is now widely accepted from the scientific community, nevertheless when speaking about it as a scholarly discipline there is less consensus. It is often considered as an argument or an approach to discuss when teaching about Psychiatry. At the same time, though palliative care education has recognized as a priority in many European countries, that should be integrated to undergraduate medical curricula, there remains a lack of consensus on how to do that. The Psychosomatic Model (PM) can provide fundamental guidelines to design useful undergraduate courses for the teaching of palliative medicine. First of all, the PM highlights the importance of the bio-psycho-social approach, that allows us to fight the biological reductionism of the "oncologist view" on palliative medicine. In addition, the PM underlines that, especially in palliative care, we have to take in account not only the disease but the individual goals of the patient. As a third point, the PM remember to us that a future doctor have to acquire non only knowledge but also (non technical) skills and personal attitudes. At the University of Turin (Italy) the Medical School proposes an integrated academic curriculum on these issues through two didactic modules: 1. a mandatory course on doctor-patient relationship, communication, end of life care and clinical ethics at the second year; 2. an elective didactic training on clinical aspects in psycho-oncology and palliative care within a psychosomatic model of medicine at the fourth year. Both modules consist of lectures, interactive lessons, role playing, supervised focus groups, and clerkships in hospice. With a pre-post methodology, we administered an anonymous questionnaire to ask the students their opinion on usefulness of the mandatory course, and a specific questionnaire to evaluate the attitude to care for the dying patient. The course emerged as feasible and useful (from the perspective of the student and as measured by the specific test). In the lecture these results will be discussed in detail.

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## ICF guided inpatient treatment for psychosomatic patients

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Psychosomatic medicine follows a holistic, person centered, or bio-psycho-social concept, as outlined in the ICF (International Classification of Functioning, Disability, and Health) of the World Health Organization. An example of how to translate this concept in daily practice can be found in “inpatient psychosomatic rehabilitation hospitals”. There are about 25000 beds in psychosomatic rehabilitation hospitals in Germany, which admit per year approximately 5 per 1000 persons of the general population. Patients suffer from chronic psychological disorders like affective, anxiety, adjustment, or personality disorders. Psychosomatic treatment aims at the prevention, treatment, and compensation of the present illness and life problems including a multilevel psychosomatic assessment and multidimensional treatment, enclosing the modification of psychodynamic processes, the amelioration of symptoms, the training of capacities, the coping with the chronic illness and impairment, the restoration of wellbeing and normal life, and the occupational reintegration including the search for a workplace which allows work in spite of impairment. Scientific studies have shown that the psychological status, the motivation to work, the number of days on sickness absence and occupational reintegration can be improved, and that the system pays for the patients themselves, but also pension, and health insurance.

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## Controlled trial of UE in occupational therapy and cognitive behavioral group therapy in anxiety patients

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**Introduction:** Psychotherapy can have negative effects, which is especially true for group psychotherapy because of the group setting, therapeutic content, or interaction not only between patient and therapist but also between patients. In this sense group sessions per se can have negative effects. To study treatment specific side effects an unspecific group control is needed.

**Methods:** Sixty-two patients with workplace-related anxieties were randomized to cognitive behavioral group therapy or an unspecific group encounter aiming to increase recreational activities. Patients filled in the Unwanted Events in Group Therapy Scale (UE-G scale). **Results:** In the anxiety therapy group, 41.9% of the patients reported at least one relevant side effect, as compared to 28.9% in the recreational group. Significant differences are found for “I feel

trapped in the room”, “My problem was not touched”, “It is all too complicated”, “I got additional problems”, “I felt criticized”, I will get further problems, when I do what has been recommended in the group therapy”. **Conclusions:** Anxiety treatment in groups has specific negative effects, when compared to group encounters as such. Of special importance is that the group can induce further feelings of helplessness and anxiety. Group psychotherapists should be aware of potential side effects.

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## Resilience and regeneration orientation in stress management: the ReRe scale

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**Introduction:** Psychosomatic patients often have the idea that they need regeneration, in order to “reload their batteries“. This means avoidance of stressors, self-care, distraction or in general saluotherapy. The alternative is to improve “resilience“, hardiness, or stress tolerance. An open question is which approach is best for which patient and how to proceed therapeutically. **Methods:** Regeneration and resilience orientation was measured with the ReRe scale. It has 10 items for resilience and 10 for regeneration. The rating is done on a 5 step Likert scale from 1 = “do not agree“ to 5 = “agree fully“. A total of 342 unselected patients from a psychosomatic rehabilitation unit (67.5% female, age 49.8 years) filled in the ReRe scale and the SCL-90. **Results:** The average score for regeneration was 3.35 (Range: 1-5; SD = 0.79) and resilience 3.43 (Range: 1-5; SD = 0.69), with means per item varying from 2.55 to 4.37 for regeneration and 2.96 to 3.82 for resilience. Cronbach’s Alpha was 0.85 for regeneration and 0.82 for resilience. There were significant negative correlations of regeneration orientation with all subscales of the SCL-90 and significant positive correlations with resilience orientation in respect to “social insecurity“, “phobic anxiety“, and “psychoticism“ and a significant negative correlation with the intensity of the answers in the SCL-90. There were no differences in respect to gender or age. **Conclusions:** The study shows that resilience and regeneration orientation can be separated and measured. Regeneration is positively associated with subjective wellbeing in contrast to resilience orientation. Further studies will have to show whether this is positive or the result of an avoidance behavior and what is best for coping with stressful situations.

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## Understanding co-occurring pain and emotion: a transdiagnostic approach to treatment

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The mystery of the relationship between emotional distress and persistent pain is at the dawn of being unraveled. Their co-occurrence is common and associated with many negative outcomes, but poorly understood. While historically viewed as

separate entities, modern psychology suggests a more delicate relationship. Indeed, one need not assume that distress is a reaction to pain or that it causes it. An alternative is to explore transdiagnostic processes that underlie both. Emotion regulation is a transdiagnostic condition that strives to produce appropriate responses to the ever-changing demands of the environment. To be effective this process must be in tune with the situation and “context sensitivity” may explain why distress and pain may persist beyond their usefulness. To promote treatment that addresses transdiagnostic emotion regulation processes, we studied the role of reducing negative affect to enhance treatment effects. First, we present work isolating the effects of employing a communication style that addresses negative affect via emotional “validation”. Second, we present a hybrid treatment for patients suffering long-term distress and pain that in part addresses negative affect and in part addresses avoidance of movements. We conclude that emotions are intrinsically entwined with pain. Indeed, underlying processes such as avoidance and catastrophizing may fuel both. Understanding this relationship opens new avenues for treatment.

### **Bodily complaints and mood concurrency in patients with severe chronic somatoform disorder**

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**Introduction:** Based on the concept of somatization, psychological distress is supposed to be experienced as symptoms of physical illness. This suggests a close-fitting intra-individual association between bodily complaints and mood in patients with somatoform disorder (SFD). The aim of the present study was to investigate the contemporaneous day-to-day complaints-mood association in patients with severe chronic SFD using an ecological momentary assessment (EMA) design. **Methods:** Eleven patients, who had recently received specialized tertiary care treatment for severe chronic SFD, kept an online electronic diary for 4 consecutive weeks. They were prompted at intervals throughout the day to complete questions on their momentary primary symptoms (i.e., pain and fatigue), and mood state (i.e., negative and positive). For each measure, day-mean aggregated values were computed and analyzed using linear multilevel (mixed model) regression analysis. **Results:** Fixed factor results showed that symptoms were associated with both negative mood state ( $\beta = 0.47$ ) and positive mood state ( $\beta = -0.59$ ). Random results, however, indicated large inter-individual differences, with correlations varying between 0.17 and 0.99 for negative affect, and between -0.88 and 0.14 for positive affect. **Conclusions:** This study demonstrates a substantial day-to-day contemporaneous association between bodily symptoms and affect across subjects with severe chronic SFD. In accordance with the literature for less severe patient-subgroups, there are large inter-individual differences. In this study, data showed a relationship between both negative and (inverse) positive mood and complaints, which has potential clinical relevance: providing SFD patients with feedback consisting of their personal day-to-day

concurrency graph may promote understanding of their own complaints in a broader context than the somatic area.

### **The moderating impact of gender in the association between alexithymia and craving in alcohol dependent patients: a vulnerability factor for women but a protective factor for men?**

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**Introduction:** Alexithymia is a multifaceted personality trait that involves difficulties in identifying and describing feelings to others, a poor fantasy life and an externally oriented cognitive style. Alexithymia has been described as a vulnerability factor for mental and physical diseases. **Methods:** We investigated in a group of 158 alcohol-dependent patients (103 males, 55 females) the association between depression and craving for alcohol when these patients were starting a detoxification program, and the moderating impact of gender and alexithymia on this relation. **Results:** We first found an interaction between depression and gender in the prediction of craving in the sense that only for women an increase in depressive mood was related to an increase in total craving. When examining the gender separately, we found that alexithymia factors acted as moderators. For women, the link between depression and craving was strengthened for the ones scoring higher on “difficulties describing feelings”. But, for men, the link between depression and craving was reduced for the ones scoring higher on “externally-oriented thinking”. **Conclusions:** These findings suggest that in some cases that need to be identified more systematically in the future, alexithymia can exert – at least in the short term – some protective effects.

### **iSee – development of PRISM for use by groups and giving feedback in real time**

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Positive Group is a specialist consultancy, working predominantly with large corporations but also with health service providers, aiming to optimize individual and group performance at work, and to promote individual wellbeing. We have developed iSee, an instrument derived from the PRISM measure developed by Büchi, Sensky and colleagues, to elicit individual and group feedback. iSee is substantially more versatile than the original PRISM measure, allowing PRISM to be completed electronically, on smart phones, tablets or computers, and the resultant data can be instantaneously captured via the internet. We have applied data collected using iSee to contribute to group decision-making, consensus development, and other types of meetings, and to inform organizational change.

This presentation will introduce the properties and methodology of iSee, and outline two examples of its application in an occupational setting. Study 1: iSee was used by the leadership team of a large company to appraise the relative importance of a range of factors/variables known to be linked to organizational success. Study 2: iSee was used to identify a range of individual and organizational (contextual) variables known to be linked to psychological wellbeing and performance at work. To further enhance the potential of iSee, we are developing methods of displaying and manipulating group data from iSee in real time, so that data can be interrogated as well as collected during meetings. This will allow iSee to be used even more effectively within groups, for example to enhance nominal group techniques and other forms of consensus development or change management.

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### Clinical model of buprenorphine/naloxone therapy in a multidisciplinary, group-based setting for high-risk chronic pain patients

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The prescription drug epidemic has made it increasingly difficult when treating chronic pain patients with opioids. Accurately assessing patients for risk factors that could complicate management of chronic pain with opioids is challenging and can be time consuming. Fear of risks related to chronic opioid therapy can limit access to quality pain management. Providers often overlook the fact that risk factors such as psychiatric comorbidities such as depression and anxiety and depression are modifiable and treatable. The same can be said for risk factors related to addiction. The climate is one that is still permeated with fear these risks, and patient care is currently suffering. Buprenorphine/naloxone can assist in mitigating some of the risks related to chronic pain management with opioids while providing benefit. We will describe a clinical model involving medical management of chronic pain with buprenorphine/naloxone and other adjuvants that takes place in a multidisciplinary, group-based setting focused on longitudinal assessment and treatment of comorbid risk factors in a population deemed high risk as efficient and effective.

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### Effects of improvisational music therapy on enhancing communication skills in children with global developmental delay

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**Introduction:** The case study demonstrates the potential for improvisational music therapy in the treatment of children with global developmental delay. **Case description:** The case illustrates the use of improvisational music therapy in a 3-year old boy with severe physical health problems since his birth including liver dysfunction, ongoing hearing and vision problems, as well as global developmental delay with communication delay (no speech), and challenging behavior. The child received three months of improvisational music therapy process on a weekly basis. Pre- and

post-music therapy measures were obtained, the progress was monitored using J. Robertson's rating scales: The Relationship Continuum & The Musical Communicativeness Continuum. There was a significant improvement in the scores (from 3.8 to 6.4 out of 7, and from 4 to 6.5 out of 9, respectively). Vocalization evoked by music therapy led the child to gain the early single words level during the therapeutic process. **Comment:** The findings of the case study are encouraging and suggest beneficial effects of improvisational music therapy on communication, emotional, and behavioral disorders in children with global development delay. Establishing the meaningful therapeutic relationship provides musical and emotional space for the child as a secure base - which results in evoking interpersonal responses and initiatives, creativity in musical and emotional expression, as well as a supporting speech development.

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### Serum BDNF as a treatment biomarker for response to docosahexaenoic acid in traumatized people vulnerable to developing psychological distress: a randomized controlled trial

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**Introduction:** Our open-label pilot study showed that supplementation with docosahexaenoic acid (DHA) increased serum brain-derived neurotrophic factor (BDNF) levels and that there might be an association between changes in serum BDNF levels and reduced psychological distress. Animal research has indicated that a DHA-enriched diet increases BDNF in the brain. In this randomized double-blind controlled trial of severely injured patients vulnerable to Post Traumatic Stress Disorder (PTSD) and depression, we examined whether DHA increases serum BDNF levels and whether changes in BDNF levels are associated with subsequent symptoms of PTSD and depression. **Methods:** Patients received 1470 mg/d of DHA plus 147 mg/d of eicosapentaenoic acid (EPA; n = 53) or placebo (n = 57) for 12 weeks. Serum levels of mature BDNF at baseline and 12-week follow-up were measured using ELISA kits. At 12 weeks, we used the Clinician-Administered PTSD Scale to assess PTSD symptoms and depressive symptoms by the Montgomery-Åsberg Depression Rating Scale. **Results:** At 12 weeks, there were no differences in the CAPS total score between the DHA and placebo groups. We found a significant increase in serum BDNF levels during the trial in the two groups with no interaction between time and group. Changes in BDNF levels were not associated with PTSD severity but negatively associated with depression severity (Spearman's  $\rho = -0.257, p < 0.05$ ). **Conclusions:** We found no specific effects of DHA on increased serum levels of BDNF; however, evidence in this study suggests that increased BDNF and pro-BDNF have a protective effect by minimizing depression severity.

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### It is not how much, what it feels like or where it comes from that matters: it's what you do with it

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Thoughts and feelings can appear to intimidate, threaten, overwhelm, and "cause" us to do one thing or another. This experience seems so obvious that it is rarely questioned – most of us just go along with it. More than that, we do not just resign ourselves to the inevitability of this scenario, we also participate in it. Our efforts to reach our goals in life include considerable efforts to assure that the content of our thoughts and feelings agree with or facilitate our reaching these. Calm, comfortable, certain, positive, and encouraging thoughts and feelings become the recipe for success, so much so that we experience the absence of these ingredients as distressing and itself a kind of failure. A question approached in this short talk is whether this scenario is inevitable, or might there be another way for us humans, with all of our painful, discouraging, and distressing experiences, to succeed. The framework applied to this question is the psychological flexibility (PF) model, the model underlying a form of Cognitive Behavioral Therapy (CBT) called Acceptance and Commitment Therapy (ACT). This model includes a focus on performance regulation rather than content of thoughts and feelings. This talk will present data from people seeking treatment in a specialty pain service ( $n = 573$ ; 66.3% women; age  $M = 46.7$  years) to highlight some less well known facets of PF. Measures included the Acceptance and Action Questionnaire-II, Cognitive Fusion Questionnaire, Committed Action Questionnaire, and Experiences Questionnaire. In confirmatory factor analyses, a model with unitary underlying factor emerges in addition to five separate factors, including acceptance, cognitive defusion, and committed action. In further analyses both the unitary and separate factors correlate with important aspects of daily functioning. The results support the simultaneous unidimensional and multidimensional nature of PF, and its role in health and wellbeing, consistent with the model.

### Effectiveness of an early intervention for panic symptoms: results from a randomized controlled trial

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**Introduction:** Panic disorder (PD) is a serious DSM-IV axis I disorder affecting 2.2% of the Dutch population each year. It is associated with a large burden of disease, considerable medical consumption and extensive loss of productivity. A substantial proportion of the population suffers from subsyndromal PD and is at risk of developing a full-blown PD. We developed a public mental health intervention for panic symptoms, called the "Don't Panic" course. The intervention consists of 8 weekly sessions of 2 hours each in groups of 6 to 12 participants following the protocol of the "Don't panic" course. It contains psycho-education about anxiety and panic attacks, changing life-style, managing stress, relaxation training, cognitive restructuring, interoceptive exposure, "in vivo" exposure, and relapse prevention. **Methods:** A multi-site randomized trial (the course "Don't Panic" versus waiting list

control group), with a baseline measurement and 2 follow-up measurements (at the end of the intervention and 6 months later). Subjects were recruited from the general population. A total of 217 subjects entered the study and were randomized to the experimental group ( $N=109$ ) and the control group ( $N=108$ ). **Results:** People presenting with subthreshold and mild PD benefit from this brief intervention: escalation toward more severe manifestations of PD is avoided and panic symptom levels were much reduced. These beneficial effects were maintained over time. **Conclusions:** The target group is known to be reticent in asking professional help and it is therefore good to see that a low threshold intervention is apparently effective and regarded as accessible and acceptable.

### Klinefelter syndrome and testosterone substitution therapy; the need for psychiatric evaluation

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**Introduction:** Klinefelter Syndrome (KS) is an endocrine disorder in boys and men marked by an extra X-chromosome (47,XXY). About 1 in 500-700 males suffer from the disorder, although it remains largely underdiagnosed. From mid-puberty testosterone substitution is advised as testosterone levels are lower than normal in about 80% of adults with KS. KS has been associated with an increased rate of several psychiatric disorders (e.g., depression, attention deficit/hyperactivity disorder, schizophrenia). As it is illustrated in the present case, little is known about psychiatric adversities when embarking on a lifelong testosterone substitution therapy. **Case description:** A 53-year old male was referred to the psychiatrist because he often suffered from temper attacks and verbal assaults. He was diagnosed with KS at the age of 30 because of infertility and subsequently was prescribed testosterone to improve his bone density. Annual evaluations of testosterone levels, estrogens, FSH, LH were performed by the endocrinologist. However, on psychiatric assessment it appeared that the temper attacks worsened and as a child he also suffered from conduct disorder and learning difficulties. Transdermal testosterone gel (50 mg/day) was discontinued after discussion with the endocrinologist. The patient stopped having temper attacks while his energy levels remained stable. **Comment:** It is advisable for boys/adults with KS diagnosis to be seen by a psychiatrist to weigh risks and benefits of testosterone substitution therapy both on commencement and during a follow-up program. Detailed information should be obtained about psychiatric comorbidity and psychological wellbeing in cooperation with the endocrinologist.

### Response of amitriptyline to atypical odontalgia

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**Introduction:** Atypical odontalgia (AO) is a condition characterized by tooth pain or pain at the site of tooth extraction with no apparent radiographic or tooth pathology. Although

pharmacotherapy with tricyclic antidepressants such as amitriptyline might be effective, pain relief is not attained in some cases. The aim of this study was to investigate the clinical features of AO and the response of amitriptyline in AO. **Methods:** We retrospectively collected data of 136 outpatients presenting with AO at the department of psychosomatic dentistry, TMDU, between January 2013 and June 2014. The dataset included, among the others, the following variables: sex, age, history of headache or insomnia. **Results:** Our study included 136 patients (25 men, 111 women; mean age of onset was  $53.20 \pm 14.66$  years). Forty-one patients out of 136 patients were prescribed amitriptyline. Twelve patients were treated with only amitriptyline, while 13 patients added other psychotropic medications, and 7 patients changed to others. Twelve patients (12/41; 29.3%) with monotherapy, nine (9/41; 22.0%) with combination therapy, and three (3/41; 7.3%) with other antidepressants reported clear improvement; nine patients (9/41; 22.0%) discontinued pharmacotherapy. In the monotherapy group, six patients (6/12; 50.0%) had a history of headache and four (4/12; 33.3%) had insomnia. **Conclusions:** Because of variations in AO pathophysiology, the response of amitriptyline may not be consistent. History of headache or insomnia may become predictors of therapeutic response to amitriptyline of AO.

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### What makes patient's expectation for improvement of functional somatic syndromes increase?

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**Introduction:** Psychosocial factors often influence functional somatic syndromes (FSS), so active participation of patients to the treatment seem to be effective. Expectation for improvement is the important factor to increase patient's motivation for altering themselves, therefore identification of the psychosocial factors affecting the expectation must be helpful in clinical practice. **Methods:** One-hundred eight outpatients with FSS completed Sense of Coherence (SOC) questionnaire, MMPI, and three numerical rating scales assessing symptoms intensity, frequency, and expectation for improvement. SOC is regarded as a health promoting resource. It has three components: comprehensibility, manageability, and meaningfulness. These three components, three validity scales and ten clinical scale of MMPI, intensity, and frequency were analyzed using a stepwise multiple regression analysis to determine which factors predict patient's expectation for improvement. **Results:** Participants were 36 males and 72 females ( $47.6 \pm 18.7$  years old). Median score and interquartile range of expectation was 5 (2 - 8). Meaningfulness ( $\beta = 0.24$ ,  $r = 0.32$ ), scale 2(D) of MMPI ( $\beta = -0.16$ ,  $r = -0.33$ ), and frequency ( $\beta = -0.28$ ,  $r = -0.30$ ) were revealed to be predictors of expectation. With this model,  $|R|$  value was 0.46. **Conclusions:** The results suggest that the attempt to change the patient's attitude toward symptoms from refuse to acceptance is effective clinical approach. Elevation of MMPI scale 2 means tendency to pessimistic and depressive that probably change when patients acknowledge their symptoms to be meaningful. Acceptance, that is to say distracting the attention from symptoms to one's ordinary life, probably increases expectation for improvement through reducing subjective frequency of symptoms.

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### Effect of social participation on cognitive function among aged people in Korea

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**Introduction:** Many studies have been conducted to find out the way to prevent cognitive dysfunction in later life but the effect of the non-pharmacological therapies remains largely uncertain. Therefore, this study investigates the influence of social participation on cognitive function in a 3-year follow-up period among aged people in Korea. **Methods:** Data were from the Living Profiles of Aged People Survey, a national survey of community-dwelling Koreans aged more than 60 in 2008 who underwent a 3-year follow-up evaluation in 2011. Social participation was questioned in each year of the survey and the groups were divided into "both year participating group" and "none participating group" based on 5 categories (i.e., friendship group, cultural activities, sports leisure activities, volunteer groups, social learning activities). Cognitive function was evaluated by MMSE-KC score in 2011 after adjusting education level. Multivariate logistic regression analysis was used to analyze the effect of social participation on cognitive function, adjusting for socio-demographic variables and health-related factors. **Results:** The total number of participants involved in this analysis was 5389 (2310 men, 3079 women). Compared to both year participating group, none participating group demonstrated significantly increased odds ratio on cognitive function impairment (men: OR = 3.739; p-value < 0.001; women: OR = 3.197; p-value 0.001). This result was confirmed even after adjusting for many other covariates. (men: OR = 2.823; p-value < 0.001; women: OR = 2.090; p-value < 0.001). **Conclusions:** Among aged people in Korea not participating in social groups, the risk of cognitive impairment is significantly elevated in both men and women.

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### Factors of dropouts from outpatient treatment for eating disorders; based on questionnaire survey to dropout patients

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**Introduction:** Dropout from outpatient treatment is relatively common among patients with eating disorders (ED). However, the reason remains unclear. The aim of the present study was to investigate factors associated with dropout from treatment in ED patients. **Methods:** We analyzed outpatients (n = 342) who first visited our department of The University of Tokyo Hospital between January 2009 and July 2012. A total of 53 patients (15.5%), out of 342 patients, dropped out. We conducted them under questionnaire survey (close-ended and open-ended questionnaire) via postal mails. The comments for open-ended questions were analyzed by the Modified Grounded Theory Approach. **Results:** Respondent rate was 45.3% (n = 24; 23 women, 1 man). The median age was 25 years old (from 16 to 50). The type

of ED were Anorexia Nervosa (n = 14), Bulimia Nervosa (n = 5), and ED-Not Otherwise Specified (n = 5). According to the closed-ended questions, the most common factor of their dropout was "a matter of chemistry" with their doctors (n = 12). The other answers were "nothing has changed even after visit to hospital" (n = 6), "that was not a therapy that they expected" (n = 6), "I became busy" (n = 5), and "a symptom has improved" (n = 5). Analyzing the open-ended answers, description about "personality and behavior of the therapist", "treatment regimen", and "burden for going to hospital" were relatively frequent. **Conclusions:** Not only factors on patients' side, but also factors on the medical side as well as the treatment environment were identified as the major reasons for dropout from treatment in ED patients.

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### The relation of fatigue related psychological factors and exercise capacity to heart drawings of patients with cardiovascular disease

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**Introduction:** Patients' beliefs about their heart disease might have an important influence on their recovery and rehabilitation success. One of the measurements to get an indication about illness beliefs might be pictorial representations. The aim of our study was to examine whether the heart drawings of Cardiovascular Disease (CAD) patients are associated with their psychological (i.e., subjective fatigue) and clinical status (i.e., exercise capacity) **Methods:** Patients with stable coronary artery disease (n = 126; 70 male, 56 female; mean age 64.30 ± 6.42 years) participated in the study. All patients underwent a maximal exercise stress test and completed a package of questionnaires, including the Shortened 9-item Vital Exhaustion Questionnaire, FIS Fatigue Questionnaire, SF-36 Health Survey, Shortened 9-item Beck Depression Inventory and Spielberger State and Trait Anxiety Questionnaire. In addition, patients were asked to draw a sketch of their hearts. **Results:** Our results indicate relations of exercise capacity and physical functioning to the size of the hearts drawn by the patients. Larger hearts were associated with worse exercise capacity and everyday physical functioning. Neither myocardial infarction nor bypass surgery was found to be related to the drawings. PTCA, however, showed a strong association with it. In addition, a gender difference was found: in men, the size of the hearts was related to exercise capacity and state-anxiety. In women, it was rather associated with physical and social fatigue, vital exhaustion, and depression. **Conclusions:** As a conclusion, drawings might be simple assessments of patients' perceptions of their illness, giving an indication about their exercise capacity, physical functioning, and fatigue.

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### Dignity and spirituality in patients with chronic medical conditions

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**Introduction:** Dignity, is "the status of human beings entitling them to be respected, a status which is first and not to be taken for granted". It refers to their highest value or to the fact that human beings are a presupposition for value, as they are those to whom value makes sense". Dignity has been investigated in several fields, particularly in patients affected by terminal illnesses. The aim of the study was to explore the condition of dignity and its associated variables among patients with chronic medical conditions.

**Methods:** Patients with chronic medical conditions (n = 290) (i.e., cancer, neurological, cardiac, and rheumatic illnesses) were assessed submitted to a series of psychosocial tools. More specifically each patient completed the Patient Dignity Inventory (PDI), the FACIT spiritual well-being questionnaire, the EURO-QOL to assess QOL, and the Ryff Psychological well-being questionnaire. **Results:** Statistically significant associations (p < 0.001) were found between dignity (and dignity dimensions) and both spirituality and psychological well-being. Also QOL, in terms of the dimensions of good personal care, high performance status, low pain, and low emotional symptoms were related to high dignity and psychological well-being. **Conclusions:** Existential burden faced by medically ill patients with chronic conditions is extremely important and loss of dignity is a significant factor to be taken into consideration in general hospital in order to both implement person-centered approach that include dignity and to possibly early intervene to avoid loss of dignity.

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### The effect of short-term counselling for the bereaved family of crime victim

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**Introduction:** The bereaved families of crime victims face severe distress and various psychiatric conditions. We practiced five and a follow-up sessions counselling to the bereaved adult man whose mother died of medical error. **Case description:** The contents of this counselling was identifying the complaint, setting of the treatment goal, psycho-education, talk about the traumatic event and its influence on everyday life, and looking back of five sessions. We asked the client to answer four questionnaires IES-R (Impact of Event Scale-Revised); PTSD symptoms, PTCI (Post Traumatic Cognitive Inventory); traumatic cognition, ICG (Inventory of Complicated Grief; complicated grief; cut off score 29/30), and BDI- II (Beck Depression Inventory; depression; cut off score 13/14) before every session. The process of the score of IES-R was 27-33-12-16-12-21, PTCI was 132-141-112-97-78-107, ICG was 42-38-28-17-22-31, BDI- II was 16-20-14-10-10-8. The client said he had never talked about his traumatic event and emotion to anyone other than this counselling, so this counselling had made him feeling easier. **Comment:** According to each questionnaire, the patient did not exceed the cut-off point of psychiatric diagnosis after successful five sessions but an increase of the IES-R, PTCI and ICG scores was observed at follow-up visit. We found some favorable effect of short-term counselling in this case, but the effect did not seem to sustain for 3 months. We should observe its course in the future.

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## Predictors of the dental anxiety

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**Introduction:** The dental anxiety is prevalent condition in clinical dental and important to management of the dental patients. This study was conducted to identify predictors of this condition. **Methods:** Participants were 352 Brazilian adults (74.4% female; age:  $45.1 \pm 19.2$  years). The Dental Anxiety Scale (DAS) was used. The socio-demographic information and presence/absence of disagreeable previous dental experience were collected. The interviews were conducted by phone. The validity and reliability of the DAS were assessed. Confirmatory factor analysis was performed using the indices chi-square over degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), goodness of fit index (GFI), and root mean square error of approximation (RMSEA). The reliability was evaluated by Cronbach's alpha coefficient ( $\alpha$ ). A predictive model was developed using structural equation modeling. **Results:** The fit of the one-factor model was inadequate to the sample ( $\lambda = 0.65 - 0.83$ ;  $\chi^2/df = 14.802$ ; CFI = 0.949; GFI = 0.958; RMSEA = 0.198). The fit was adequate ( $\lambda = 0.58 - 0.88$ ;  $\chi^2/df = 1.494$ ; CFI = 0.999; GFI = 0.998; RMSEA = 0.038) after insert correlation between error of the items ( $LM > 11.0$ ;  $p < 0.001$ ). The DAS was reliable ( $\alpha = 0.83$ ). The fit of the predictive model was adequate ( $\chi^2/df = 1.244$ ; CFI = 0.995; GFI = 0.989; RMSEA = 0.026). Socioeconomic status ( $\beta = -0.145$ ;  $p = 0.010$ ), gender ( $\beta = 0.120$ ;  $p < 0.05$ ), age ( $\beta = -0.225$ ;  $p < 0.05$ ) and disagreeable previous dental experience lived by the individual ( $\beta = 0.212$ ;  $p < 0.05$ ) was significant predictors of the dental anxiety. The model explained 11% of the dental anxiety. **Conclusions:** The DAS was valid and reliable to the sample. Individuals with lower socioeconomic level, female, younger, and who lived disagreeable dental experience in the past, have higher anxiety toward the dental treatment.

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## Effectiveness of a specific work-related treatment for employees in health care

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**Introduction:** Elevated rates for psychological disorders – especially depression – are common among employees working in health care. This study evaluates the effectiveness of a specific work-related treatment for these jobholders. **Methods:** A total of 316 patients (mean age = 50.33 years) with mainly depressive disorders (90.2%), sampled from a psychosomatic rehab hospital, were divided into two groups. Group A primarily consisting of employees in health care received a treatment specifically adapted to their profession ( $n = 156$ ), Group B received a common disorder-

specific treatment ( $n = 160$ ). Impairment rates, as well as work-related behavior and experience patterns, were measured with Health-49, BDI-II, and AVEM before (T0) and after the treatment (T1). **Results:** Regarding impairment rates, there were no significant differences between the two groups, neither at T0 nor at T1. Concerning work-related patterns, at T0 the two groups differed in terms of willingness to work until exhausted, striving for perfection, and tendency to resignation, with Group A scoring significantly higher ( $p < 0.05$ ,  $d = 0.64$ ). At T1 Group A showed a significant reduction in their willingness to work until exhausted ( $p < 0.05$ ,  $d = 0.32$ ), however less improvement in proactive problem-solving could be observed ( $p < 0.05$ ,  $d = 0.27$ ). **Conclusions:** Our data reflect the specific struggles this occupational group is confronted with. The results show that both types of treatment are effective in reducing patients' symptoms. The tightly scoped discussion and reflection of occupational problems with other patients from the same profession can be seen as a benefit of a work-related treatment. However, such a treatment seems to be more effective in reducing dysfunctional work-related patterns.

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## Is the Type D personality construct valuable for psychosomatic rehabilitation?

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**Introduction:** Type D personality, defined as a combination of negative affectivity (NA) and social inhibition (SI), is associated with negative health outcomes such as coronary heart disease, but has been less examined in connection to other diseases or other contexts. This study evaluates 1. the association between Type D personality and work-related behavior and experience patterns, 2. whether Type D personality changes over the process of psychosomatic rehabilitation, and 3. if Type D personality predicts the outcome of such a treatment. **Methods:** The sample consisted of 1132 patients (male = 163, female = 969; mean age = 53.26 years) from a rehab hospital with chronic pain and the diagnoses "persistent somatoform pain disorder" and "fibromyalgia". Type D personality was assessed by Type D Scale 14 (DS14) and work-related behavior and experience patterns were measured with the questionnaire AVEM. **Results:** The results indicated low to moderate correlations between Type D personality and work-related patterns, in which the correlations between NA and these patterns were slightly stronger in comparison to SI. In contrast to SI, a significant reduction of NA could be observed at the end of the treatment ( $p < 0.001$ ,  $d = 0.26$ ). Furthermore, the distinction between Type D versus not-Type D personality significantly predicted a minor improvement concerning the following work-related patterns: willingness to work until exhausted ( $p = 0.001$ ), striving for perfection ( $p = 0.001$ ), distancing ability ( $p < 0.05$ ), tendency to resignation ( $p < 0.05$ ), experience of success at work ( $p < 0.05$ ) as well as satisfaction with life ( $p < 0.05$ ). **Conclusions:** Altogether, the Type D personality construct proves to be relevant to psychosomatic rehabilitation.

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## Are omega-3 PUFAs effective for depression during pregnancy in countries where fish consumptions are high?

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Maternal depression can have a significant harmful influence on both mothers and children. Considering the possibility of adverse effects of antidepressants and limited accessibility to psychotherapy, the role of evidence-based nutritional approach have been paid attention. Although meta-analyses have suggested that omega-3 PUFAs are effective for depression, the evidence regarding depression during pregnancy have not been established. Moreover, the prevalence of depression during pregnancy in Japan is much lower than that in most other countries. In Taiwan, it is also relatively low, possibly due to high consumption of fish. Whether omega-3 PUFAs is effective for depression during pregnancy in these countries is thought to be an important issue. Thus, we implemented an open trial by omega-3 PUFAs in Taiwan and Japan, showed safety and potential effectiveness, and are going to carry out a randomized controlled trial.

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## The effect of docosahexaenoic acid on quality of life among traumatized people: a randomized, placebo-controlled trial

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**Introduction:** Health-related quality of life (QOL) reflects disease-induced changes in physical and psychosocial functioning. Severe accidental injury not only causes physical impairments but also psychiatric disorder. Psychiatric morbidity has an adverse effect on QOL. Prevention for psychiatric disorder and improving QOL is an important issue in traumatic stress research. In the experimental studies, the association between n-3 polyunsaturated fatty acid (PUFA) and QOL is controversial. The aim of this study was to investigate the effect of docosahexaenoic acid (DHA) supplementation on QOL in traumatized people. **Methods:** We conducted a double-blind, randomized controlled trial. Patients

received 1470 mg/d of DHA plus 147 mg/d of eicosapentaenoic acid (EPA) (n = 45) or placebo (n = 54) for 12 weeks. We used the Medical Outcomes Study 36-Item Short Form Health Survey (SF-36) to assess QOL (i.e., physical functioning, role-physical functioning, bodily pain, general health perception, vitality, social functioning, role-emotional functioning, and mental health) at 12-week follow up. **Results:** Mean age of the participants was 39.6 and 81.8% were male. Erythrocyte level of DHA and EPA in DHA group was significantly elevated compared to placebo group (p < 0.01). We found no significant effects of supplementation with DHA-EPA on all eight domains of QOL after 12 weeks unfortunately. **Conclusions:** Supplementation with DHA for 12 weeks did not influence the QOL of traumatized individuals.

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## A single session of integrated yoga program as a stress management education for the teachers at schools

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**Introduction:** In Japan, it is important to prevent mental health problems related to stress, and the Government has made guidelines of stress management. We had developed a single session of integrated yoga program as a stress management education and reported the benefits of the yoga program. The aim of this study was to assess the benefits of the yoga program for teachers at schools. **Methods:** The subjects (n = 37) participated in a stress management education based on the integrated yoga program at their school. The program included psychological education about stress and yoga theories as well as practices of asanas, pranayama, relaxation, and cognitive structure from Indian philosophy. Assessments were carried out before and after the program using the Subjective Units of Distress (SUD) about mind and body and the Two-Dimensional Mood Scale (TDMS). **Results:** The calmness (p < 0.001), comfort (p < 0.001), and cheerfulness (p < 0.001) significantly increased, and cognitive mind (p < 0.001) and body (p < 0.001) stress significantly decreased after the integrated yoga program. After the intervention, most people had an incentive to practice the program in their daily life. **Conclusions:** The results suggest that a single session of the integrated yoga program as a stress management education is effective in reducing stress and promoting mood in a training workshop at their work places and is acceptable for Japanese ordinary teachers who are typically not interested in yoga.

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## Psychiatric intervention in amyotrophic lateral sclerosis: a case report

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**Introduction:** Amyotrophic Lateral Sclerosis (ALS) is a neurodegenerative disorder associated with progressive physical disability that inexorably results in death. Patients with ALS require a multidisciplinary and palliative approach to maximize their independence, function and quality of life. In this whole-person approach, psychiatric intervention must be considered. With this clinical case, our main purpose is to reflect about the role of psychiatric expertise along the disease process with regard to possible psychiatric symptoms and eventually cognitive impairment interfering with quality of life but also end of life decisions. **Case description:** We report the case of a 65 years old woman, without psychiatric background, who developed progressive tetraparesis, followed by dysphagia, anarthria, and finally respiratory muscle weakness with need of non-invasive ventilation. Psychiatry was involved as part of the multidisciplinary approach we are developing to ALS patients. The patient was followed through the disease progression, until she died at 69 years old at home after deciding not to proceed with tracheostomy. **Comment:** Given the progressive nature of ALS, appropriate interventions must be applied at each stage. With this case we intend to discuss the importance of psychiatric intervention as part of a multidisciplinary approach in ALS patients, in providing support not only for patients but also for caregivers and other family members, along with the management of possible psychiatric symptoms as the disease progresses, which can have a severe impact in quality of life, functionality, and even interfere in the process of end of life decisions.

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## The Possibility of Kampo Application for the initial treatment of medically unexplained symptoms

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**Introduction:** Many patients describe to their general practitioners (GPs) medically unexplained symptoms (MUS) such as headaches, fatigue, back, chest, and other pains which cannot be explained by recognized physical diseases. The GPs are required to treat the patients with MUS properly. Without adequate treatment, patients suffer from persistent MUS that may ultimately impair their physical and social functions as well as reduce their quality of life (QOL). Another problem is the high cost associated with these symptoms because of the frequency of doctor visits. The recommended therapy of MUS is cognitive behavioral therapy (CBT). This intervention is more effective than usual treatments. But in severe cases, the initiation of this therapy might be difficult. Kampo, a Japanese herbal medicine, has been used for the treatment of unidentified complaints or functional disorders. Several reports show beneficial effects of Kampo on functional disorders. For example, Rikkunshito is reported to be effective for functional dyspepsia, Daikenchuto for chronic constipation, Kamishoyosan and Keishibukuryogan for climacteric syndromes, Yokukansankachimpihange for pediatric psychogenic dizziness, Orengekuto for fever of unknown origin. Kampo has been shown to relieve mild symptoms of some diseases without CBT and may also reduce medical costs. In moderate to severe cases, this herbal medicine can reduce many symptoms of some diseases. Moreover, a good doctor-patient relationship is essential for the treatment of MUS and Kampo may help establishing the relationship. From

those points, the role of Kampo in treatment of MUS warrants further investigation.

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## The effects of living-donor transplant recipients' physical status on donors' physical perception — A study of 117 living-donor liver transplant donors

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**Introduction:** Living-donor liver transplant (LDLT) donors have been reported to experience various psychological problems. A number of case reports have investigated the relation between the physical status of recipients and the psychological and physical perceptions of donors. The aim of this study was to statistically clarify this phenomenon. **Methods:** In this cross-sectional study, 167 persons who underwent a pediatric LDLT donor operation from 1 to 10 years ago were surveyed with Short Form 36 (SF36), a self-administered evaluation scale for quality of life. Information about recipient outcomes was gathered for the 117 participants from whom valid responses were received, and the presence of any relations were investigated. **Results:** The donor was the recipient's mother in 50.4% of cases and the recipient's father in 46.2% of cases. In 76.9% of cases, the recipient progressed favourably; in 19.7% of cases, postoperative complications occurred; and in 3.4% of cases, the recipient died. The mean scores for all of the 8 sub-items of SF36 (i.e., physical-functioning, role-physical, bodily-pain, general-health-perception, vitality, social-functioning, role-emotional, and mental-health) were all better than national averages. However, general-health-perception, a scale for physical health, was lower in cases where the recipient developed postoperative complications, and mental-health was lower for cases where the recipient died ( $p < 0.05$ , Steel-Dwass method). **Conclusions:** The results suggested that donors feel the recipient's poor physical condition as their own (the "Siamese-twin" effect). Furthermore, it seems that psychosomatic problems may develop in response to poor outcomes in recipients, indicating the necessity of offering mental support.

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## Type A behavior pattern in relation to obesity: a cross-sectional study in Japanese workers.

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**Introduction:** Obesity is associated with personality of accumulative psychological stress. Type A behavior pattern (TABP), which has been characterized as hostility, hard-driving, competitive behavior, and time urgency, is related to psychological stress. In previous

study, TABP is a risk factor for lifestyle related diseases. However, the relationships between obesity and TABP have not been examined. Therefore, we conducted a cross-sectional study that aims to investigate the relationship between obesity and TABP in the Japanese workers. **Methods:** Participants were 3099 Japanese workers (1505 males, 1594 females). All participants completed a questionnaire that collected data on past history, present illness, smoking state, exercise habit, drinking status, eating habit, and quality of sleep. TABP was measured with a Maeda questionnaire (cutoff 16/17). Data were analyzed using univariate and multivariate logistic regression. **Results:** Univariate odds ratios were calculated, TABP resulted as a risk factor for obesity (OR = 1.83; 95% CI 1.47 - 2.26). Multivariate odds ratios were calculated and TABP was a risk factor for obesity after adjustments for age, sex, smoking status, drinking status, exercise status, and occupation (OR = 1.59; 95% CI 1.27 - 1.98). **Conclusions:** These findings suggest that TABP may be an independent risk factor for obesity. Because of the hostility and aggression components of the TABP increases psychological stress, this stress might induced overeat, thus weight tend to increase.

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### Integrative psychosomatic approach for the school refusal in Japan

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**Introduction:** Most of patients of the school refusal suffer from several psychosomatic symptoms. This clinical case study demonstrates the psychosomatic approach to school refusal depend on grade in Japan. **Case description:** The report illustrates several cases of integrative psychosomatic approach with oriental medicine, psychotropic drugs, and psychotherapy in the management of symptoms referring to school refusal during elementary schoolchild to high school student. Oriental “Kampo” medicine is often prescribed to children with psychosomatic symptom because it is hard to use the psychotropic drug for them. Additionally, the combination of “Kampo” medicine and psychotropic drugs may reduce the number of the prescriptions. In the elementary school, children are mainly treated on environmental adjustment including the correspondence in the communal living in the school. In junior high students, ratios to handle a problem with the progression of the study and the change of pubertal personal relationships. For the senior high student who left a compulsory education, the progression of studies and days attended become more important. In particular, it must be noted by an environmental change by repeating the same grade and the transfer. **Comment:** This report was carried out to illustrate the effects of examining patients in school refusal from pre-puberty to the puberty with integrative psychosomatic approach. Demand for consultation of patients of the school refusal is high, but there are few medical institutions to install the outpatient department for them in Japan. More facilities which can examine them with psychosomatic approach should be founded in the future.

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### Somatic symptom disorder and depression – when it becomes a challenge

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**Introduction:** Somatic Symptom Disorder introduced in DMS-5 seems to be a high prevalent, debilitating condition that brings significant healthcare cost. In this condition, the psychosocial stress manifests through somatic symptoms and when present, depressive symptoms worsens prognosis. **Case description:** The patient is a man of 59 years old, married, presenting with generalized chronic pain (i.e., limbs, neck and head), associated with fatigue, causing significantly distress (i.e., fear of having a serious and deadly disease) and social impairment. The patient already had sought out help in other medical specialties (i.e., orthopaedics, rheumatology, and neurology). He underwent an electromyography, magnetic resonance imaging, and blood tests with negative results. Progressively, the patient stopped walking and became clinically depressed. Pharmacological treatment with antidepressants was optimized and a psychoeducational approach was made towards the family and patient. Cognitive and physical stimulation were recommended, including participation in a physical rehabilitation programme. The multidisciplinary approach culminated in the improvement of depressive and somatic symptoms. **Comment:** This clinical case demonstrates the importance of the differential diagnosis between functional disorders and other medical causes. The authors highlight the importance of the involvement of the family and other healthcare professionals in the therapeutic process.

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### Dental care for patients with white-coat syndrome

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**Introduction:** Patients with arterial hypertension at the dental care are about 30-70%. High blood pressure values could be due to the visit to the medical office. This phenomenon is called White-Coat Hypertension (WCH) - a persistently elevated blood pressure, measured in the medical office, in the presence of a normal blood pressure outside of the office. The present study had the aim to detect patients with WCH during dental care. **Methods:** A total of 17 patients from 35 to 65 years, who came in for primary dental care, had their blood pressure (BP) measured before dental interaction with the help of a tonometer AND TM-2655P. All patients received a prescription of ambulatory blood pressure monitoring (ABPM) to detect cases of white-coat hypertension. **Results:** Seven out of 17 patients did not show any increase in blood pressure rates during the day. **Conclusions:** Patients with WCH need psychological and pharmacological distress correction during dental care.

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## Socio-economic pathways in coronary heart disease

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**Introduction:** Low Socio Economic Status (SES) is known to increase risk of both cardiac morbidity and mortality; psychological factors such as depression worsens prognosis in patients with Coronary Heart Disease (CHD). Autonomic, inflammatory, hemostatic/thrombolytic, and metabolic imbalance have been proposed as mediating pathways of depression in patients with coronary heart disease. Similar findings were observed in both Scandinavian and US male and female adult patients. **Methods:** The current study is part of a comprehensive set of analyses of pathogenic SES pathways in CHD in a well-defined large cohort of German CHD patients. This SPIRR-CAD study is a DFG funded multi-center trial on 570 CHD patients with a depression score of 8 and more on the Hospital Anxiety Depression Scale (HADS). In the present paper, we analyzed baseline data of SES, defined as educational attainment, as well as autonomic dysfunction, defined as low heart rate variability (HRV) and other biological data. The relative importance for SES gradients of the psychobiological pathways -mentioned above- are estimated. **Results:** About 24% of the patients were academics (i.e., high SES) and 42% belong to lower SES classes (i.e., mandatory or low education). Patients of lower SES classes showed higher depression scores (HADS;  $p < 0.05$ ). Frequency domain indices of HRV were low and the inflammatory, hemostatic, and metabolic risk factor levels were high in low social class. **Conclusions:** Bio-psycho-social-physiological pathways (i.e., autonomic and metabolic dysfunction, inflammation, coagulation) need to be considered, together with lifestyle (i.e., BMI, smoking, physical activity). Although the current cross sectional design does not allow causal interpretations and the study cohort may not be regarded as representative of German CHD patients (due to the selection process and the recruitment at university clinics), the data may give further insights into the socio-economic causality of CHD.

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## Psychological reaction to cancer – The burden of an internalized stigma?

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**Introduction:** According to literature on psycho-oncology distress and other psychiatric comorbidities varies in different types of cancer and in different stages of the disease. Although clinical evaluation emphasizes these aspects of the disease, for patients, the overwhelming impact of cancer associated stigma and the anticipated consequences can determine a deep psychological disturbance. The aim of this research is to analyze emotional

distress and stress vulnerability, in different stages of the disease, facing specific diagnosis and treatments. **Methods:** Patients were assessed after admission in a day care oncology department (Hospital Cuf Infante Santo, Lisbon), before chemotherapy, in a first episode or cancer relapse. After their informed consent, they completed a questionnaire including socio-demographic and medical data, the Distress Thermometer, the Stress Vulnerability Questionnaire, the Brief Symptom Inventory (BSI), and the Quality of Life Questionnaire. **Results:** Sample included 205 subjects, 99 with local (G1) and 106 with advance disease (G2). Breast (54.5%) and Digestive (23.2%) were the most common cancers in G1, whereas Hematologic (36.4%) and also Digestive cancer (30.8%) were more prevalent in G2. Comparing G1 with G2, distress, global symptoms index (BSI), and stress vulnerability total score were not significantly different, although higher in advance patients. As expected, significant differences were found in QoL indexes, higher in local disease patients. **Conclusions:** Despite the importance of medical and prognostic factors to health professionals, patients can react to diagnosis in a more unspecific approach, reflecting mostly the stigma associated to the word cancer and the experienced immediate threat.

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## Maintaining flexibility and tolerance in the face of chronic (emotional) pain

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There may be important similarities across physical pain and emotional pain. Strategies that have been found useful in the management of chronic physical pain may be adapted for the treatment of persistent emotional pain (and vice versa). Some of the most useful treatment strategies include: reducing catastrophic interpretations, accepting current situations, cultivating positive expectations, reducing coping by avoidance, and remaining flexible in movement and attitude. These strategies appear useful in the management of most types of chronic pain. Hopefully, the lives of patients can be improved through a cross fertilization of ideas, adapting strategies found useful for managing physical pain and applying similar procedures for emotional pain.

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## The treatment of psychogenic non epileptic seizures (PNES) using eclectic short-term psychotherapy: a case report

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**Introduction:** This clinical case report reveals the potential of eclectic short-term psychotherapy in modern treatment of psychogenic non epileptic seizures (PNES). **Case description:** The case emphasizes the psychological treatment of psychogenic non epileptic seizures (PNES) using eclectic short-term psychotherapy in only 2 sessions. In 2004, a 45-year-old woman came to the psychotherapist because she was having 2-3 seizures per week. Prior to psychotherapy, she went to the hospital and the epilepsy was ruled out. Her problems appeared 4 months after her father's

death. In eclectic short-term psychotherapy the following techniques were used: reframing, making symbolic connections, linking, narrative, and the labor of mourning (a technique from the E.S.P.E.R.E. method). The results of the 2 sessions were positive, with full disappearance of the symptoms. Eradication of PNES lasts for 11 years so far (2004-2015). **Comments:** psychogenic non epileptic seizures (PNES) are common symptoms of conversion disorder, which is a type of somatoform disorder (DSM IV-TR) or a somatic symptom disorder in the classification of DSM-5. Evidence-based treatments for PNES are limited and mostly focused on cognitive-behavioral therapies. This is the first report of an eclectic short-term psychotherapy used in PNES. Due to the very good relation between the socio-economical investment and the favorable results, in this case we recommend this form of psychotherapy in modern treatment of PNES.

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## Alexithymia predicts risk-taking in aggressive and academic behaviors

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**Introduction:** Risk-taking is a major determinant of health playing a central role in many diseases and is related to several health risk factors. For example, risky behavior may be the cause of injury (i.e., traffic accidents and self-inflicted injuries), is associated with public health hazards (i.e., unprotected sex and alcohol use). The present study aimed at investigating the relationship between alexithymia and risk-taking. **Methods:** One hundred and thirteen participants ( $M_{age} = 21$ ;  $SD = 3.54$ ; Women = 69%) filled out the alexithymia scale (Toronto Alexithymia Scale – TAS-20), impulsivity and venturesomeness measures (17 scale) and a risk-taking questionnaire (Cognitive Appraisal of Risky Events – CARE). The CARE questionnaire was designed to assess risk preferences in 6 domains (i.e., illicit drug use, heavy drinking, risky sexual activities, aggressive and illegal behaviors, high risk sports, and academic/work behaviors). **Results:** Six hierarchical regression analyses were performed to investigate whether alexithymia was a significant contributing factor for the explanation of risk preferences, controlling for impulsivity and venturesomeness. These analyses showed that alexithymia tendency positively predicted risk preferences in two domains (aggressive/illegal,  $\beta = 0.36$ ,  $p < 0.001$ ; and academic/work behaviors,  $\beta = 0.33$ ,  $p < 0.001$ ). We also found a marginally significant effect of alexithymia on sex and drinking domains (risky sexual activities,  $\beta = 0.16$ ,  $p = 0.08$ ; and heavy drinking,  $\beta = 0.15$ ,  $p = 0.09$ ). **Conclusions:** The results of the present study point out the role of the alexithymia as a key factor in predicting risky behaviors. Future studies should shed light on mechanisms underlying this relationship.

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## Give me feedback. Outcome phases of punishment and reward processes during a Monetary Incentive Delay task (MID)

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**Introduction:** Brain processes in reward consummation and punishment are linked to the subjective feeling of (dis-)satisfaction. An appropriate emotional reaction to external feedback is an important evolutionary function and is often impaired in psychopathology. One's reaction towards rewarding feedback can be dependent on the entity: directly receiving reward versus avoidance of loss. To date, most studies did not differentiate between the entity of the reward/punishment: it is unclear if positive and negative reward and punishment outcomes share the same neural correlates. **Methods:** Sixty healthy subjects (age = 16-25 yrs, M/F = 14/46) underwent an fMRI scan with the monetary incentive delay task. Image pre-processing and statistical analyses were done in SPM8. **Results:** There was a significant main effect of feedback value in bilateral caudate nucleus, frontopolar prefrontal cortex, and right insula ( $p_{corr} < 0.01$ ). Post hoc T-test showed higher activation to reward outcome in caudate bilaterally, left dorsal anterior cingulate cortex (ACC) and frontopolar prefrontal cortex activity ( $p_{corr} < 0.01$ ); the insula bilaterally was significantly more activated during punishment ( $p_{corr} < 0.01$ ). There was no interaction effect between feedback and entity. **Conclusions:** insula's role in negative feeling perception is extended to the punishment outcome. The caudate, dorsal ACC, and prefrontal cortex seem to be designed for coding and response to positive feedback. Since, the caudate nucleus seems involved in the consummatory phase of reward in relation to anhedonia, in future analyses we will assess the stability of the interaction between feedback and entity taking into account the effect of anhedonia.

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## Use of PRISM to evaluate schoolchildren's perceptions of natural hazards and responses to them in Dominica, Eastern Caribbean

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PRISM (the Pictorial Representation of Illness and Self Measure) has been used predominantly to measure and understand suffering due to illness. Through its properties as a visual metaphor, PRISM can be applied to elicit personally salient information about other concepts and relationships. In the present study, PRISM has been applied to assess the understanding by a cohort of 11-year old schoolchildren of natural hazards (such as hurricanes and landslips) in Dominica, where such natural hazards are prevalent. The children were also asked their views regarding sources of information about the natural hazards investigated, and what can be done to mitigate their effects. The data presented represent the start of a 5-year prospective study, aiming to evaluate how young people's knowledge and attitudes develop over time, and comparing a cohort of students from a range of schools in Dominica given structured hazard education teaching as part of

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their Geography course with a matched control group of students not taking Geography. Results to date have indicated that the children have understood and engaged well with PRISM, and the patterns of results support the validity of data obtained using PRISM. Because PRISM is essentially non-verbal, it lends itself to this project because data obtained using the PRISM measure are less likely than interview methods to be distorted by the developing verbalization and literacy skills of the students over the 5 years of the project.

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### **Stress and inflammation in pregnancy: relevance for psychopathology in the mother and in the offspring**

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Stress and depression in pregnancy increase the risk of the offspring developing psychopathology in adolescence and young adults. For example, our own research has shown that offspring of mother who were depressed in pregnancy are more likely to develop depression and antisocial behavior in adolescence and adulthood, and to be exposed to additional life adversities. Interestingly, stress and depression are also associated with increased inflammation, which in turn may affect brain function and program the individual on a trajectory toward future psychopathology. Consistent with this notion, our data have shown that stress and depression in pregnancy are associated with increased inflammation in mothers during pregnancy as well as increased inflammation in the offspring. Taken together, this evidence points at inflammation as a possible biological mechanism transmitting the risk of psychopathology from the mother to the offspring.

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### **Body image and illness perception in cancer patients**

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**Introduction:** Cancer and cancer treatment can change a patient's appearance and their way of experiencing the body. There is research demonstrating a link between the specificity of treatment (e.g., surgery, chemotherapy) and the patient's body image. The aim of this study was to assess the relationship between a cancer patient's body image and their perception of their own illness. **Methods:** A total of 226 patients diagnosed with cancer and hospitalized in Polish hospitals participated in the study. The following tools were used: the Multidimensional Body- Self Relations Questionnaire (MBSRQ) designed to measure self – attitudinal aspects of body image and The Revised Illness Perception Questionnaire (IPQ – R) both of which assess illness perceptions. **Results:** The results demonstrate a relationship between illness perception and body image in terms of appearance and body weight evaluation, as well as orientation towards fitness and the illness itself. Illness perception consists of several factors which appeared essential when taking into account the body image of cancer patients. These include: illness identity, duration

(acute/chronic), timeline cyclical, personal control over illness, treatment control, and emotional representations of the illness. **Conclusions:** Cancer can leave a permanent trace on the “body self” of a person. By understanding the link between body image and illness perception, the impact of body image changes can be appreciated. Therapeutic work with cancer patients should include work on illness representation as well as work on body image.

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### **The Relationship between stress, personality and acne vulgaris in adults**

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**Introduction:** Acne vulgaris, one of the most prevalent skin disorders, is characterized by inflammation of the pilosebaceous follicle. There is a strong believe in the role of stress as well as certain personality traits in the development of this disease in adults and we aim to study this relationship. **Methods:** Papers about the association between stress, personality, and acne vulgaris in adults were searched using PubMed database. **Results:** The possibility of a causal influence of emotional stress on the development or exacerbation of acne vulgaris has long been postulated and studies have demonstrated that a marked percentage of adults reported worsening of lesions during stressful periods, however the mechanisms underlying the triggering or exacerbation of acne by stress remain unclear. On the other hand neurotic personality features are observed more frequently in these patients. In one study, patients with severe acne had higher trait anger than those with milder forms of the disease, suggesting a cause-effect relation, but in another study this association was not found. Authors provide a brief illustrative case report. **Conclusions:** Acne may be a cause of anxiety and stress in those who suffer from it, however strong evidence is lacking for a causal association. Neuroticism and trait anger appear more frequently in adult patients with acne vulgaris. This review shows that adult patients with acne vulgaris are experiencing a psychosomatic disease, and a better understanding of the relationship between psycho-emotional-personality-acne functioning could lead to a better knowledge of pathogenetic mechanisms as well as treatment improvements.

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### **Prevalence and correlates of depression amid patients living with HIV infection**

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**Introduction:** Depression is one of the most common psychiatric comorbidities of HIV infection and has been recognized as a significant predictor of negative outcomes, such as decreased adherence to antiretroviral therapy and impaired quality of life (QoL). The purpose of this study was to assess the prevalence and severity of depressive symptoms in a sample of HIV-infected patients and to identify their sociodemographic and HIV-related correlates. **Methods:** The sample of this prospective study consisted of 1194 HIV-infected patients, recruited from 10 Portuguese hospitals. The Beck Depression Inventory (BDI) was

used to assess the prevalence and severity of depressive symptoms. Logistic regression was used to determine the sociodemographic and HIV-related factors associated with risk of moderate-to-severe depressive symptoms. **Results:** Symptoms of moderate-to-severe depression (BDI score  $\geq 17$ ) in 462 patients (38.7%). In the univariate analyses, the factors significantly associated with increased likelihood of depressive symptoms were: gender, education, unemployment, HIV stage, CD4+ T-cell count, time since HIV diagnosis, other co-infections, and sexual activity. In the multivariate model, female gender, advanced HIV stage, diagnosis of HIV for longer time, presence of other co-infections, and not being sexually active were independently associated with risk of symptoms of depression. **Discussion:** This study shows that a significant proportion of HIV-infected patients reported moderate-to-severe depression symptoms. As depressive symptoms are often under-diagnosed among these patients, a systematic screening of depression and of its correlates is critical to decrease the risk of non-adherence and to improve patients' QoL and treatment outcomes.

### Does psychological distress differ between younger and middle-aged and older women living with HIV

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**Introduction:** Adults aged 50 years and older constitute an ever-growing proportion of HIV cases worldwide. According to the latest Portuguese report of HIV/AIDS (2014), middle-aged and older adults represent 14.4% of all HIV cases, with about 26% of new infections occurring in this population. Middle-aged and older women represent 15.1% of all women living with HIV. The aim of this study was to examine if psychological distress differs between younger and middle-aged and older women living with HIV. **Methods:** The sample of this prospective study consisted of 388 HIV-infected women, of which 63 (16.2%) were aged 50 years and older. Participants completed the Brief Symptom Inventory (BSI) and the Beck Depression Inventory (BDI). **Results:** Middle-aged and older women were more likely to be less educated, widowed, and to have other comorbidities; in addition, they were less likely to be single, employed or currently working, to report sexual transmission of HIV, and to be diagnosed for longer time than their younger counterparts. Moderate-to-severe symptoms of depression were observed in 170 women (43.8%). No significant differences were found in the proportion of women reporting clinically significant psychological distress (18.9% vs 10.8%) and severe-to-moderate depressive symptoms (42.4% vs 50.8%). However, middle-aged and older women reported significantly more somatic symptoms of depression. **Conclusions:** This study shows that middle-aged and older women do not differ substantially from younger women in terms of psychological distress, although a significant proportion of women reported moderate-to-severe depression symptoms. Interventions that improve mental health in HIV-infected women are increasingly needed.

### Genetic vulnerability, alexithymia and depression in patients with hepatitis C virus (HCV) during antiviral treatment

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**Introduction:** Depression triggered by treatment with an exogenous inflammatory cytokine as interferon (IFN) is a paradigmatic model for prospectively examining vulnerability to depressive symptoms. For alexithymia, controversial were obtained in investigating the functional gene polymorphisms in the serotonin (5-HT) network regulating a variety of brain functions. To our knowledge, no study investigated the associations between alexithymia and gene polymorphisms regulating the availability of brain 5-HT and their role in developing depressive symptom in HCV patients undergoing antiviral treatment with IFN. **Methods:** The functional gene variants of the 5-HT<sub>1A</sub> receptor (HTR1A), 5-HT transporter (5-HTTLPR), and tryptophan hydroxylase-2 (TPH2) and their role in IFN-induced depression were evaluated in 130 HCV patients. The 20-item Toronto Alexithymia Scale (TAS-20) at baseline and the depression subscore of the Hospital Anxiety and Depression Scale (HADS-D) during the treatment period were used. **Results:** As expected, depressive symptoms increased during the treatment period and decreased back to the baseline level at the 6-month follow-up evaluation, and the TAS-20 was significantly associated to HADS-D. Analysis of co-variance (ANCOVA) for repeated measures showed that the significant increase over time of depression was due to the interaction between alexithymia and baseline depression scores. Patients carrying HTR1A-G allele and 5-HTTLPR double long allele had higher levels of alexithymia. After controlling for sociodemographic and disease-related factors, alexithymia and HTR1A-G polymorphism, both separately (20-22%) and jointly (14-16%), significantly and independently predicted the development of IFN-induced depression, during and after treatment. **Conclusions:** Two main findings were obtained by this study. First, subjects with homozygosity for HTR1A-G and 5-HTTLPR-l/l alleles showed higher vulnerability to alexithymia. Second, HTR1A-G polymorphism interacted with alexithymia, particularly the facets of difficulty identifying and describing feelings, in explaining the expected increase of IFN-induced depression in HCV-infected patients, controlled for socio-demographic and HCV-related factors.

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## Longitudinal course of depression, demoralization, type A behavior and biological correlates in patients with acute myocardial infarction

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**Introduction:** Few studies have considered the longitudinal course of depression and its association with biological correlates. The objectives were: to evaluate the presence of current/past depression (i.e., major/minor depression, dysthymia, demoralization) and type A behavior in patients with a first episode of Acute Myocardial Infarction (AMI); to identify specific subgroups of patients based on current comorbidity and history of depression, associations with blood parameters and stress biomarkers. **Methods:** One month post-AMI, 84 patients were administered the structured interviews for DSM and DCPR. Blood parameters (i.e., blood count and glucose, serum electrolytes, lipid profile, creatinine, glycated hemoglobin, PCR, PTT, PT, fibrinogen, d-dimer) and stress biomarkers (DHEAs, urinary cortisol, epinephrine, and norepinephrine) were recorded. **Results:** Risky levels of homocysteine were associated with current minor depression (72%) and demoralization (76%). Risky values of HDL and LDL cholesterol were associated with current demoralization with previous demoralization (HDL = 63.6%, LDL = 81.8%). Risky levels of d-dimer were mainly found in patients with current minor depression (81.3%), while those of urinary cortisol in both demoralized patients with a positive anamnesis for demoralization (76%) and depressed and/or demoralized patients with type A and a positive history of depression (44.4%). A total of 5.3% of the patients showed risky levels of epinephrine. They all presented with both current and past depression. **Conclusions:** This study highlights the usefulness of a clinimetric approach taking into account the longitudinal course of clinical and subclinical depression. A positive anamnesis for depression/demoralization, in fact, is associated with specific biological changes and allows the identification of subgroups of patients at greater risk.

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## Allostatic overload among depressed patients, with or without type A behavior, after acute coronary syndrome

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**Introduction:** The role of stress in the development of acute coronary syndrome (ACS) is well-established. However, only few studies clearly defined and investigated stress and its association with depression and type A behavior. The objective was to evaluate in depressed patients at their first episode of ACS: allostatic overload (AO) and the association between AO and (current/past) depression, with or without comorbid type A. **Methods:** One month after ACS, 97 patients were administered the structured interviews

for DSM-IV-TR (i.e., major/minor depression, dysthymia) and DCPR (i.e., demoralization, type A), Symptom Questionnaire, Psychological Well-Being scales, and stressful life events format. **Results:** A total of 16.5% of the total sample presented with AO, women more often than men (28.6% vs 11.6%). A positive anamnesis of depression was associated with AO more often than that of demoralization (81.3% vs 56.3% of the total cases of AO). Of the total sample with AO, 50% included patients with type A, whereas 30.8% of the total cases of type A showed AO. A total of 23.3% of depressed patients presented AO, while 41.2% of depressed patients with type A had AO; 17.4% of demoralized patients presented AO, whereas 30.4% of demoralized patients with type A showed AO. Similarly, the frequency of AO among patients with comorbid depression and demoralization, increased from 26% to 40% in the presence of type A. **Conclusions:** This study shows that the presence of a dysfunctional lifestyle such as type A behavior might increase AO in depressed and demoralized patients with ACS, making their psychological, and physical clinical profile more complex.

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## Assessment of allostatic overload in patients with congestive heart failure

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**Introduction:** The precipitating role of emotional stress in the development of congestive heart failure (CHF) has been well established. However, there is paucity of studies in which stress has been clearly defined and investigated. The aim of this study was to evaluate the feasibility of the clinimetric criteria for allostatic overload (AO) in a sample of CHF patients, with particular regard to its associations with psychological distress and health status. **Methods:** Seventy consecutive outpatients with CHF underwent an ad hoc structured clinical interview for the assessment of psychopathology (according to DSM-IV-TR) and psychosocial syndromes (based on DCPR), and completed two self-rating questionnaires for the assessment of stress and psychological distress. Cardiac variables were also collected at intake. **Results:** Mood and anxiety disorders were the most frequently reported psychiatric diagnoses, whereas syndromes concerned with abnormal illness behavior and irritability were predominant. Twenty-three patients (32.9%) were classified as having AO. Significant differences were found with regard to gender between CHF participants with and without AO, with women being more likely to report AO than men. Patients reporting AO presented also significantly higher levels of psychological distress compared to those who did not. Among cardiac risk factors, only hyperglycemia was found to be significantly associated to the presence of AO. **Conclusions:** These findings support the utility of the clinimetric criteria for the assessment of AO in medical settings. These criteria may thus be considered as a global index for identifying distress manifestations that might adversely influence course and progression of a medical disease.

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## The effects of Pennebaker's writing technique on treatment success and alexithymia in couples subjected to assisted reproductive treatment

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**Introduction:** WHO considers that 15-20% of couples suffer of fertility problems. Aim of this study was to assess the effects of Pennebaker's writing technique on alexithymia and treatment success (pregnancy) in couples subjected to an assisted reproductive treatment (ART). **Methods:** Through randomization 54 women admitted for ART in a medical center were divided into two groups: an experimental one, where women wrote for three times about their deepest thoughts and emotions concerning the infertility experience, and a control group where women did not write. Women and men of both groups completed a socio-demographic questionnaire and the TAS-20 before and after the writing sessions. **Results:** Separated analysis for groups of men and women were conducted. Regarding alexithymia, analysis showed a significant reduction in the "Difficulty Identifying Feelings" score ( $p < 0.01$ ) in the group of women after writing. Reductions on TAS-20 Total score ( $p = 0.06$ ) and on the "Externally-Oriented Thinking" score ( $p = 0.01$ ) were also found in the group of men whose wives wrote. After ART 8 successes in the experimental group versus 4 of the control group were reported ( $p = n.s.$ ). The number of treatment successes of couples who refused to participate in the study ( $n = 0$ ) was compared with total success of both experimental and control groups ( $n = 12$ ) and a trend in the expected direction emerged ( $p = 0.08$ ). **Conclusions:** Findings support the usefulness of writing technique in promoting emotional awareness in ART treatment. No significant results were reported for treatment success, probably because of small sample size. Further data will be collected to support these preliminary results.

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## Cushing's syndrome: more than physical impact

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**Introduction:** Cushing's syndrome was first described by Harvey W. Cushing in 1932, who was a pioneer in the psychosomatic approach to endocrine disease. It results from chronic exposure to excess glucocorticoids and classical clinical features include specific physical signs and symptoms, but also psychiatric disturbances, regardless of its etiology. For these reasons, patients show functional impairment and reduced quality of life. Following successful treatment, features of Cushing's syndrome often disappear. However, patients may present residual features and persistence or even worsening of psychological distress upon adequate endocrine treatment. We present a clinical case of Cushing's syndrome with psychiatric symptoms. **Case description:** We report a case of a woman, with 48 years old, who presented

psychiatric symptoms some years before the diagnosis of Cushing's syndrome. She was referred to psychiatric appointment at the time of diagnosis and was followed since then. After medical and surgical treatment of Cushing's syndrome, we could observe psychiatric worsening, with the need for prompt psychiatric intervention until clinical improvement. **Comment:** With the presentation of a clinical case of Cushing's syndrome, we underline the importance of psychiatric evaluation and intervention through the illness course, even prior to the diagnosis, and until full recovery is achieved. Moreover, multidisciplinary treatment of Cushing's syndrome can be more effective in improving patients' quality of life.

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## Request of care in psychosomatic medicine and ethical implications in the psychopharmacological prescriptions

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**Introduction:** The psychosomatic occurrences alert general practitioners, various specialists, and diagnostic systems. The psychopharmacological prescription is one of the possible answers but often the drug is prescribed for palliation or placebo, as simulacrum of care, because of the lack of an organic cause. The request of care is thus circumvented. Psychiatrists continue to prescribe anxiolytics, antidepressants, or neuroleptics without specific evidences, routinely, maybe off-label, regardless of the ethical implications. **Methods:** To stimulate a discussion about a very complex problem, we have examined, from 2010 to 2014 all the prescriptions in a cohort of consecutive outpatients suffering from psychosomatic disorders sent by general practitioners or other specialists to medical district where some psychiatrists act. This study concerns 40 cases out 250 patients referred. We try to find a rational or the sense of various prescriptions for a population without organic causes demonstrated that accepted a psychiatric examination and a psychopharmacological therapy, without enough awareness. **Results:** Psychiatrists tend to confirm or replace those already prescribed with other molecules, but prefer an integrated approach about psychological medicine. However, they are not likely to understand the problem of drugs in a prescriptive ethical view. **Conclusions:** In the field of psychosomatic medicine, perhaps, there is an ethical attention less than severe mental disorders about psychopharmacological prescriptions. The role of psychiatrists should be to avoid unnecessary diagnostic test (TAC or RMN) and unnecessary prescriptions. The discussion is open.

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## Midwifery: A complex intervention to reduce stress in childbirth?

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**Introduction:** The Lancet series on Midwifery identified the central role of midwifery in ensuring high quality maternal and neonatal care in high, middle and low-income countries. Cochrane Library systematic reviews of the evidence demonstrate the significant impact of midwife-led continuity models of care and

continuous support during labor on a range of birth outcomes. Government policy throughout the UK supports the provision of a named midwife for every woman during her childbirth journey. The reality of care is far from this, with the majority of women not knowing the midwife who cares for them in labor and rarely seeing the same midwife through their antenatal care. The aim of the present research was to explore the evidence for the hypothesis that midwifery is a complex intervention with the potential, when implemented in line with best evidence, to significantly reduce stress in childbirth. **Methods:** A review of the current evidence and a description of an observational study undertaken in four maternity units in Scotland to measure the impact of the quantity and quality of intrapartum support. **Results:** Continuity of midwifery care has been found to have a very positive impact in a wide range of quantitative and qualitative studies on a wide range of birth outcomes, including women's experience. **Conclusion:** High quality midwifery care, including continuity models of care, should be consistently implemented across NHS maternity services in the UK.

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### Readiness to experience chronic pain as part of satisfaction with clinical treatment in relation to five personality factors

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**Introduction:** Readiness to suffer the highest pain and simultaneously be satisfied with its treatment is one of the basic practical aspects of the treatment of chronic pain. **Methods:** A questionnaire with 228 variables was applied to 109 random chosen patients who were treated at outpatient pain clinic of the University Clinical Centre Ljubljana (May - June 2013). A total of 87 patients responded the questionnaire (79.8%). The five BFI (Big Five Inventory) personality factors were taken into account as dependent variables (i.e., extrovertism, agreeableness, consciousness, neuroticism, openness); level of depression (Zung) and level of anxiety (Zung) were treated as covariates in the framework of multivariate analysis of variance. Independent variable was the evaluation of the highest pain, which respondent is ready to suffer and to be satisfied with the treatment at the same time. Primary 11-point scale from 0 to 10 (maximal pain) was recorded into 3-point scale. **Results:** Average age of participants was 52.7 years (SD 13.9), 70.9% of subjects were female and 29.1% males. Significant multivariate differences in set of dependent variables and of covariate measuring self-evaluated depression were found. Regarding three levels of the independent variable, the significant difference in factor BFI "agreeableness" is particularly expressive on univariate level. For other personality factors, the null hypotheses were accepted. The BFI factor "openness" is a variable with relatively strong predictive value. **Conclusions:** the results of the research show the need to take also the personality factors into account in treatment of chronic pain.

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### Cluster analysis of dignity therapy

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**Introduction:** Patients in the end stages of cancer often experience spiritual pain. Dignity therapy (DT) is reportedly effective in many such patients. However, the medical records of patients who have undergone DT have not been previously analyzed. We used cluster analysis to analyze the medical records of patients who underwent DT in our department. The records of two or more patients who underwent DT were analyzed in the cluster, and the differences in the content of the DT records were assessed. **Methods:** This study included 3 patients who underwent consultation and DT at the palliative care departments of the Department of Medicine, Kinki University Hospital from April 2013 to March 2014. Cluster analysis was performed using the patients' DT records and KH Coder software. **Results:** DT was classified into four categories: "role, I, adult, friend, and brought up a child", "importance, consultation, and money", "health, marriage, and hobby", and "family, feelings, child, and life". Important aspects of DT for families were an adult role that includes oneself, especially a role in bringing up a child; consultation regarding money; and hobbies that center on health and married life, the event accomplished by feelings especially to the child. **Conclusions:** Focusing on these aspects of DT may help to reduce the spiritual pain felt by patients with end-stage cancer.

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### Relationship between interpersonal tension and social life of socially withdrawn young Japanese people (Hikikomori)

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**Introduction:** Socially withdrawn young Japanese people (Hikikomori) often have difficulty in smoothly performing social actions due to experiencing strong interpersonal tension. In this study, we investigated the relationships between social anxiety disorder (SAD) in Hikikomori and its effects on their social life. **Methods:** We performed a questionnaire-based survey concerning SAD and social activities with 43 Hikikomori attending a rehabilitation facility fostering "a place of being" (ibasho) and investigated the correlation between these two items. **Results:** "Participation as a volunteer" and "going out for shopping and hobbies" were found to be weakly negatively associated with avoidance behavior in daily life. In addition, overall SAD was found to be negatively associated with social life in Hikikomori undergoing treatment. Further, especially for ibasho, a negative association was observed with sites where the Hikikomori interacted with staff such as "conversing with staff" and "doing activities together with staff". **Conclusions:** Our conclusions suggest that Hikikomori can reduce their avoidance behavior by going out to pursue volunteer, shopping, or hobby-related activities

while having social resources for supporting *ibasho*. Our results also suggest that, for Hikikomori undergoing treatment, the promotion of social activities, particularly in relation with staff at their *ibasho*, might be linked with a reduction of their interpersonal tension.

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## Disrupted white matter integrity in anterior corona radiata of patients with anorexia nervosa

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**Introduction:** Patients with Anorexia Nervosa (AN) show structural change in the brain such as atrophy. Although white matter of AN patients has been evaluated with Diffusion Tensor Imaging (DTI) technique, results were inconsistent and inconclusive. **Methods:** A total of 19 AN patients (14 restrictive type and 5 binge-purge type) and 22 healthy controls (HC) were participated in this study. All were female and right-handed. This study was approved by the Ethics Committee of Tohoku University Graduate School of Medicine. Images of all participants were acquired with 3.0 T MRI scanner. Fractional Anisotropy (FA) was calculated and compared between two groups. **Results:** There was no difference in age between AN patients ( $20 \pm 4$  years) and HC ( $19 \pm 2$  years). Body Mass Index of AN patients ( $14.4 \pm 1.9$  kg/m<sup>2</sup>) was lower than that of HC ( $20.0 \pm 1.5$  kg/m<sup>2</sup>) (two sample t-test,  $p < 0.01$ ). Eating Attitude Test (EAT)-26 of AN patients ( $19.5 \pm 15.9$ ) was lower than that of HC ( $6.4 \pm 5.7$  kg/m<sup>2</sup>) ( $p < 0.01$ ). FA in the anterior corona radiata and corpus callosum were significantly lower in AN patients than in HC. **Conclusions:** Anterior corona radiata is a component of the limbic-thalamo-cortical circuit, which plays an important role for cognitive and emotional regulation. Disrupted white matter integrity in anterior corona radiata of patients with anorexia nervosa may be relevant with the onset and maintenance of the disease.

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## Involvement of hippocampus in chronic fatigue syndrome

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In this presentation, we concentrate on the role of the hippocampus in the development and perpetuation of chronic fatigue syndrome (CFS) and attempt to show that this focus provides an understanding of some puzzling facets of patients' difficulties to follow treatments and improve and guide us in the need for rehabilitation strategies. New knowledge of hippocampal function has shown that impairment not only disturb the capacity to encode and retrieve new events but also the ability to navigate in the environment, to think forward, to imagine new scenarios, and make predictions about the future. The hippocampus is also an important actor in the regulation of stress and chronic stress has a detrimental effect on its integrity and on neuroplasticity. There are several comorbidities in CFS associated with defective function of the hippocampus formation, namely subjective memory impairments, one of the most common complaints of patients with CFS, infections and inflammation, especially if they are chronic, are detrimental for the functional integrity of the hippocampus. Chronic stress, one of the main active components of CFS, is known to affect the hippocampal regulation of the hypothalamic-pituitary-adrenal (HPA) axis. There is also a connection between inactivity, which is a major consequence of the illness, and neurogenesis in the hippocampus. Sleep disturbances and the presence of depressive thoughts are also known to affect the hippocampus. We discuss the implications of these results for the rehabilitation of patients with chronic fatigue syndrome.

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## Changes in self-reported symptoms of depression and physical wellbeing in healthy individuals following a Taiji beginner course – Results of a randomized controlled trial

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**Introduction:** Taiji is a mind-body practice being increasingly investigated for its therapeutic benefits in a broad range of mental and physical conditions. The aim of the present study was to investigate potential preventive effects of Taiji practice in healthy individuals with regard to their depressive symptomatology and physical wellbeing. **Methods:** A total of 70 healthy Taiji novices (mean age 35.5 years) were randomly assigned to a Taiji intervention group, i.e. Taiji beginner course (Yang-Style Taiji, 2 hours per week, 12 weeks) or a waiting control group. Self-reported symptoms of depression (CES-D) and physical wellbeing (FEW-16) were assessed at baseline, at the end of the intervention, as well as two months later. **Results:** Physical wellbeing in the Taiji group significantly increased when comparing baseline to follow up (FEW-16 sum scale  $T(27) = 3.94$ ,  $p = 0.001$ , 95% CI 0.17 - 0.55). Pearson's correlation coefficients displayed a strong negative relationship between self-reported symptoms of depression and physical wellbeing ( $p$ 's  $< 0.001$ ,  $r$ 's  $\geq -.54$ ). **Conclusions:** In this randomized controlled trial we found significant evidence that a Taiji beginner course of three months duration elicits positive

effects with respect to physical wellbeing in healthy individuals, with improvements pronouncing over time. Physical wellbeing was shown to have a strong relationship with depressive symptoms. Based on these results, the consideration of Taiji as one therapeutic option in the development of multimodal approaches in the prevention of depression seems justifiable.

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## The effect of sleep deprivation on pain perception: A meta-analysis

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**Introduction:** There is large evidence for an interaction of sleep and pain. However, the size of this effect and thereby the clinically relevance is vague. We conducted a meta-analysis to quantify the effect of sleep deprivation on pain perception. **Methods:** PubMed, Cochrane, Psynex, PsycInfo, and Scopus was searched for Sleep AND pain AND (“sleep restriction“ OR “sleep deprivation“ OR “sleep loss” OR “sleep interruption” OR “hyperalgesia” OR “total sleep deprivation” OR “partial sleep deprivation” OR sleep fragmentation”). Studies were included that investigated 1. sleep deprivation (total or partial) or sleep restriction and 2. pain (any kind of pain measurement, e.g., VAS or pain threshold). **Results:** Five eligible studies (190 subjects) for the between-group analysis and 10 studies (266 subjects) for the within-group analysis were identified. Sleep deprived conditions showed a medium effect to non-sleep deprived conditions in the between group analysis (SMD = 0.62 95% CI 0.12 - 1.12;  $z = 2.43$ ;  $p < 0.05$ ) and a large effect in the within-group analysis (SMD = 1.49 95% CI 0.82 - 2.17;  $z = 4.35$ ;  $p < 0.0001$ ). Test for heterogeneity was not significant in the between-group analysis ( $Q = 5.29$ ;  $df = 4$ ;  $p = n.s.$ ) and significant in the within-group analysis ( $Q = 53.49$ ;  $df = 9$ ;  $p < 0.0001$ ). **Conclusions:** This meta-analysis confirms the effect of sleep deprivation on pain perception. A medium effect (SMD = 0.62) was found for the between group analysis and a large effect (SMD = 1.49) for the within group analysis. Although this meta-analysis is based on experimental studies, a medium to large effect on pain perception seems clinically relevant.

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## The influence of psychotherapy on the outcome of patients with rheumatoid arthritis – A case study

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**Introduction:** The effectiveness of a psychoanalytic psychotherapy in the treatment of rheumatic diseases is clearly illustrated by the case at hand. **Case description:** A today 58-year-old Turkish patient was treated in 1987 at a psychosomatic ward in Frankfurt for the first spurt of chronic polyarthritis. Severe pain in the fingers and wrists with radiological changes, max. ESR, RF, and CRP confirmed the diagnosis. She could no longer work in her

profession as a precision engineer. The 6-month hospitalization included three sessions per week psychoanalysis, physical, and anthropologic therapy. The basic therapy with gold and methotrexate had to be cancelled due to incompatibility. The trusting doctor-patient relationship corresponded to the good father-daughter relationship. The patient had lived 11 years in Germany and married a German one year before the admission to the hospital without their parents' knowledge. She feared that she would therefore be expelled from the Turkish family. After solving the conflict, the journey was prepared despite pain symptoms. The patient returned after six weeks without symptoms. The parents accepted the marriage which is still in existence today. She takes anthropologicals occasionally and travels annually to Turkey for a spa treatment. A rheumatoid thrust has never reoccurred. **Comment:** Chronically rheumatic diseases often (20% to 91%) associates with anxiety- and depression disorders. Only medical treatment leads to a better outcome, improves the quality of life and reduces the treatment costs. In many cases there is no psychotherapeutic treatment. There should be further research into the reasons for this.

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## Do patients in rehabilitation with adjustment disorder differ from patients with depression while and after psychosomatic rehabilitation?

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**Introduction:** Adjustment Disorders (AD) are often used as a residual category of diagnosis. Especially relating to job strain AD are often used in context with the experience of burnout or mobbing. We observed whether patients with AD differ from those with depression. **Methods:** A total of 100 patients in psychosomatic rehabilitation, treated on a special station for workplace related strain (71 female/ 29 male; age  $49.84 \pm 8.73$  years), attended this study. Seventy-three achieved the criteria of a depressive disorder, 23 of AD. To measure psychiatric symptoms we used Health-49, BDI-II, and Burnout-Screening-Scales I-III (BOSS I-III) which detect job strain, somatic disorders, and resources, at admission of rehabilitation (T0), at discharge (T1), and six month after discharge (T2). **Results:** Patients with AD showed at T0 and T1 less strain than patients with depressive disorder. Both groups could benefit from the psychosomatic rehabilitation in the same degree despite of the different base levels. Relating to the inability to work both groups did not differ at any time. Those who were inability to work decreased from 45% at T0 to 9.5% at T2. **Conclusions:** Patients with AD have as expected less psychopathology strain at T0 and T1 than patients with depressive disorders. Regarding the state of employment both groups are similar strained and both groups benefit equal and lasting from the psychosomatic rehabilitation. Future studies should research whether patients in psychosomatic rehabilitation with AD have more specific strains and whether they need the same treatment in rehabilitation as patients with depressive disorders.

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## PRISM, a novel visual metaphor measuring personally salient appraisals and attitudes

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PRISM (the Pictorial Representation of Illness and Self Measure) was discovered by serendipity to measure suffering. PRISM is essentially non-verbal, and the instructions for its use are brief and simple, and almost always understood without further explanation. It can be completed very rapidly. Of the publications reporting data using PRISM, the majority have focused on applying PRISM to measure and describe suffering. However, novel applications of PRISM have also been reported, including assessing the attitudes to alcohol of problem drinkers, perceived support among people subjected to political turmoil, and stress among anesthetists. The performance of PRISM in these apparently diverse applications can be explained by its properties as a visual metaphor of the relationship of object(s) (e.g., "my illness" or "my medical treatment") to a subject (e.g., "myself") in a defined context (e.g., "my life at the moment"). Adequate and appropriate definition of subject, object, and context are crucial to the successful use of PRISM. Like all metaphors, it is presented to participants in a deliberately imprecise manner, and to complete the PRISM task, participants have to apply their own understanding and attitudes. Because of this, and in contrast to questionnaires, PRISM yields data, qualitative as well as quantitative, which are personally salient to each participant. Because of its properties as a visual metaphor, and its combination of qualitative and quantitative methods, PRISM is likely to have wide applications in assessing beliefs, attitudes, and decision-making, including as a person-centered outcome measure in healthcare.

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## Interplay between depression and sleep in general and specifically in medical conditions

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The interplay of sleep and depression has been appreciated for centuries. That this interaction is a reciprocal one has gained credence recently and this has been explored particularly in relation to insomnia and sleep apnea. At this point in time, we appreciate that the odds ratio for having depression in patients with sleep apnea is higher than any of the widely recognized clinical features of sleep apnea and in treatment resistant depression, rates of apnea are up to 70%. A resolution of treatment resistant depression occurs in half of those with apnea when treatment for sleep apnea is initiated. If hypothetically 20% of all patients with PTSD had hypothyroidism we would be testing the thyroid function in all PTSD patients. We have reached that point vis-a-vis the interplay of sleep apnea and depression and with the new and surprisingly wise approach of DSM5 the same applies with insomnia. In many medical conditions (e.g., diabetes, cardiac arrhythmia and glaucoma) there are very high rates of sleep apnea which may be factors in causing depression. Finally, we found a method to use

sleep macro and micro-architecture markers to detect depression and this biological tool may help to titrate treatment, predict suicidal behavior and decrease stigma of depression.

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## Pathological grief and suicide bereavement: cases from clinical psychiatry in Japan.

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**Introduction:** Per head of population Japan ranks 13th in the world suicide table and each year about 30000 people commit suicide. Suicide is an act with an enormous impact on the family of the deceased. We present 2 cases of bereavement by suicide leading to mental illness. **Case description:** The first case is a woman in her 60's whose husband, a company manager, committed suicide while she was in hospital for a physical disease and was thus apart from her spouse at this critical time. After her discharge she was busy dealing with the aftermath of his death with no time to mourn, and after completing the formalities concerning his death, she suddenly developed panic disorder and underwent psychiatric treatment. The second case is a woman in her 50's who lost her daughter by suicide. After her daughter's death, she had to care for her husband who was suffering from terminal cancer. Upon his death, she presented such symptoms as numbness of the lower body and after visiting hospital was finally seen by a psychiatrist. **Comment:** The two cases have certain common features namely the process of mourning is frozen with strong feelings of guilt, and they are unable to describe the deaths as suicide to other people. Their pathology seems to be complicated grief which is proposed in DSM-5. We examine the pathological grief of the suicide bereaved from the view point of clinical psychiatry and also in relation to the cultural background and social situation of Japan.

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## Development of Teachers' Job Adaptation Model with resilience as a mediator variable

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**Introduction:** The number of reported teachers' mental illness has steeply increased in the last two decades in Japan and over 5000 teachers has left their job because of their illness every year since 2007. The hypothesis of this study is that psychological resilience is one of the crucial keys to teachers' coping with stress. The aims were to develop Teachers' Specific Resilience Assessment Scale (TSRAS) and to examine the hypothetical model based on TSRAS, School Job Adaptation Scale (SJAS), and Teachers' Stressor Inventory (TSI). **Methods:** The subjects of 412 school teachers (mean age: 45.15, SD: 9.58) were asked to answer a questionnaire composed of question items about teachers' resilience, school job adaptation and teachers' stressors. Exploratory and confirmatory factor analyses and reliability analyses were conducted to develop TSRAS. Structural covariance analysis was employed to examine the hypothetical model. **Results:** The results yielded a 4-factor model for TSRAS. The structural validity and Cronbach's alpha reliability of TSRAS were statistically acceptable. The hypothetical structural equation model showed that the pass

coefficient from TSI to SJAS via TSRAS is significantly smaller than the direct pass coefficient from TSI to SJAS. **Conclusions:** The results above suggest that teachers with a high degree of resilience have a low risk of maladaptation. This implies that appropriate psychological interventions to promote their resilience (e.g., enhancing the positive coping style and cognitive modification) can help teachers to better adapt to their workplace and prevent their burnout.

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## The effect of self-help cognitive behavior therapy program on psychological factors for Japanese healthy workers

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**Introduction:** Self-help Cognitive Behavior Therapy (CBT) is a useful approach for the treatment of psychological problem. Previous studies showed that self-help CBT approach has moderate effect on the improvement of depression, insomnia, and anxiety. Present study examined whether supplement drink enhance the effect of self-help CBT on psychological values. **Methods:** Eighty-seven participants were randomly allocated to control group (n = 29), self-help CBT group (n = 29), and self-help CBT with supplement drink group (n = 29). CBT group and CBT with supplement drink group received 6 weekly self-help CBT program, consisted of psycho-education of stress management, behavior activation, and cognitive restructuring. Present program was delivered by e-learning system on demand and self-help guidebook. The Japanese version of Profile of Mood Scale (POMS) was administered before and after the program. This study was approved by the Institutional Review Board of Suntory Ltd. **Results:** Finally, 72 participants completed the program (control group: n = 23; CBT group: n = 25; CBT with supplement drink group: n = 24). Differences among three groups of all measures were examined using ANOVA. The results showed that there were significant interaction on the POMS tension-anxiety ( $F(2, 69) = 3.04$ ,  $p = 0.05$ ) and fatigue ( $F(2, 69) = 5.01$ ,  $p < 0.01$ ). Post hoc tests revealed that CBT group significantly improved on tension-anxiety ( $p < 0.05$ ) and CBT with drink group significantly improved on fatigue ( $p < 0.01$ ). **Conclusions:** The results showed that self-help CBT program improved tension anxiety. Additionally, supplement drink enhanced self-help CBT effect on fatigue. These findings suggested the points of improvement on self-help CBT program.

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## Patient profile for management of pediatric dental/needle phobia - a retrospective audit

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**Introduction:** Various management strategies exist for treating dental phobic and/or needle phobic pediatric patients, including needle desensitization (ND) plus relaxation, hypnosis, The Wand STA system, Cognitive Behavior Therapy (CBT) and psychology referral. The aim of this audit was to establish a profile of patients for whom dental treatment was completed. **Methods:** Case records for 30 dentally phobic patients in GDH&S were selected. Information was recorded on patient demographics, MCDASf (Faces version of the modified children's dental anxiety scale) scores, anxiety etiology, patient information seeking/blunting and management strategy. **Results:** Twenty four case records were evaluated. Demographics: 58% female, median age 13, 79% ASA I, 92% high caries risk. Anxiety: median MCDASf was 33.5, etiology medical needle phobia 46%/ dental needle phobia 62%, (not recorded 21%), 25% information seeking. Of patients treated successfully, the following treatment modalities were used: ND (with relaxation) in 50% of cases, hypnosis 31%, The Wand 81%, CBT in 25%, and psychology referral 25%. **Conclusions:** Many dentally phobic adolescents present with needle phobia and almost half also have a medical fear of needles. A combined approach, with more than one management strategy used was evident in this group. The wand STA system and ND (with relaxation) were effective with CBT and hypnosis. Children were referred to psychology services and a quarter of patients benefitted from this. From the small pilot sample evaluated a complete data set was not always documented. A standardized assessment sheet has now been introduced and this will help in future audit and database management.

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## Guidelines for utilizing psychopharmacotherapy for primary care patients with psychosomatic disorders

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**Introduction:** Patients suffering from psychosomatic disorders constitute a formidable portion of primary care. One of the main armaments for the management of these patients is psychopharmacotherapy. Because of an increase of psychopharmacological agents, it has become important to follow guidelines that can help patients suffering from one or multiple disorders. **Methods:** The ideal goal of the guidelines should be optimal therapeutic benefit with minimal adverse reactions. Gathering information on target symptoms and formulating the correct diagnosis is the first vital step of utilizing psychopharmacotherapy. Monotherapy as a management tool is the ideal choice, although polytherapy can become necessary for satisfactory management. **Results:** Psychopharmacotherapy in psychosomatic disorders comprises the following groups of medications: anti-depressants, anti-anxiety agents, hypnotics, anti-psychoics, anti-migraine agents, and other miscellaneous groups of medications. Compliance of medications and education for patients about managing the adverse reactions of short or long term duration are very helpful. Potential for toleration and drug abuse as well as pharmacokinetic and pharmacodynamics based drug-to-drug interaction with psychotropic drugs should always be taken into

account. In order to provide total therapy, psychopharmacotherapy should be combined with medications for managing physical disorders and with Oriental or Western psychotherapies, or the combination of both. **Conclusions:** The management of patients suffering from psychosomatic disorders in primary care is complex and usually needs health services based on total care based on a research paradigm. At present, management is less than optimal. Thus, extensive research activities are needed to improve therapeutic results and the quality of care.

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### **Behavioral Intervention Team (BIT) Study: results from the two-year implementation of a Proactive CL Psychiatric Service at the Yale New Haven Hospital**

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**Introduction:** Mental illness correlates with an increased length of stay (LOS) for patients hospitalized for medical conditions. While psychiatric consultations help manage mental illness among those hospitalized for medical conditions, consultations initiated by non-psychiatric mental health practitioners may lack maximum effectiveness. **Methods:** With a before-and-after design and in 3 contiguous years, LOS for internist-initiated, conventional psychiatric consultation (CC) as usual treatment was compared to LOS of a proactive, mental health professional-initiated, multidisciplinary intervention delivered by the behavioral intervention team (BIT) on the same hospital nursing units. The patient populations included general medical patients with a variety of illnesses. Patients were treated in these 3 different inpatient settings with a total capacity of 92 beds serving 15,858 patient visits over 3 comparison years. BIT was comprised of a psychiatrist, a nurse, and a social worker, each of whom performed the specific tasks of their professional discipline, while collaborating among themselves and their health-care colleagues. BIT provided timely, appropriate, and effective patient care in addition to consultative advice and education to their corresponding professional peers. BIT was compared to CC on the outcome of LOS. **Results:** There was a statistically significant reduction of LOS favoring BIT over CC for patients with an LOS of <31 days which persisted while controlling for multiple co-morbid factors. Also, a statistically significant spillover effect was suggested by the overall improvement of LOS on units implementing BIT. **Conclusions:** BIT is a promising means of lowering LOS on general medical units while providing a high level of care and staff support and it is economically cost effective when compared to CC.

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### **Biopsychosocial reasons of premenstrual syndrome among young women**

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**Introduction:** Premenstrual syndrome is a group of psychological and physiological symptoms (e.g., irritability, anxiety, depressed

mood, breast tenderness, headaches) which start before period and stop within a few days of bleeding. Symptoms interfere with different fields of life, like work efficiency, relationships, or social life. The aim of this study was to find biopsychosocial reasons of premenstrual syndrome which is an important problem of many women. **Methods:** Participants were 154 young women: 82 patients with PMS or PMDD, measured by the premenstrual symptoms screening tool (PSST) and 72 controls without diagnosis. The patients and controls answered the questionnaires concerning the personality (NEO-FFI), the temperament (PTS), the negative emotions (TPI), and the social approval (KAS - Social Approval Questionnaire). **Results:** Patients had significantly higher neuroticism and negative emotions and lower strength of excitation and mobility of neural process than controls. The result of using a stepwise regression revealed that the most significant reasons of premenstrual syndrome are neuroticism and depression. **Conclusions:** The knowledge of PMS reasons should enable to improve the treatment of premenstrual syndrome and rise women's quality of life.

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### **The family physician and the psychologist together in primary care: an effort towards integration**

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**Introduction:** About 50% of requests brought to family physicians, though expressed as physical symptoms, often derive from relational/existential problems: seldom, however, is the physician in a condition to meet this demand adequately. Differentiation of models between medicine and psychology makes co-operation through referral to a psychologist quite problematic. Acceptance of psychological referral is in any case difficult, due to the social stigma that still surrounds contact with mental health operators. **Methods:** An experience implemented by the postgraduate Health Psychology School of the Rome University 'Sapienza', entails joint, direct co-operation between primary care physicians and psychologists during consultations. Such an arrangement allows access to a psychologist's listening and intervention in the absence of any filter and without the need for a formal request on the patient's part, so overcoming the fear of social stigma. In a small number of cases, more formal consultation with the psychologist is proposed. This setting allows exploration of the meaning of any complaint brought by patients in the context of the individual's past and/or present relational situation, in a very early phase. **Results:** The experience, beginning in 2000, has until now involved 18 psychologists for a period of 3 years each: it appeared as entirely feasible, though requiring several months for adaptation; patients have welcomed the presence of the psychologist and, took a broader approach in reporting their distress. In two cases where data were available, a substantial (17% and 14%) reduction of drug prescription on part of the physician was recorded. Illustrative clinical vignettes will be presented.

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### **"I tried to get a bug out of my ear": a case report of a patient with delusional parasitosis**

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**Introduction:** Primary or secondary delusional parasitosis is a phenomenon that often has a clear and memorable presentation. We are reporting a case of one patient with delusions of parasitic infestation, with history of stimulant (i.e., amphetamines and cocaine) use disorder and diagnosis of schizoaffective disorder, who self-inflicted a trauma to his ear by attempting to remove "a bug". **Case description:** The patient is a 52-year old man who presented to the emergency department for right ear pain due to laceration. Pt was picking at his right ear with various instruments because he felt like "bugs were in his ear". He complained of a 2-week history of infestation resulting in bites all over his body. Patient appeared disheveled and had multiple skin ulcers, scabs, and scratches on the extensor surfaces of his arms, the front of his shoulders, and the anterior surfaces of his thigh and leg, with an increase in frequency on his left side. There were no lesions on the medial surfaces of his arms, posterior surfaces of his legs, chest, abdomen, or back. Patient was evaluated by infection disease physician and no signs of infestation were identified. During psychiatric hospitalization patient was treated with antipsychotics and his symptoms resolved within one week. **Comment:** Patients with delusions of parasitic infestation might cause significant self-mutilation during the attempts to remove "a parasite", therefore a prompt diagnosis through a multidisciplinary approach (i.e., dermatologists, psychiatrists, parasitologists) and adequate treatment are of great value.

### Skills Not Pills: outcomes of a chronic pain rehabilitation program utilizing cognitive behavioral skills and opioid abstinence

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**Introduction:** Mayo Clinic's Pain Rehabilitation Center is a longstanding interdisciplinary chronic pain functional restoration program. Based on cognitive-behavior theory, this 3-week program includes patient education on medication safety, daily physical and occupational therapy, pain self-management instruction, and tapering of all controlled substances. **Methods:** Patients complete survey measures at admission, discharge, and 6-month-follow up. Of the 949 patients who completed the program in 2013 and 2014, 215 participants have completed 6-month follow up surveys. The majority of patients were female (89.9%) and Caucasian (94.9%). Repeated measures ANOVA compared survey measures across the three time points. We hypothesized that gains made in the program would persist at follow up. **Results:** A total of 132 patients (61.1%) reported using opioids on admission; 116 (87.9%) reported they were not using opioids at 6 month follow up. Perceived quality of life improved from admission ( $M = 31.52$ ,  $SD = 14.03$ ) to discharge ( $M = 59.97$ ,  $SD = 19.28$ ) and 6-month follow up ( $M = 46.02$ ,  $SD = 21.38$ ). Depression improved significantly from admission ( $M = 25$ ,  $SD = 8.43$ ) to discharge ( $M = 20.01$ ,  $SD = 6.46$ ), and continued to improve from discharge to 6-month follow up ( $M = 15.48$ ,  $SD = 12.39$ ). **Conclusions:** Patients benefit from comprehensive programs that aim to improve functioning, reduce medication use, and employ cognitive behavioral skills in a self-management approach to chronic pain management. Positive gains in physical

functioning, psychosocial functioning, and perceived quality of life are demonstrated in three weeks and may continue to improve six months after program completion.

### Tranceformation: hypnosis in brain and body

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Hypnosis was the first Western form of psychotherapy, yet it remains underutilized in part because of insufficient understanding of its neural basis. Hypnosis involves highly focused attention, coupled with dissociation of aspects of awareness, relatively automatic response to social cues, and an enhanced ability to modulate perception. New evidence regarding this sensory processing ability will be presented, including studies employing event-related potentials, PET and fMRI. Our recent resting state fMRI data demonstrate functional connectivity between the executive control and salience networks among high but not low hypnotizable individuals. New data from fMRI activity and connectivity analyses in hypnosis compared to control conditions will be presented. This hypnotic ability to modulate perception has clear clinical application, especially in pain and anxiety control. Randomized clinical trials that we have conducted demonstrate the efficacy of hypnosis in reducing pain, anxiety, somatic complications, and procedure duration during radiological interventions. Other RCTs show that hypnosis provides relief of chronic cancer pain. In addition, techniques employing hypnosis are effective in controlling various neuromuscular disorders. Hypnosis is a brain-based tool that can be easily taught for controlling a variety of psychological and somatic problems. Learning Objectives: 1) Understand the nature of hypnosis; 2) Recognize the importance of hypnotizability and its assessment in the clinical setting; 3) Learn effects of hypnosis on brain function; 4) Learn how to combine hypnosis with psychotherapeutic techniques, 5) Learn how hypnosis can be utilized in the treatment of patients with comorbid psychiatric and medical problems.

### Inpatient Cognitive Behavioral Analysis System of Psychotherapy (CBASP) for treatment resistant and chronically depressed patients: adverse effects related to response and relapse

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**Introduction:** Inpatient psychotherapy might trigger specific adverse effects due to short but intensive treatment. In this study,

the adverse effects of the multidisciplinary inpatient Cognitive Behavioral Analysis System of Psychotherapy (CBASP) concept for chronically depressed patients are examined. **Methods:** A total of 70 patients with chronic depression completed the structured 12-weeks inpatient treatment program and were followed up for 24 months. Adverse effects were assessed by: 1. deterioration of depressive symptoms and 2. a self-report questionnaire Adverse Effects of Inpatient Psychotherapy (ADEFIP). ADEFIP measures transient deterioration of depressive symptoms during treatment, interpersonal conflicts, and serious changes in psychosocial domains induced by CBASP. **Results:** While 76% met response criterion and 40% remission criterion at discharge, none of the patients deteriorated after 12 weeks of treatment. First results concerning adverse effects show that approximately two thirds of the patients reported transient deterioration of symptoms. Patients with transient deterioration had equal response rates compared to patients without but were less likely to achieve remission. Over 50% reported conflicts with treatment team members or other patients without any relation to outcome. More than half of the patients reported significant changes in psychosocial domains after discharge. Patients without these changes are more likely to relapse. **Conclusions:** The findings suggest that the CBASP inpatient program entails specific adverse effects but these are predominantly not associated with negative treatment outcome. Future studies should examine whether these adverse effects are specific for the inpatient CBASP concept.

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### Psychosomatic patients in integrated care - which treatment mediators do we have to focus?

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**Introduction:** Psychosomatic diseases represent a challenge to their treatment and care due to their broad spectrum and the frequency of their occurrence. With the aim to improve existing therapeutic approaches, the question has been focused, whether an 8-week inpatient treatment for psychosomatically ill people in a psychiatric department with regional mandatory supply contract, provides an improvement concerning the patients' complaints and whether patient-specific predictors have influence on the treatment outcome. **Methods:** A total of 127 patients with ICD10: F4 diagnoses were hotspot recruited and included in a naturalistic study. Using a prospective study design structured interviews assessed socio-demographic data, subjective symptom presentation, and the Symptom Checklist-90-R (SCL-90-R), the Inventory of Interpersonal Problems (IIP-D), the Counter Transference Questionnaire (CTQ), the Psychotherapy Relationship Questionnaire (PRQ) were applied pre- and post-interventional and compared in a 6-months-follow up. Statistical analysis was performed using the SPSS 19.0 using paired t tests, Wilcoxon test, and a binary regression analysis. **Results:** The pre-post comparison showed a significant reduction of symptoms described by all completers immediately after intervention ( $p < 0.001$ ,  $d = 0.49$ ), which, however, in the 6-months-follow up subsided in intensity. General, statistically significant negative predictors towards the success of therapy were taking multiple medications ( $r = 0.50$ ) as well as the death of a close person ( $r = 0.32$ ). **Conclusions:** Since the studied intervention is considered successful, an inpatient

intensive therapy in the context of psychosomatic illnesses can be formulated as a treatment recommendation because of some generalizability of the results; it should be noted that patient-related predictors can predict the success of therapy.

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### Therapy and cost effectiveness of an 8-week psychosomatic treatment integrated in psychiatric regional mandatory supply within a 1-years-follow up

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**Introduction:** Because of the heterogeneity of psychosomatic care data and the large number of possible objectives (in this case efficiency of care strategy) an established tool for comparison (EQ-5D) is extended by meaningful and highly cost-related single items to allow statements about the longer-lasting effectiveness of regional community-based psychosomatic therapy initiation. Therefore, statements can be derived for profound stabilizing effectiveness of community-based care settings. It is to assess the effectiveness in a 1-year pre-post catamnestic comparison for reasons of practicability. The outcome survey makes it possible to focus on the costs of the 8-weeks psychosomatic integrated care and relate them to medical, socio-therapeutic, and psychotherapeutic treatment effects and its duration, necessary for further planning of regional care. **Methods:** EQ-5D (EuroQol health index), Mini-ICF-APP (for activity and participation disturbances in mental illness), CGI, GAF, socio-demographics, and disease characteristics (before starting and 1 year after discharge). **Results:** In addition to statistically significant improvements in the ICF Global Core, in the general health-condition EQ5, and GAF found in the one-year pre-post comparison, a reduction of the amount of medication, of physician contacts and sick-leave-days for one-third compared to the year before the integrated psychosomatic treatment. The hospitalization days declined in the year after the treatment for an amount of 70%. The number of diagnostic consultations decreased for more than a half. In particular, the number of treatment changes decreased for an amount of by 80% while psychotherapy sessions increased on the double. **Conclusions:** Support is given for a highly sustainable therapy effectiveness and cost-effectiveness of an 8-week psychosomatic integrated treatment in a psychiatric department with mandatory regional supply and with a focus on high dose psychotherapy combined with community-based socio- and milieu therapy in social-psychiatric case.

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### Medical culture and chronic pain management

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In some countries, strong opioids are rarely used to treat chronic pain, but in others, including the United States and Canada, there

has been a rapid increase in the frequency and dose with which opioids are used in such patients over the last 2 decades. It has become increasingly clear that treating patients with large doses of opioids is frequently counter-productive to controlling pain. In many cases, it is quite clear that the opioids have been ineffective in treating the pain, but it is difficult to stop this treatment, which is typically accompanied by physical and psychological dependence. Thus, clinicians who treat chronic pain need to learn techniques to manage these difficult patients. Clinicians need to understand the neuroadaptations that occur under the influence of chronic opioid intake. Eliminating the dependence on opioids while managing pain at the same time requires proper detoxification strategies, psychological support, and attention to the patient's social context.

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### **Treatment of the opioid-dependent chronic pain patient in an outpatient pain clinic**

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We report 20 years of experience treating chronic pain patients in an outpatient pain clinic. Referrals to this pain clinic were accepted if psychological issues were thought to be important in the pain problem or there were medication management problems. Follow up results have been published describing cases before the use of buprenorphine and after such use. Opioid dependent chronic pain patients were treated with a protocol that has been published. When patients were educated about the adaptation that occurs with chronic opioid intake, most acknowledged this seem to fit their case and it often inspired hope that the chronic pain condition could be improved. Chronic pain generally improved when the opioid dependence was treated, and the use of buprenorphine made such treatment easier, faster, and more effective.

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### **Major depressive episodes during pregnancy: a role of omega-3 polyunsaturated fatty acids**

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Clinical depression is common in women during pregnancy, which has drawn public attention due to its significant consequences of morbidity and mortality for both mother and neonate. Several clinical factors are associated with the risk of perinatal depression, including stressful life events, past and family history of depression, lack of social support, unintended pregnancy, lower socio-economic status, alcohol and substance abuse, domestic violence, having anxiety or depression before and during pregnancy, lower education, smoking, single status, and poor nutritional status. Pharmacotherapy for pregnant women with depression is still a clinical dilemma. To date, the US Food and Drug Administration approves no psychotropic drugs during pregnancy. Omega-3 polyunsaturated fatty acids (PUFAs) are essential nutrients for pregnant women and fetal brain development. So far, two double blind, placebo-controlled RCTs have been

conducted to investigate omega-3 PUFAs' therapeutic efficacy in pregnant women with major depression, but the results are not consistent. In conclusion, the application of omega-3 PUFAs in pregnant women with depression seems to be promising, but the we need more supportive evidence from the RCTs.

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### **The conceptual question of the mental disorders classification: somatoform disorders.**

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**Introduction:** There is a wide debate over the problem of classifications in any area of science and psychiatry is not an exception. Especially urgent seems to us classification of somatoform (SDs) disorders, as SDs are residing between medicine and psychiatry settings. The aim of the present study is to find the most adequate approach to the classification of SDs. **Methods:** This study is based on more than 30 years of clinical, research, educational experience which allows us to make some generalizations and conclusions. **Results:** Neurotic, stress-related, and SDs (ISD10) are united in one (F4) group in view of historical connection to conception of neurosis and psychogenic causality of disorders, which in this case is necessary but not sufficient condition. ICD10 united mental disorders according to general characteristics, description/similarity. This is why we find it necessary to revise F4, that is to separate SDs according to description/similarity aspects which are reflected the pathological processes of perception, emotions, associations. This group includes: somatic disorders, undifferentiated SDs (numerous senestopathy-like physical manifestations), dysautonomia (prevalence of vegetative disorders), SDs (prevalence of physical symptoms), hypochondriasis (e.g., hypochondriasis, nosophobia, dysmorphophobia), Somatoform pain disorders, somatoform-physiological disorders (i.e., anorexia nervosa, bulimia, atypical forms). **Conclusions:** This is a preliminary study which needs to be revised and completed. We think that this approach will facilitate the identification and delineation of neurotic disorder and a number of mental disorders in primary care.

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### **The efficacy of buprenorphine/naloxone as a pain relief agent in patients self-identified as having comorbid chronic pain who are being treated in a general office-based opioid addiction treatment program**

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In 2013, we surveyed our general buprenorphine/naloxone (bup/nx) clinic to see what percentage of patients self-identified as having a chronic painful condition prior to entering into addiction treatment and how the chronic use of bup/nx affected their perception of pain. Patients were asked 1. prior to starting Suboxone® did you have

chronic pain? and 2. does Suboxone® help with pain? Two hundred forty one (241) surveys were administered and 150 patients acknowledged a history of chronic pain treatment. Three data points were evaluated: 1. patients with less than 90 days abstinent (n = 17); 2. patients with 90-365 days abstinent (n = 37); and 3. patients with more than 365 days abstinent (n = 96). Abstinence was described as being free from alcohol and all drugs of addiction with exception of nicotine and caffeine. The average time in opioid treatment was 33 months and 60% were women. All three groups showed improvement in their perception of having decreased pain while on bup/nx. This improvement persisted over time without any need for dosage escalation.

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## Development of Behavioral Checklist of Depression Symptoms in the workplace

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**Introduction:** Prevention of depression is very important in the workplace. However, the symptoms of depression are often subjectively experienced and incomprehensible to others. Therefore, it is necessary to develop a behavioral checklist that a colleague and/or boss can easily make use of in the workplace.

**Methods:** A semi-structured interview of 10 workers who took sick-leave due to depression and their bosses (5 people) or colleagues (6 people) were conducted to obtain data about their work-related behaviors just prior to taking sick-leave. From the results of qualitative analysis, a 45-item behavioral checklist was prepared. Following that, a total of 816 employees (mean age: 45.1 ± 9.8, female: 29.1%) were requested to fill out a set of questionnaires, including our behavioral checklist, and the Beck Depression Inventory-II (BDI-II). **Results:** The results of factor analysis revealed that our behavioral checklist consists of three factors (“Difficulty with business-related behavior” - DBB, “Poor expression and interpersonal communication” - PEI, and “Expression of irritation and anger” - EIA). These subscales show a significant correlation with the BDI-II (DBB = 0.72, PEI = 0.65, and EIA = 0.53). The results of item analysis showed that the BDD items had a high response rate for severely depressed people, the PEI items had a high response rate for moderately depressed people, and the EIA items had a high response rate for mildly depressed people. **Conclusions:** The behavioral checklist developed in this study is expected to be useful for evaluating the severity of an employee’s depression by a colleague or a boss in the workplace.

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## Alexithymia and stress in the development of mental health disorders.

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**Introduction:** A positive correlation of somatization severity with depression severity exists as well as a negative correlation of somatization severity with anxiety among primary care patients with mental disorders. In addition, a negative correlation was observed between somatoform disorders and situational anxiety. In this framework, the relationship between somatization level of mental disorders and an anxiety in primary care patients was examined. **Methods:** The aim of the present study was to conduct the quantitative and qualitative analysis of alexithymia and stress in somatic patients and compare with data received from psychological and psychiatric institutions. A total of 122 patients from “Diagnostic” center, 111 patients from “Artmed” rehabilitation center, and 148 patients from mental health center “Stress” were observed. **Results:** Alexithymia was observed as a risk factor for many mental (and physical) disorders since 5-23% of healthy population has different level of alexithymia features. According to our research the observed population was characterized by high pathologic level of alexithymia (60%). It was indicated that alexithymia and psychic trauma have impact on somatization process of mental disorders and anxiety manifestations. Significant increase of alexithymia was found in patients with pathologic level of somatization. Our research data verified that stress increased the level of situational anxiety: pathological levels of alexithymia (over 74) and situational anxiety were statistically significant (t = 4,8E-136) and a negative correlation between them was found (r = -1). **Conclusions:** Severe stress may lead to mental disorders while not severe, long-term stress correlated with development of somatic pathology.

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## Appendicitis with anorexia nervosa under weight gain

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**Introduction:** Little is known about the occurrence of appendicitis during the weight-gain period in Anorexia Nervosa (AN). **Cases description:** We report three cases of appendicitis in patients with AN that occurred after hospitalization for treatment of AN. Case 1 is a 34-year-old female, case 2 is a 17-year-old female and case 3 is a 38-year-old female. Constipation was observed in all three cases. Careful management of constipation might be important to prevent appendicitis among AN patients during the weight-gain period. In addition, mild and diffuse symptoms and atypical laboratory findings were observed in all three cases. Therefore, diagnosis proved to be difficult to make and abdominal computed tomography was particularly helpful in all cases. As the symptoms were diffuse, the condition of appendicitis turned out to be more severe in one of the cases. Because lack of interoceptive awareness was observed to be elevated in all three cases, their perception of bodily signals might be reduced. **Comment:** These findings suggest that appendicitis should be considered as one of the critical complications in the therapy for AN.

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## Type A behavior pattern as risk factor of cardiovascular disease

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**Introduction:** Cardiovascular Disease (CVD), including Coronary Heart Disease (CHD) and stroke, is a leading cause of death around the world. Type A behavior pattern (TABP) is a purported psychosocial factor related to CHD. While several prior investigations have examined the relationship between TABP and CHD alone, the current study aims to assess the association between TABP and CVD using a more comprehensive definition including both CHD and stroke. **Methods:** We retrospectively examined cross-sectional data from 54721 individuals aged 40 to 74 years old, who visited our facility in Tokyo between 2009 and 2013 for an annual health check. TABP was evaluated with validated scale for Japanese TABP. Both TABP and CVD were assessed via a standardized and self-reported questionnaire. CVD included CHD (i.e., myocardial infarction and angina) and stroke (i.e., cerebral infarction, TIA, intracranial hemorrhage, and subarachnoid hemorrhage). **Results:** The mean age of the study population was 52 years old and 26102 subjects (47.7%) were male. A total of 1185 subjects (2.2%) had history of CVD; 614 for CHD, 599 for stroke, and 28 for both. A total of 7495 (13.7%) subjects were categorized as Typical TABP. Bivariate analysis of the association between TABP and CVD showed 237 (3.2%) subjects in the Typical TABP group reported CVD event compared to 948 (2.0%) in the others ( $p < 0.01$ ). Logistic regression showed multivariate-adjusted odds ratio of CVD associated with Typical TABP was 1.26 (95% CI, 1.08 - 1.46). **Conclusions:** Typical TABP was significantly associated with CVD, conferring an approximately 30% increased risk. TABP would be helpful for risk assessment of CVD and stroke.

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## Irritable Bowel Syndrome in university students is associated with higher experiencing maladjustment and employment anxiety

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**Introduction:** The present study tested our hypothesis that university students with Irritable Bowel Syndrome (IBS) may experience unsatisfactory academic life than those of students without IBS. We also verified an additional hypothesis that university students with IBS may have higher employment anxiety than that observed in students without IBS. **Methods:** We conducted a cross-sectional study of 1686 university students. Presence or absence of IBS was assessed via the Rome III Questionnaire. Two original items were used to evaluate academic life. **Results:** The prevalence of IBS with diarrhea, IBS with constipation, mixed IBS, and unsubtyped IBS in the study population were 5%, 2%, 10%, and 3%, respectively. Regarding academic life, the proportions of participants who experienced maladjustment and employment anxiety were 29% and 50%, respectively. After adjusting for age, sex, and faculty, the odds ratios for maladjustment and employment anxiety were significantly higher in students who screened positively, relative to those who screened negatively, for IBS (OR = 1.62; 95% CI 1.24 – 2.21; OR = 2.16; 95% CI 1.68–2.81, respectively). **Conclusions:** In conclusion, maladjustment and anxiety over future employment were higher in university students with IBS relative to those without.

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## Proactive consultation-liaison psychiatry: Lessons learned from developing the Behavioral Intervention Team program at the Dartmouth-Hitchcock Medical Center

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Following the success of a proactive psychiatric consultation service developed for a busy, short-stay, hospitalist-staffed general medical unit at Yale, our group at DHMC have developed a Behavioral Intervention Team (BIT) which includes nursing, social work, and psychiatric support. During the initial phase of our BIT development, we proactively screened all patients admitted to two particular medical units and identified those with psychiatric or behavioral needs which could interfere with delivery of care. Once these cases were identified, nursing, social work, and/or psychiatric intervention was offered. Over the 7 months of this phase, we followed various outcomes including length of stay, use of restraints, staff injury, and others. At the conclusion of the pilot phase we determined that our method was targeting the desired population (i.e., patients with acute psychiatric issues requiring psychiatric disposition). For that reason we shifted to screening all adult inpatients at DHMC (excluding psychiatric inpatients). As it is not feasible to screen every new admission to a nearly 400-bed hospital in person, we developed an EMR-based screening tool which identified patients most likely to benefit from psychiatric intervention. With implementation of BIT we have seen more timely psychiatric involvement, decreased length of stay, reduced use of restraints, increased staff satisfaction, and potential for reduced costs. "Lessons learned" include the practical difficulties of

developing an EMR-based screening tool, determining which patient criteria are most useful in using such a tool, and also the practical challenges as well as rewards of implementing proactive consultation in identified cases.

## Potential biological pathways linking Type-D personality and poor health: a cross-sectional investigation

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**Introduction:** The Type D personality is defined as a combination of high negative affect (NA) and high social isolation (SI) and has been associated with poor health outcomes. However, the biological and behavioral pathways via which Type-D produces its deleterious effects are largely unknown. Therefore, the present study was designed to investigate the relationship between Type-D personality and several biological and behavioral pathways including the ANS, the immune system, glucose regulation and sleep in a large, apparently healthy sample. **Methods:** Data from a total of 647 respondents (age 41.6 (11.48) years, 73 women) were available for analysis. Persons with Type-D (NA and SI trait score  $\geq 10$ ) were compared with those without Type-D. Measures of plasma fibrinogen levels, white blood cell count, high sensitivity C-reactive protein, fasting plasma glucose (FPG), cholesterol, high-density and low-density lipoprotein, glycated hemoglobin (HbA1c), creatinine, triglycerides, and albumin were derived from fasting blood samples. Urine norepinephrine and free cortisol were determined by high-performance liquid chromatography. The mean IBI (in ms), the standard deviation of IBI (SDNN), the root mean square of successive differences (RMSSD), and the percentage of differences between adjacent NN intervals differing by more than 50 ms (pNN50 in %) were calculated for the 24 hr recording period and for nighttime separately. **Results:** Persons with Type-D had significantly higher HbA1c, FPG, and fibrinogen, and significantly lower nighttime RMSSD, SDNN, and pNN50 than those without Type D. In addition, those with Type D reported less social support and greater sleep difficulties. **Conclusions:** These results provide some of the first evidence for multiple biological and behavioral pathways between Type D personality and increased morbidity and mortality.

## Screening for mitochondrial dysfunction in chronic fatigue syndrome using Near Infrared Spectroscopy: a preliminary study

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**Introduction:** Chronic Fatigue Syndrome (CFS) is characterized by chronic fatigue persisting for at least 6 months, myalgia, post exertional malaise, and the absence of any sufficiently explanatory medical condition. Mitochondrial dysfunction and oxidative damage may underline the typically experienced exercise intolerance, myalgia, and weakness. Previous work showed that Near Infrared Spectroscopy (NIRS) distinguishes mitochondrial myopathy with documented mitochondrial dysfunction, from healthy controls by reliably measuring deoxyhaemoglobin and – myoglobin in forearm muscles during an Incremental Cyclic Contractions Protocol (ICCP). This study aimed to screen for mitochondrial dysfunction in CFS. **Methods:** Twelve CFS patients and 12 matched healthy controls underwent the ICCP consisting of rhythmic handgrip contractions with increasing intensity. Muscle tissue oxygen extraction was measured with NIRS. Patients with an abnormal profile were invited for further examination by muscle biopsy, the gold standard for diagnosis of mitochondrial diseases. **Results:** Only subtle differences were detected by NIRS between the patient and control group. Looking into the individual results, four CFS patients showed no increase in deoxyhaemoglobin and – myoglobin during ICCP, similar to the profile observed in mitochondrial myopathy and significantly different from healthy controls. Muscle biopsy in these patients confirmed mitochondrial abnormalities in two out of three CFS patients. **Conclusions:** Four out of 12 CFS patients showed altered peripheral oxygen extraction during ICCP, suggesting mitochondrial dysfunction. This finding was confirmed by muscle biopsy in two out of three patients. Research in a large cohort is needed to further investigate a possible role of mitochondrial dysfunction in post exertional malaise experienced by CFS patients.

## A new health care model for patients with abnormal fatigue and chronic fatigue syndrome

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**Introduction:** The organization of care for patients with the Chronic Fatigue Syndrome (CFS) in tertiary care referral centers from 2002 onwards, was negatively evaluated by the Belgian Health Care Knowledge Centre on the endpoint of socio-professional reintegration. Subsequently, the reference center of the University Hospital Ghent took the initiative of recruiting partners in the Belgian provinces of East and West-Flanders to guarantee the care for patients with medically unexplained symptoms, in particular abnormal fatigue and CFS. **A new health care model:** A new and innovative care model, in which general practitioners play a central role, emphasizes the importance of early recognition of the

patients 'at risk', correct diagnosis and timely referral. Early detection and intervention is essential in order to avoid or minimize illness progression towards chronicity, to safeguard opportunities for significant health improvement as well as to enhance successful socio-professional reintegration. This approach covers both the large sample of patients developing somatic complaints without obvious disease in an early phase as well as the more limited group of patients with chronic illness, including CFS. Cognitive behavioral therapy and graded exposure/exercise therapy are the evidence based main components of therapy in the latter. **Conclusions:** The presented care path for abnormal fatigue presents a conceptual framework for early detection and prevention on the one hand and timely referral for adequate diagnostic screening and treatment on the other hand. The use of a biopsychosocial model and interdisciplinary interaction between different caregivers are key features.

### Psychological distress, well-being and personality traits in patients with different severity of psoriasis: a clinimetric assessment approach

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**Introduction:** Psoriasis is a chronic dermatologic disease that negatively impacts not only the physical health of patients but also their mental health and social and work life. Indeed, it has been estimated that at least 30% of dermatologic patients present significant psychiatric comorbidities. A number of studies have found a correlation between the occurrence of psoriasis and psychiatric disorders such as depression and anxiety. However, major psychiatric disorders and life dissatisfaction have not been proved to differ across severity levels of the illness. The aim of this study is to illustrate, according to a clinimetric approach, the presence of differences between patients with mild versus moderate to severe psoriasis in psychological distress and well-being.

**Methods:** A total of 70 patients suffering with psoriasis were recruited during follow up visits at Dermatology Clinic of Florence. Patients were evaluated using the Structured Clinical Interview for DSM-IV (SCID-I), the Diagnostic Criteria for Psychosomatic Research (DCPR) interview, along with the following self-report instruments: the Symptoms Questionnaire (SQ), the Psychological Well-being scales (PWB), and the Temperament and Character Inventory (TCI). Illness severity was evaluated as mild or moderate to severe using the Psoriasis Area and Severity Index (PASI). **Results:** According to PASI (> 10), 18.6% (n = 13) of patients reported moderate to severe psoriasis while 81.4% (n = 57) did not. No differences were reported between groups in rates of mood and anxiety disorders, but patients with greater severity presented greater rates of demoralization (61.5%; p < 0.05) and Type A behavior (53.8%; p < 0.05) than subjects with mild severity (17.5% and 21.1%, respectively). Patients with moderate/severe psoriasis also reported impaired levels of psychological well-being in terms of lower autonomy (p < 0.05), environmental mastery (p < 0.05), personal growth (p < 0.05) and purpose in life (p < 0.05), along

with greater anxiety (p < 0.05), depressive (p < 0.05) and somatic symptoms (p < 0.05) than patients with milder severity of illness. Furthermore, according to TCI, severe patients reported greater harm avoidance (p < 0.05) and lower self-directness (p < 0.05) than individuals with milder psoriasis levels. **Conclusions:** Overall results highlighted the need in patients suffering with psoriasis of a more comprehensive psychological and psychosomatic assessment not limited to the customary diagnostic criteria.

### Psychological distress and family functioning in stroke patients and their caregivers: changes over time and associations with outcomes.

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**Introduction:** The aim of this longitudinal study was to explore change over time in psychological distress and family functioning of stroke patients and their caregivers and to verify if and which dimensions of family functioning were significantly associated with patients' functional recovery and caregivers' psychological distress.

**Methods:** A sample of 40 Italian stroke survivors (age: 71.8 ± 12.5; 52.5% male) and 36 family caregivers (age: 58.8 ± 9.0; 41.7% male) completed the Symptom Questionnaire (SQ) and the Family Assessment Device (FAD) at the admission to the rehabilitation hospital and 6 months after discharge. Stroke survivors' functional status was measured using the Functional Independence Measure (FIM) on admission to and discharge from rehabilitation. **Results:** Six months after hospital discharge, both patients and caregivers reported a significant decrease in SQ anxiety (p ≤ 0.05), with stroke patients showing a reduction in SQ somatic symptoms (p ≤ 0.05) as well. A significant deterioration over time in FAD general family functioning, roles, behavior control, and affective involvement was observed only in patients who reported also an association between FAD behavior control at hospital admission and recovery in the FIM cognitive domain at discharge (p ≤ 0.05). In caregivers, perception of family functioning at hospital admission significantly predicted caregivers' SQ hostility at 6 months after discharge (p ≤ 0.05), while FAD affective involvement was associated with SQ somatic symptoms (p ≤ 0.05). **Conclusions:** These data highlight the utility in the Italian setting of the adoption of a psychosocial assessment and a family-systems approach in stroke rehabilitation.

### Response to diagnosis, family functioning, psychological distress, and well-being in mothers and fathers of children with type-1 diabetes

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**Introduction:** Reactions to the diagnosis of a chronic pediatric illness may impact parents in different ways. The study explores differences between mothers and fathers of children with type-1 diabetes mellitus (DMT1) in family functioning, psychological

distress, and well-being in relation to their diagnosis responses and perceptions. **Methods:** A total of 110 parents (mean age  $43.5 \pm 4.5$ ) of children with DMTI (mean age  $6.4 \pm 3.4$ ; mean glycated hemoglobin  $7.11 \pm 0.89$ ) were evaluated using an ad hoc questionnaire for reactions to diagnosis, Family Assessment Functioning Device (FAD), Symptom Questionnaire (SQ), Davidson Trauma Scale (DTS), and Psychological Well-being scales (PWB). Bivariate correlational analyses and t-tests were run. **Results:** No differences between mothers and fathers were found in FAD, PWB, and DTS scores. One significant difference emerged in SQ-somatization with mothers reporting significantly higher total scores ( $p = 0.001$ ). In mothers, SQ-anxiety ( $r = 0.31$ ;  $p < 0.05$ ), SQ-depression ( $r = 0.38$ ;  $p < 0.05$ ) and SQ-somatization ( $r = 0.32$ ;  $p < 0.05$ ) correlated positively with feeling lonely. However, in fathers the scales SQ-anxiety ( $r = -0.36$ ;  $p < 0.05$ ), SQ-depression ( $r = -0.47$ ;  $p < 0.05$ ) as well as SQ-hostility ( $r = -0.363$ ;  $p < 0.05$ ) correlated negatively with feeling prepared in managing the illness. Concerning positive aspects, in mothers acceptance of the diagnosis correlated with better scores in FAD-distribution of roles scale ( $r = -0.373$ ;  $p < 0.05$ ). Differently, in fathers it correlated with lower FAD-communication scores  $r = 0.333$ ;  $p < 0.05$ ). **Conclusions:** The findings indicate that distress may be associated with different aspects of the reaction to diagnosis depending on the parent in question. Such differences between mothers and fathers may be due to gender differences in coping and adjusting to illness and thus warrant further consideration.

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## The importance of supportive Shiatsu touch in childbirth

Trend L

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**Introduction:** Eastern bodywork has been increasing in popularity in the UK. Shiatsu is a traditional Japanese bodywork which was central to traditional Japanese midwifery care and is highly adaptable for use from basic home use to advanced professional level. The pioneering teaching and research work of Suzanne Yates (Well Mother Bristol, UK) has brought the value of Japanese Shiatsu to the awareness of those working in both holistic and mainstream maternity care in the UK. Her valuable research, training courses and publications have provided a grounding for integrated health care and a model for training primary care workers to implement this valuable tool which contributes to reducing intervention in childbirth through the positive support model. The aim of the present study was supporting women to have positive birth experiences and reducing interventions in childbirth. **Methods:** Offering Shiatsu touch training to midwives, physiotherapists, doctors, birth partners, and all who support women during the childbearing year. Offering post graduate maternity care training to Shiatsu Practitioners. **Results:** Increasing awareness of positive outcomes was found as a result of holistic support model. **Conclusions:** Positive touch and informed, considered choice is a valuable contribution to improving experience and outcomes in obstetric care.

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## Demand, control, and social support in the workplace: the role of job strain on ovarian cancer risk

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**Introduction:** Ovarian cancer (OvCA) is one of the leading causes of cancer death for women. Thus, the identification of modifiable risk factors is critical for reducing incidence and mortality. Research suggests that low social support is related to progression and survival in OvCA, but less is known about other forms of chronic psychosocial stress, such as job strain. **Methods:** Women ( $n = 31946$ ; mean age 55 years) from the Nurses' Health Study completed a job questionnaire in 1992 and 1996. They were grouped according to their job type (i.e., low demand/high control = "low-strain"; low demand/low control = "passive"; high demand/high control = "active", and high demand/low control = "high-strain") and level of social support provided by the coworkers and the supervisor (i.e., low/moderate/high). OvCA incidence was evaluated through 2012. Cox regression models, adjusting for potential covariates (e.g., demographics, health status, ovarian cancer risk factors, and behaviors), were used to estimate hazard ratios (HR) of OvCA risk. **Results:** There were 196 OvCA cases during follow-up. Compared to the "low-strain" jobs (reference group), the "passive" (HR = 1.35; 95% CI 0.91 – 2.01), "active" (HR = 1.22; 95% CI 0.80 – 1.86) and "high-strain" (HR = 1.06; 95% CI 0.70 – 1.62) jobs were not significantly associated with an increased risk of OvCA. Levels of social support were not related to cancer risk. **Conclusions:** Among the current sample of midlife nurses, no significant association was observed between job strain and OvCA incidence. These findings might be due to lack of statistical power and the relatively late age at job strain assessment. Further research on such modifiable factors is encouraged, particularly in younger populations.

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## Closing the mental health educational gap of primary care providers in low and middle income countries

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Psychiatric illness is the major cause of years lived with disability. But in low and middle-income countries (LMICs), 70-95% of individuals with these conditions go untreated. The primary reason is a severe shortage of mental health professionals. The only practical approach to closing the treatment gap is through primary care providers (PCPs). But most medical and nursing schools in LMICs provide little or no training in mental health. Students are

provided a few readings and/or lectures, but there is usually no practical experience in interviewing mentally ill patients, treating them, or following their clinical course. The lack of formal training reinforces stigmatized conceptions that these patients are difficult to interview, impossible to diagnose, and untreatable. Without adequate knowledge and skills, PCPs feel overwhelmed and ill prepared to respond to their needs. Several steps are needed to address the mental health educational gap of PCPs. For the existing workforce, videotape lectures delivered via the Internet provide a cost effective first step. A next step is role-playing scripts with supervision by mental health professionals. In addition, consultation by mental health professionals of ongoing cases can be provided through the Internet. However, the long-term solution is to augment mental health training as a core educational experience in LMIC medical and nursing schools. This will require increased time in the curriculum and resources to augment the supply of mental health faculty.

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### The relationship between fatigue, insomnia and depression in chronic medical conditions: approaches to assessment and management

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About 1 in 5 patients complains of suffering from fatigue when visiting their family physician's office. However, often no etiology is found and no specific treatment is offered to them. Insomnia, depression, and fatigue may be characterized as a triad of symptoms occurring concurrently in a wide spectrum of physical illness and mental disorders. This presentation illustrates guidelines for basic medical assessment, and attempts to highlight pharmaceutical treatment options available with regard to managing several of these conditions. The importance of understanding the connection and symptom overlap with regard to sleep disorders, mood disorders and fatigue will be discussed. Approaches to diagnostic assessment and pharmacological management of symptoms and associated disorders will be outlined.

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### Positive expectations and happiness in healthy women (the iMIND study)

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**Introduction:** Human mind is able to process both negative and positive thoughts and emotions. Although psychology aims to understand human mind as a whole, research has disproportionately (17:1) focused on negative dimensions of life. This study intends to bring some light on mind's positive dimensions of healthy women and how optimism and happiness, conveying a positive perception of reality, are thought to contribute to their health. **Methods:** A cohort of healthy women from a primary health care setting is being studied by a team including internal medicine, psychology, and psychiatry professionals. We aim to investigate the relationship

between physical and mental well-being with a focus on cardiovascular risk and depression, taking into account personal and contextual variables. Assessments include a semi-structured interview, standardized evaluation (i.e., subjective well-being, happiness, optimism, coping, personality) and monitoring of health-related behaviors. Biological and physiological measures (i.e., cardiovascular and metabolic monitoring) are repeatedly collected.

**Results:** Happiness is negatively correlated with depressive mood ( $r = -0.739$ ;  $p < 0.05$ ), but not with anxiety. Happiness ( $r = -0.778$ ;  $p < 0.05$ ) and optimism ( $r = -0.826$ ;  $p < 0.05$ ) also presented a negative association with perceived stress. Happiness and optimism showed similar correlations with personality dimensions – both were positively associated with extroversion ( $r = 0.655$ ;  $p < 0.1$  and  $r = 0.755$ ;  $p < 0.05$ , respectively) and negatively associated with neuroticism ( $r = -0.882$ ;  $p < 0.05$  and  $r = -0.840$ ;  $p < 0.05$ ). Happiness and dispositional optimism were correlated ( $r = 0.826$ ;  $p < 0.05$ ). **Conclusions:** Positive dimensions of mind processes, whether inborn or learned, can be protective and reduce the deleterious effects of psychological suffering on health. Present work brings some data to promote scientific discussion on positive psychology.

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### Sleep, depression, and blood pressure in healthy women (the iMIND study)

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**Introduction:** Sleep is a vital phenomenon. Disorders of sleep disrupt psychological and physiologic functions and have been associated with increased risk of cardiovascular events. The causality is not established, though disturbed sleep is supposed to cause deleterious changes in sympathetic tonus and neuro-humoral activity. **Methods:** A cohort of 350 women between 55 and 65 years of age was randomly selected from a Primary Health Care database. They were free of major medical or neurological disease. The study is based on a primary health care setting and involves the Medical Psychology Unit of the local medical school, and is being supervised by a psychiatrist and an internal medicine physician. Assessments included a semi-structured interview, standardized psychometric instruments and laboratory determinations: psychosocial variables (i.e., perception of stress, anxiety and depressive symptoms, personality), health-related behaviors, quality of life, blood pressure, glucose, lipid, renal and hepatic profile and further metabolic monitoring. **Results:** Sleep features in a Portuguese sample of healthy middle-age women are described. Anxiety level was correlated with the time needed to fall asleep ( $r = 0.755$ ;  $p < 0.05$ ). Depressive symptoms were inversely correlated with the total hours of sleep ( $r = -0.836$ ;  $p < 0.05$ ). Moreover, hours of sleep were inversely correlated with physiological dimensions such as Systolic Blood Pressure ( $r = 0.748$ ;  $p < 0.05$ ). **Conclusions:** Sleep is an accessible measure related with psychological suffering and with cardiovascular physiology. Identification of sleep patterns and its bidirectional relationship with other health variables is of paramount importance if health and disease is to be thoroughly understood.

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## Schizophrenia psychosomatically assessed. In need of an integrated concept as prerequisite of integrated care

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**Introduction:** Schizophrenia is a severe mental illness that has strong impact both on mental experience and on somatic well-being. However, an appropriate integrated care has not been established, yet. **Methods:** The presentation (1) refers to currently published scientific data about somatic morbidity and mortality of schizophrenic patients and reasons for their poor physical health, and (2) relates these findings to an integrative psychosomatic assessment. **Results:** Schizophrenia is a life shortening disease. Life expectancy of schizophrenic patients in industrial countries is reduced by about 20 years. This mortality gap has probably widened in recent decades. About 60% of this excess mortality is due to physical illness, by which 30-50% of schizophrenics are affected to a relevant degree. Many diseases are associated with schizophrenia, but cardiovascular, metabolic and infectious diseases, and carcinosis seem to be the most important ones. Besides illness, lifestyle and treatment factors, also the organization of health care access and organization account for much of the poor physical health. Although there is strong scientific evidence that schizophrenia is a multi-causal disease, a one-dimensional biological perspective has academically prevailed and prevented comprehensive treatment. **Conclusions:** Schizophrenia is generally a severe and complex to mind and body pertaining disease. Both biological and psychosocial factors essentially influence individual vulnerability, onset, course, and outcome of this disease. Schizophrenia has been termed the “central disease of psychiatry” (Finzen) - but is not a “psychiatric”, but a human disease, that only psychosomatically assessed is well understood and appropriately treated.

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## Towards an anthropological conception of emotions in psychosomatic medicine

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**Introduction:** Emotions are historically and epistemologically of central concern in psychosomatic medicine and philosophical anthropology for the understanding of the embodied self. Yet, depending on the field of study, the term is imbued with distinct and often unrelated meanings. **Methods:** Drawing on concepts and findings of emotions applied in psychosomatic medicine and theories of emotions developed in philosophical anthropology, this presentation explores the compatibility of findings of current empirical and hermeneutic research. **Results:** From Antiquity in various historical concepts the cause and cure of many diseases were ascribed to the agency of emotions (“passions”). At the onset of modern psychosomatic medicine a basically linear-causal role of emotions was postulated by mainly psychogenic approaches (i.e., conversion, actual neurosis, specific unconscious conflict,

resomatization, alexithymia). The introduction of the biopsychosocial model and the concept of multicausality, which constitute basic postulates of present psychosomatic medicine, replaced the ideas of a unidirectional impact of emotions on bodily changes. But, the biopsychosocial model not only implicates a change of the understanding of the emotions’ function, but also of their meaning. Empirical research on emotions has generated a plenty of neurobiological, physiological, and epigenetic facts. Hermeneutic research has developed a wealth of anthropological considerations just as well, concerning mainly the meaning of emotions for ethics, identity-formation and inter-subjectivity. **Conclusions:** The biopsychosocial model implies the necessity of different and complementary methods. Only a connection of empirical with hermeneutic considerations may provide a more comprehensive and anthropological conception of the emotions’ functions and meanings in psychosomatic theory and clinical practice.

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## Is distress reduction necessary in chronic pain? A session-by-session analysis of distress change trajectories in relation to treatment outcomes following interdisciplinary Acceptance and Commitment Therapy

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**Introduction:** Chronic pain is common, costly, and debilitating. The high levels of distress that typically occur are regularly targeted for treatment, based on the assumption that decreases are an essential prerequisite for a successful reduction in pain-related disability and dysfunction. Conversely, Acceptance and Commitment Therapy (ACT) assumes that distress reduction is not necessary, rather responses to pain must change, such that functioning improves in clearly specified areas (e.g., engagement in valued activities, decreased disability in social activity). This study expands upon previous work supporting the effectiveness of interdisciplinary ACT for chronic pain through follow-ups of as long as three years. **Methods:** First, session-by-session trajectories of change in distress over the course of treatment were examined. Second, trajectories of change across patients were examined in relation to changes in functioning (i.e., values engagement; disability) at three-month follow-up. In total, data were collected from 148 consecutive participants (68% female; mean age: 46.6 years, SD = 11.2), who provided weekly levels of distress over a 4-week course of treatment and also completed measures of values engagement and disability at treatment onset and follow-up. **Results:** Treatment outcomes were consistent with previous work in that they indicated statistically significant reductions in disability and increases in values engagement (range partial  $\eta^2 = 0.29$  to 0.44). Latent Growth Modeling indicated three trajectories of change in distress over the four weeks of treatment: 1. linear decrease; 2. slight parabolic increase, and 3. pronounced parabolic increase with return to baseline. When these trajectories of change were analyzed in relation to changes in functioning at follow-up, a lack of significant differences in treatment-related improvements

were indicated for psychosocial disability (e.g., social, familial functioning), success in values-based action, and the values importance/values success discrepancy. A significant difference was indicated for physical disability, such that the third “pronounced parabolic” trajectory, which comprised only a minority of individuals, reported lesser improvements in this domain compared to the other two trajectories. **Conclusions:** Overall, these data suggest the following: there are different patterns of change in distress across treatment; decreases in distress are not a necessary prerequisite for change; support is provided for the somewhat counterintuitive hypotheses posited by the ACT model in relation to distress.

### Comparison of cerebral blood flow in oral somatic delusion in patients with and without a history of depression

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**Introduction:** Oral Somatic Delusion (OSD) is an unusual, strange, and bizarre sensation in the oral area without any corresponding abnormality. OSD may be either primary (i.e., monosymptomatic) or secondary to another disease (e.g., depression, cerebral infarction). Although the presenting complaints of patients with primary and secondary OSD are nearly indistinguishable, symptoms in patients with secondary OSD seem to be resistant to treatment. The aim of this study was to assess the differences in clinical characteristics and CBF distribution between patients with monosymptomatic OSD (non-depression group) and OSD in conjunction with remitted depression (depression group). **Methods:** Participants comprise 17 patients in the non-depression group and 10 patients in the depression group. CBF was examined using single-photon emission computed tomography. **Results:** There was no difference in clinical presentation between the two groups. A significant right dominant asymmetry in the temporal and posterior cerebral regions was observed in both groups. In the central region, a right dominance was seen in the non-depression group, while a left dominance was seen in the depression group. Moreover, the mean regional CBF values for patients in the depression group were significantly lower in several regions (including bilateral callosomarginal, precentral, angular, temporal, posterior cerebral, pericallosal, lenticular nucleus, thalamus, and hippocampus; and right central and cerebellum) than for patients in the non-depression group. **Conclusions:** These results suggest that the temporal and posterior cerebral regions are involved in the pathophysiology of OSD, regardless of depression history, and that widespread CBF reduction is a characteristic of remitted depression.

### Type-2 diabetes and depressive symptoms: results of applying a Mendelian randomization in the Cardiovascular Risk in Young Finns Study

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**Introduction:** The causal role of type-2 diabetes in the development of depressive symptoms remains unclear. We applied instrumental variables regression analysis (Mendelian randomization) to examine the association between type-2 diabetes and depressive symptoms. **Methods:** The study was based on information collected from 2063 individuals who participated in the 2011 follow-up of the prospective Cardiovascular Risk in Young Finns Study. The diagnosis of type-2 diabetes was based on fasting glucose or the concentration of glycated hemoglobin or self-reported diabetes, or use of medications for diabetes. Depressive symptoms were assessed using the modified Beck Depression Inventory (mBDI-I). The genetic risk score of 34 single nucleotide polymorphisms previously identified as genetic markers of type-2 diabetes/hyperglycemia were used as an instrument for type-2 diabetes and glucose. **Results:** In standard linear regression, type-2 diabetes ( $B = 0.21$ ; 95% CI 0.05 – 0.37,  $p < 0.05$ ) and glucose ( $B = 0.04$ ; 95% CI 0.01 – 0.08,  $p < 0.05$ ) were associated with increased depressive symptoms independently of sex and age. The results of instrumental variables regression showed no sex- and age-adjusted association of type-2 diabetes or glucose with depressive symptoms ( $p > 0.05$ ). The differences in estimates between the linear and the instrumental variables regression analyses were non-significant ( $p > 0.05$ ). **Conclusions:** The study provides evidence for a non-casual role of type-2 diabetes in increasing depressive symptoms. The association between type-2 diabetes and depressive symptoms is more likely to be due to reverse causality or confounding.

### How do we understand and treat depression in people with persistent pain?

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Psychologically-based interventions for persistent pain are essentially pragmatic combinations of cognitive and behavioral methods of known efficacy. For participants with significant anxiety and depression associated with their pain, cognitive and behavioral methods target those as well as other pain-related problems. The theoretical basis is unclear. Simple theories of causality evolved into more sophisticated versions invoking early

vulnerability, and cognitive processing and emotion regulation. Meta-analysis of cognitive and behavioral interventions for chronic pain showed small benefits for distress, but with variation in baseline depression and quality of treatment. Outside these interventions, a review of the longitudinal studies on chronic pain and depression in adults from clinical populations provided weak evidence that depression worsens pain outcomes, and pain worsens depression outcomes. Most studies used unsuitable measures of depression, assessing depression with instruments developed and standardized in physically healthy populations. This issue is widely neglected. There are 227 different ways to achieve the DSM-5 diagnosis of major depression, a far from homogeneous classification. Attention to specific symptoms and their (lack of) associations with persistent pain would build more specific models to address in psychological treatment.

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### Care matters in maternity – enabling staff to provide compassionate woman centred care for vulnerable women

Willocks C

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**Introduction:** Maternity care has become increasingly complex and this itself can be stressful for the caregiver. Educational resources developed by NHS Education Scotland that combine stories and learning have been found to be useful tools to empower staff to provide care that is safe and effective, sensitive to a woman's needs and which result in improved clinical outcomes and the health and wellbeing of vulnerable pregnant women and infants. **Methods:** A multi-agency and multidisciplinary national working group met and developed a range of resources including a short e-learning resource and workshops for the One out of Four Resource, developed to ensure that healthcare staff provide is sensitive to the needs of the one out of four women in Scotland who are survivors of sexual violence. The workshop resources include four short films depicting women survivors talking about their experiences of healthcare. The resources support facilitators to engage professionals in group work discussion using the films as a springboard. The workshops aim to support professionals to become more aware of the impact of their care on women, the impact of a history of sexual violence on women's responses to their care and to consider ways to improve the care provided to women in our services. A Maternal Mental Health e-learning resource is now under development – its aims are to provide an introduction to understanding and supporting mental health during pregnancy and in the postnatal period. **Results:** One out of Four workshop facilitators have been trained all over Scotland to provide workshops to health, social care and third sector staff and the e-learning resource is freely available on the NES website. **Conclusions:** Care that is sensitive to a woman's needs results in increased satisfaction to those receiving and providing care and may result in improved clinical outcomes.

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### Psychosomatic Medicine: populations and paradigms

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Psychosomatic medicine denotes many things. As a research strategy, it suggests incorporation of psychosocial variables. As a clinical approach, it strives for inclusion of biopsychosocial elements in understanding the patient's problems. Most commonly, it is the new designation for consultation liaison psychiatry. The traditional models for psychiatric consultation-liaison have not greatly changed medical practice as evidenced by data that many physicians continue to underdiagnose common comorbid psychiatric syndromes. The recognition that health care is increasingly costly has led to a renewed focus upon population health due to the lackluster outcomes for psychiatric disorders. Solutions offered include "top-down" strategies such as INTERMED or "bottom up" initiatives utilizing screening of primary care patients for depression and anxiety or careful psychometric evaluation of delirium in intensive care settings. This has renewed interest in how to best integrate mental health care into primary and specialty care. The use of collaborative stepped care models, behavioral team interventions, and co-location strategies are discussed. The widespread introduction of the Electronic Health Record is an integral feature of such new systems but has significant drawbacks if the biopsychosocial model is to be preserved. At present, these models and others are being tested to see which population is best served for detection and treatment of comorbid behavioral health disorders. The current evidence would seem to suggest the new paradigm for consultation psychiatry as well as psychosomatic medicine is comorbidity medicine as initially discussed by Feinstein who delineated the necessity of comorbidity but also the dangers of pure reliance upon technology.

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### Students at the Medical University at Graz – motivation, social support and mental health over the first semester

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**Introduction:** Motivation, social support, independent life-time organization and coping strategies are essential conditions for subjective wellbeing, mental health, and for productivity and satisfaction. Students have to deal with much more emotional stress than comparable young adults without academic education. Two out of 10 students suffer from extensive emotional stress during studying. The present study focuses on the balance between emotional stress because of workload and coping strategies as well as social support. **Methods:** We used the questionnaire Mental Health of Students in Greifswald to measure parameters like wellbeing, motivation, social support, self-organization skills, and conditions like critical life-events, workload, psychosomatic affections, and emotional states like stress because of studying. We asked 350 students at the beginning and at the end of the first semester at the Medical University of Graz. **Results:** Students at the Medical University of Graz are highly motivated and show a high level of competences in different coping strategies. Furthermore, these self-organization skills and social support are positively related to motivation and emotional and physical wellbeing. **Conclusions:** It is important to enable self-organization

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and social support to preserve student's motivation and wellbeing. Facilitating social support and time management could encourage productivity as well as mental health.

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## Computer-assisted Cognitive-Behavior Therapy: Can Technology Enhance Treatment Delivery in Psychosomatic Medicine?

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The goals of computer-assisted cognitive-behavior therapy (CCBT) are: 1. increase access to evidence-based treatment; 2. reduce cost of therapy; and 3. enhance the therapeutic process for both patients and clinicians. CCBT programs that could improve treatment delivery in psychosomatic medicine include those for treatment of depression and anxiety, in addition to methods for helping people better manage specific medical illnesses or symptoms. This presentation reviews key research findings for CCBT, illustrates programs available for clinical use, and discusses opportunities for future development of computer technology in psychosomatic medicine.

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## The association between alexithymia and hypothalamic-pituitary-adrenal axis reaction in irritable bowel syndrome

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**Introduction:** The function of Hypothalamic-Pituitary-Adrenal (HPA) axis is important in stress-related disorders including Irritable Bowel Syndrome (IBS). Previous studies suggested an association between IBS and alexithymia, which is a personality trait characterized by difficulties in identifying and describing one's emotions. The purpose of this study is to test the hypothesis that alexithymic factors affect Adrenocorticotrophic Hormone (ACTH) and cortisol reactions after administering Corticotrophin-Releasing Hormone (CRH) in subjects with IBS. **Methods:** Twenty seven IBS subjects diagnosed by Rome III criteria and age- and sex-matched 33 healthy controls participated in the study. CRH (2µg/kg) was administered intravenously after a viscerosensory examination of the colorectum. Plasma ACTH and cortisol were measured at baseline and at 15, 30, 60, and 120 min after the administration of CRH. Alexithymia was assessed with the 20-item of Toronto alexithymia scale (TAS-20). **Results:** There was no significant difference in TAS-20 total score and the subscales between IBS subjects and controls. In IBS subjects, the area under curve (AUC) of ACTH was positively correlated with TAS total score ( $r = 0.47$ ,  $p < 0.05$ ), difficulty identifying feelings (DIF) ( $r = 0.48$ ,  $p < 0.05$ ), and externally oriented thinking (EOT) ( $r = 0.49$ ,  $p < 0.05$ ). There was no significant association between TAS-20 total

and its subscale scores and AUC of ACTH in controls. Neither IBS subjects nor controls showed significant correlation between cortisol AUC and TAS scores. **Conclusions:** These findings suggest that alexithymic factors may affect hypothalamic-pituitary reactivity in IBS subjects.

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## Delirium in the Japanese Intensive Care Units: application of the new guideline.

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**Introduction:** Delirium is a prevalent organ dysfunction associated with increased lengths of hospital stay and mortality. In our hospital, psychosomatic medicine specialists, psychiatrists, and ICU staff formed a multidisciplinary team to systematic delirium monitoring within the Pain, Agitation, and Delirium (PAD) Guideline. However, the validity of PAD guideline in Japanese clinical setting is controversial due to differences in ICU system and staff training systems among countries. **Methods:** We retrospectively researched clinical features of ICU delirium and usefulness of the PAD guideline based screening in a Japanese educational hospital. ICU patients were screened for presence of delirium by using Confusion Assessment Method for Intensive Care Unit (CAM-ICU), and those found positive on CAM-ICU were further evaluated by specialists to confirm the diagnosis of delirium as per DSM-IV-TR criteria. **Results:** Subjects were 563 intensive care patients (326 males, mean age  $65.5 \pm 18.6$  years old). Ninety-nine patients (17.6%) were diagnosed delirium according to DSM-IV-TR criteria, and the positive predictive value of CAM-ICU screening was 91.7%. The major risk factors identified for delirium were currently receiving opioids, mechanical ventilation, infections, heart failure, surgery, benzodiazepines, steroids, dementia, and cancer. About one fourth (28.3%) of the patients who developed delirium died during the hospital stay in contrast to 7.3% mortality in the non-delirious group. Those with delirium also had longer ICU stay ( $7.3 \pm 3.5$  days vs  $3.5 \pm 3.4$  days) and hospital stay ( $52.72 \pm 55.6$  days vs  $21.4 \pm 28.0$  days). **Conclusions:** Screening within PAD guideline appropriately diagnosed ICU delirium associated with high mortality in our clinical setting.

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## Effects of mindful walking and qigong

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**Introduction:** Mindful walking is regarded as major relaxation activities in Japan. Qigong is an exercise based on the traditional Chinese health medicine. These activities enhance your perception of the world through the five senses and decrease stress and

anxiety. However, its effects are yet to be completely clarified. The purpose of this study was to evaluate the psychological effects of mindful walking and qigong. **Methods:** The subjects comprised 46 university students who agreed to participate in the study. The students engaged in mindful walking (for 1 hour) and qigong (for 30 minutes). The results were evaluated using the Profile of Mood states (POMS) and the State-Trait Anxiety Inventory A-State Scale (STAI-A). The students filled out questionnaires before and after this study. All the analyses were performed using SPSS 15.0. **Results:** in the survey after the study, the scores for tension, depression, anger, fatigue, and confusion decreased significantly ( $p < 0.01$ ), while those for vigor increased significantly ( $p < 0.01$ ). The STAI-A scores also improved significantly ( $p < 0.01$ ). **Conclusions:** These results suggest that mindful walking and qigong reduce stress and anxiety and make people feel good.

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## System of consultation liaison service in Japanese University Hospital

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**Introduction:** Consultation Liaison Service (CLS) is required to construct the efficient system for the change of medical environment. The aim of this study was to clarify recent situation of CLS in Japanese University Hospital, and to consider the system for efficient CLS. **Methods:** We conducted a survey on medical records of patients who had been admitted to, and received CLS at, the Tokai University Hospital in 2014. We investigated the departments which referred the patients to psychiatry and classified their psychiatric disorders according to the DSM-IV-TR. **Results:** A total of 1110 cases received CLS in 2014, 400 cases of which were suicidal and/or delirium patients in emergency medical center, 396 cases were cancer patients who showed delirium, adjustment disorder, and depression. The remaining 314 cases were mental disorders due to a general medical condition, adjustment disorder, and the existing mental disorders such as schizophrenia and mood disorder. **Conclusions:** Recently, we have constituted three CLS teams named "Trauma and critical care psychiatry", "Psycho-oncology", and "Consultation liaison psychiatry". These teams, not only corresponds to the routine requests from other departments, it is possible to provide a structured liaison services such as liaison conference. These systems of CLS might be best suited to a recent Japanese University Hospital.

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## Relation between personality traits, including sensitivity to reward, and self-control

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**Introduction:** Little is known about the relation between reward systems and self-control. The aim of this study was to examine the relation between personality traits, including sensitivity to reward, and anger control. **Methods:** The participants were 12 healthy volunteers. The stimuli were six anger-eliciting episodes by a

provocative person. Cognitive reappraisal of the mental state of the provocative person was used for anger control. While imaging the anger-eliciting episodes, the participants were instructed to write their feelings both from their own perspective and from the other person's perspective using cognitive reappraisal. Evaluation of the self-rating of anger was by visual analogue scale. Self-completed questionnaires were used to evaluate their personality traits, including sensitivity to reward. We then examined the relation between the subscales of the personality traits and the ratings of anger and the change of the rating of anger when using cognitive reappraisal. **Results:** The self-rating of anger when the participants imaged the anger-eliciting episodes using cognitive reappraisal was significantly lower than that from their own perspective. The rating of anger when they imaged the anger-eliciting episodes from their own perspective was significantly correlated with the scores of Reward Responsiveness, Neuroticism, and Openness. There was no significant correlation between the subscales of the personality traits and the change of rating of anger when using cognitive reappraisal. **Conclusions:** Our findings suggest that the degree of anger evoked by a stressful situation is related to reward responsiveness and the personality traits neuroticism and openness.

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## Depressed patients' preference for type of psychotherapy: a preliminary study

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**Introduction:** The treatment recommendations for depressed patients by the American Psychiatric Association encourage a focus on the patient's preferences. The focus of this study was the preference of depressed inpatients for the type of psychotherapy. **Methods:** Twenty-nine subjects of both sexes who were hospitalized with a major depressive episode were interviewed at 5-day intervals with the same questions after the depressive episode resolved, as indicated by a score less than 7 on the Hamilton Depression Rating Scale (HDRS). The selection of items was performed by expert consensus. Patients responded according to a scale ranging from 0 to 4. Regarding cognitive and behavioral therapies, we included items related to thought and emotion patterns. Regarding psychodynamic psychotherapy: the items included "parent relationships" in reference to oedipal concepts, "identity evidence about self-image," and "aspects of the ideal self" were included. Supportive psychotherapy section included questions related to "the relationship between the couple," "transitions in various life situations," "the development of conflict", "thinking about the attitude of children or relatives in reference to the person", and "the fact we can develop or talk about these difficulties". **Results:** The supportive psychotherapy scores were the highest ( $25.6 \pm 8.56$ ), followed by analytical-inspired psychotherapy ( $18.6 \pm 6.43$ ) and CBT ( $10.2 \pm 4.13$ ). The two sessions conducted at 5-day intervals showed no significant difference, which reflected the stability of choices and preferences of patients. **Conclusions:** In this study, the depressed patients' preferred support psychotherapy as first-line therapy compared to psychodynamic and cognitive-behavioral therapy.

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## The relationship among fatigue, insomnia, and depression from a cognitive behavioural perspective

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Fatigue, insomnia and depressions are often intertwined and each of them is ubiquitous in patients with medical disorders. The cognitive behavioral perspective represents a theoretical and clinical approach that highlights specific psychopathological factors and mechanisms that perpetuate depression, insomnia, and fatigue. The co-occurrence of these conditions opens the opportunity of combined treatment interventions that target both the specific and the shared mechanisms maintaining these conditions. This approach has been pioneered in comorbid insomnia and depression. The specific cognitive and behavioral links between fatigue and insomnia/depression are less explored but there is preliminary evidence to suggest that fatigue – specific cognitions may provide a link between these conditions. The symposium presents new research concerning fatigue cognitions and on the combined treatment of insomnia and depression.

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## Does cannabinoid really improve sleep? Testing the sleep effects of nabilone in chronic pain patients: a placebo-controlled, randomized, pilot study

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**Introduction:** Nabilone improves pain and subjective sleep quality but there have been no studies investigating the objective effect of nabilone on sleep. The aim of this trial was to obtain objective information on the effects of nabilone on sleep, sleepiness, and alertness using gold-standard measures. **Methods:** Eleven patients with chronic pain and insomnia participated in this double blinded, placebo-controlled, randomized, pilot study. Participants received placebo and nabilone (each for 4 weeks) in a cross-over pattern. Overnight polysomnography measured sleep parameters (at baseline, 4 weeks, and 8 weeks). Multiple Sleep Latency Tests and Maintenance of Wakefulness Tests provided objective assessment of sleepiness and alertness at each time point. Pain, fatigue, subjective sleepiness, and alertness were assessed via questionnaires. **Results:** Sleep efficiency and total sleep time increased (3.8% and 5.5%) and arousal index decreased (24.3%) during treatment (not significant). Sleep onset latency increased during treatment (from  $29.6 \pm 25.5$  and  $61.4 \pm 45.2$  minutes), which is a clinically significant delay in sleep onset. There were no treatment-related changes in sleep stages or in measures of sleepiness, fatigue, or alertness. Pain improved (from  $16.8 \pm 2.5$  with placebo to  $13.8 \pm 7.3$  with treatment on the McGill Pain Questionnaire) in all participants. **Conclusions:** The pilot results suggest that nabilone may not be efficient to objectively improve sleep in patients with chronic pain.

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## Treatment for major depressive disorder

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**Introduction:** Nowadays psychiatric drugs or psychotherapy could not satisfactorily stop major depressive disorder (MDD) destroying human life gradually (i.e., social withdrawal, psychomotor retardation) or abruptly (i.e., suicide). Homeostatic psychology can cure it by strengthening their exhausted brain and eliminating the stimuli. **Case description:** More than 20 of adolescents and young adults of MDD get full remission without any drugs (some of them withdrew drugs successfully) during the last 3 years. The treatment of process is in the following: 1. improve their close relationship with parents and/or spouses by forgiving the traumas caused by them since their birth, resolve family conflicts; 2. consume adequate amounts of animal protein and fat to nourish brain; 3. cure their constipation or diarrhea completely with natural food; 4. cure their sleep disorders without any drugs; 5. require them do some exercises, such as singing loudly, hand writing, rope skipping, jogging; 6. help them gradually join social activities. The consultant time is from 6 hours to 40 hours. The duration is from 2 days to 12 months. Generally, the more hardly forgive their parents and/or consume enough nutrition, the longer time they take to get full remission. **Comment:** MDD is the symptom of exhaustion of people's brain, which are mainly caused by innutrition, conflicts, trauma, and hate that their parents pay little attention to. During the process of remission, the overcorrect behavior must appear, such as anger, attack, hypomania, mania, so they need to be treated patiently, tolerantly. Persuading some of them to eat adequate animal protein and fat is difficult.

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## Family live-in therapy for adolescents and young adults' mental disorders

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**Introduction:** Nowadays more and more adolescents and young adults suffer from mental disorders. Side effects of psychiatric drugs affect their whole life more or less. Family live-in therapy includes the advantage of both traditional family therapy and live-in therapy and avoids their limitations. **Methods:** Parents and children live in an apartment at least one month. Psychotherapists observe their communication, behaviors, and conflicts around clock. They are formed three interactive groups – parents, children, and parents-children. Group therapy for them gets excellent results. People in groups are encouraged to reflect on their life and focus their feelings and conflicts. The therapists can help them immediately when their problems exposed. Bad appetite, sleepless, and constipation are main symptoms for nearly all mental disorders. Children need to eliminate above symptoms during therapy. **Results:** Beijing Mental Home makes a family live-in program and has helped more than 50 families for 3 years. Adolescents and young adults who suffered from anxiety, major depression, bipolar disorder, alcohol abuse, mania, obsession, anorexia nervosa

achieved full commission without drugs and became better and better in the aftermath. Five youths of autism age from 18 to 26 have been reducing symptoms gradually. One of 5 young adults of schizophrenia achieved full commission. Another one reduces the doses of drugs. Three of them remained unchanged because they take drugs for prolonged period of time or their parents do not change themselves. **Conclusions:** Family live-in therapy is very effective. However, it is expensive and could not continue unless it gets financial sponsorship.

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## Psychosomatic Medicine and Traditional Chinese Medicine (TCM) in China

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During the 1970s and 1980s, China began study and research on modern psychosomatic medicine. To combine this with the traditional culture of Chinese medicine, a psychosomatic medicine section of the TCM society was established in 1988.

Based on a summary of the thoughts of psychosomatic medicine in TCM in combination with the characteristics of modern psychosomatic medicine, "The Rigid-Gentle Syndrome Differentiation of TCM Theory" was founded. This theory is that psychosomatic disease first injures the liver according to the patients' temperament, rigid or gentle, which results in liver dysfunction. In terms of both clinical and basic scientific research, we have successively finished 10 subjects, for example, cardiac neurosis, chronic cholecystitis, and menopausal syndrome. We would like to introduce some of this research in this presentation. From the aspect of domestic and international academic communication, 25 conferences have been held, including annual Chinese psychosomatic medicine seminars and forums on new progress. In 2010, the 14th Asian Conference of Psychosomatic Medicine achieved great success.

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## The cultural construction of illness symbolism - A medical anthropological analysis of interacting biomedical and alternative explanatory models of illness

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**Introduction:** Biomedicine interacts with other medical systems, whether it retains the status of a culture's conventional medicine or serves as an alternative to indigenous remedies. Medical pluralism signifies a cultural milieu, a junction of distinct worldviews from which various, oftentimes conflicting, concepts of body and illness derive. The aim of this research is to investigate how illness-interpretations are altered vis-à-vis concepts of alternative medicine among patients/practitioners primarily socialized in a biomedical setting. **Methods:** Medical anthropological methods offer a hands-on perspective in mapping explanatory models of illness, the foundation of therapy choice and evaluation. The results are based

on anthropological fieldwork commencing in September 2014, at 3 Traditional Chinese Medicine clinics in Hungary, functioning as "social hubs" for alternative medicine. During the on-going research, thus far 15 in-depth interviews have been conducted with patients and practitioners. **Results:** Typically, explanatory models possess the premise of vitalism, mind-body unity, and illness having psychosocial etiology. Most models expand into the realm of illness-symbolism, identifying correlates between illnesses and psychosocial factors. A symbolic illness-interpretation is contingent on the symbolism of the effected body part/organ (i.e., an inference of its physiology, cultural usage, relating idioms, personal association/memories, and pertinent concepts of various alternative medical systems). **Conclusions:** There is a prevalent need for a symbolic psychosocial interpretation of illness among patients lacking allopathic diagnosis or cure, acceptable prognosis or a (personally meaningful) biomedical explanation of their illness. Grasping culture's determining role in shaping the understanding of psyche-body interaction may enrich the field of psychosomatics.