

disease itself that caused the referral of the patient to this investigation. We try to diminish this anxiety by an intervention.

**Methods:** A videotape was produced ad-hoc. It included an introductory part on bowel diseases, followed by the explanation of the procedure, by a brief recording of a colonoscopy and by the recording of a patient just finishing colonoscopy and who was satisfied with this investigation.

Patients submitted first time to colonoscopy for diagnostic purposes (not preventive) were divided in 2 groups by stratified randomization: group 1 received usual information for colonoscopy before signing the informed consent. Group 2 viewed in addition the videotape one day before. STAI I and II anxiety scales were administered to the patients before the colonoscopy.

**Results:** Both groups were similar in respect to age, sex, functional or organic conditions, comorbidities. Group 2 had significantly lower scores of STAI I compared to group I. The STAI II scores were similar in both groups.

**Conclusion:** Educating the patients submitted to colonoscopy with the aid of a videotape decreases anxiety as state before colonoscopy.

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## 21 - Symptom dimensions of depression following myocardial infarction and cardiovascular prognosis: An individual patient data meta-analysis

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**Introduction:** Recent evidence suggests that somatic/affective but not cognitive/affective depressive symptoms predict adverse outcomes in patients with different types of heart disease.

**The aim** of this study is to assess if there is a differential association between symptom dimensions of depression in predicting cardiovascular prognosis in myocardial infarction (MI) patients, by combining individual patient data (IPD) from studies available in the literature.

**Methods:** We conducted an IPD meta-analysis of prognostic studies in MI patients. Prognostic endpoints were all-cause mortality and cardiac events. Symptom dimensions were generated from Becks Depression Inventory-1 using a multiple indicators multiple causes model. The association between symptom dimensions and prognosis was assessed using multilevel Cox regression.

**Results:** Nine studies were included ( $n = 7652$ ). Two symptom dimensions were found: A somatic/affective and a cognitive/affective dimension. When predicting all-cause mortality, HRs were 1.30 (95% CI 1.221.38,  $P < .001$ ) for somatic/affective symptoms and 1.07 (95% CI 0.991.15,  $P = .056$ ) for cognitive/affective symptoms. For cardiovascular events, the HRs were 1.16 (95% CI 1.111.21,  $P < .001$ ) and 1.01 (95% CI 0.931.02,  $P = .23$ ), respectively. After adjustment for demographics, measures of heart disease severity, and health-related behaviors, the HRs decreased for the somatic/affective dimension in predicting all-cause mortality (HR: 1.19; 95% CI 1.07–1.32,  $P < .001$ ) but not for cardiac events (HR: 1.18; 95% CI 1.08–1.28,  $P < .001$ ). Cognitive/affective symptoms were not associated with any of the outcomes after adjustment.

**Conclusions:** Only somatic/affective symptoms of depression were associated with cardiovascular prognosis following MI. The association decreased but remained significant after statistical adjustment was provided. Treatment strategies targeting somatic/affective symptoms in cardiac patients are warranted.

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## 22 - Do women fare better than men in a psychosocial intervention for patients with Coronary Heart Disease the Berlin Anxiety Trial (BAT)?

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**Background:** Negative affectivity and especially anxiety (A) in patients with CHD has been demonstrated as an important predictor of outcome. The aim of this study was to analyse gender effects in CHD patients, who took part in a psychosocial anxiety trial.

**Methods:** The BAT study reanalyzed the data of 38 patients of a 6-month pilot intervention (Merswolken et al 2008), 30 CHD patients from an implementation trial (Orth-Gomér 2012) and 62 CHD patients with elevated levels of A from a RCT (Merswolken et al 2011). We calculated the overall response in the whole patient group of 120: 62 patients (41 m, 21 f) were treated (half of them in gender separated groups; 16 sessions: 13 once/per week and 3 booster session 1/month) according to the Swedish SWITCHD intervention trial. 58 (44 m, 14 f) patients got a treatment as usual. HADS anxiety (-A) and depression (-D) scores were measured before and after the intervention.

**Results:** The patient groups had clinically severe coronary disease and did not differ in demographic variables. Intervention patients tended to be sicker and also more psychologically burdened. These differences were adjusted for in the calculation of therapeutic effects on HADS-A reduction. At 6 months follow-up significant improvements were found more in the treatment compared to the control group for the HADS-A ( $p < 0.02$ ) and HADS-D ( $p < 0.02$ ). If we controlled for baseline differences of HADS-A only a statistical tendency remained ( $p = 0.08$ ). In HADS-A there was a clear gender effect in the analysis of variance ( $F 6.324$ ,  $p = 0.001$ ): Women in the treatment group showed the highest reduction (HADS anxiety  $11.1 \pm 4.0$  to  $6.8 \pm 4.2$ ), followed by men in the treatment group ( $9.8 \pm 3.7$  to  $8.2 \pm 3.8$ ), followed by women in the control group ( $8.4 \pm 4.9$  to  $6.5 \pm 4.4$ ) and last by men in the control group ( $8.5 \pm 5.0$  to  $7.6 \pm 4.6$ ). So concerning anxiety intervention in CHD, treated women compared to controls showed a favourable outcome (TG:  $-4.2 \pm 3.4$ ; CG:  $-1.9 \pm 3.1$ ;  $p < 0.05$ ), but not men (TG:  $-1.6 \pm 2.6$ ; CG:  $-0.8 \pm 3.0$ ; n.s.). In women anxiety was reduced by  $-4.2 \pm 3.4$ , in men anxiety was also reduced, but less strongly ( $-1.6 \pm 2.6$ ), so we could show a clear gender effect in this intervention ( $p = 0.001$ ).

**Conclusion:** These results are not in line with former studies on CHD patients with depressive symptoms (Schneiderman et al 2004). We suppose that the intervention program, or the gender separated women and men groups are responsible for this different results. Further psychosomatic intervention trials focusing on negative affectivity in CHD have to confirm this finding.

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## 23 - Drug allergic reactions and distress vulnerability

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**Purpose:** The aim of the study was to assess the psychological particularities at patients with drug allergy, such as high vulnerability to stress and increased levels of anxiety and depression.

**Method:** The design of the study was transversal and included 152 patients with drug allergic reactions (128 women and 24 men, mean age 46.83) and a control group of 60 healthy subjects (46 women and 14 men, mean age 44.20). They were administered Hospital Anxiety and Depression Scale, Perceived Stress Scale, Stress Vulnerability Scale and a psychological anamnesis.

**Results:** The levels of anxiety and depression were increased at drug allergic patients (10.8 vs 5.58, respective 6 vs 4;  $p < 0.001$ ). The scores at Perceived stress scale were higher in patients compared with healthy subjects (34 vs 30,  $p < 0.001$ ). The scores at Vulnerability stress scale were higher in patients than in healthy subjects (41.5 vs 33,  $p < 0.001$ ) and in patients with anaphylactic shock than patients without anaphylactic shock in their medical history (45.75 vs 42.6,  $p < 0.08$ ). There were significant correlations between perceived stress and anxiety ( $r = 0.619$ ), respective depression ( $r = 0.572$ ).

**Conclusion:** Higher stress vulnerability at drug allergic patients points out that they have an increased responsiveness to psychological stress agents, reflected also by increased levels of anxiety and depression. We do not know to what extent, in patients allergic to drugs, this vulnerability is constitutional, pre-existing allergy, or is acquired by experiencing allergic reactions. Maybe a mixed vulnerability (constitutional and acquired) is especially evident in atopic patients, subjected to repeated and various allergic manifestations.

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#### 24 - Psychosomatic symptoms in academic settings: Investigating coping strategies for the early detection of risk

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**Purpose:** The aim of this study was to assess the prevalence of psychosomatic symptoms (PS) in a heterogenous, apparently healthy academic sample, and to highlight the association between coping strategies, gender and country of origin on the expression of PS.

**Method:** The design of the study was transversal. 582 undergraduate students (428 Romanian, 154 foreign) (335♀, 247♂, mean age = 19.29) were administered Cohen & Williamson's Perceived Stress Scale (PSS), Miller & Smith's Stress Vulnerability Scale, Carver's COPE Inventory and Giessen Symptom Questionnaire.

**Results:** Gender influenced the score of perceived stress (20.63♀ vs. 17.80♂,  $p < .003$ ) and PS (48.59♀ vs. 42.91♂,  $p < .001$ ), and the choice of coping strategies (women: focus on emotions, use of instrumental and emotional social support, religion; men: humor, substance use). By country of origin, foreign students had a higher stress vulnerability (30.52 vs 25.82;  $p < .025$ ). Romanians preferred active coping, use of emotional social support, suppression of competing activities and planning, while for foreigners the most frequent were denial, behavioral disengagement and substance use. There were no significant differences in terms of PS, however they correlated inversely with certain coping strategies, e.g. mental disengagement ( $p < .007$ ), active coping ( $p < .015$ ) and planning ( $p < .033$ ).

**Conclusion:** Academic stress and adjustment issues can lead to PS in youngsters, with gender and cultural factors active as contributors in developing a certain profile of coping. Women have a higher psychosomatic load and perceive stress more acutely, whereas foreigners have a higher vulnerability to stress and do not always use adequate coping strategies.

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#### 25 - School-based weight-related problems prevention program in adolescents. Long-term effects on sedentary behaviors and physical activity

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**Purpose:** To assess changes in the sedentary behaviors and physical activity of Spanish adolescents who participated in two school-based weight-related problems prevention programs, when compared to a control group at post-treatment and at 5- and 13-month follow-ups.

**Methods:** Participants were 100 girls and 100 boys aged 12–14, who were assigned to a control group ( $n = 88$ ) or one of two possible experimental conditions: media literacy program (ML,  $n = 59$ ) and Theater Alive program ( $n = 53$ ). Weekly hours spent on sedentary behaviors during free time and monthly frequency of physical activity out of school were asked with the Health Behaviour in School-aged Children (HBSC). Pre-test, post-test, 5- and 13-month follow-up measurements were taken. Linear mixed-model analyses were conducted with  $3 \times 3$  ANOVA (group  $\times$  phase), adjusted by baseline levels.

**Results:** A statistically significant interaction effect (group  $\times$  phase) was found for hours watching TV ( $p = .031$ ). The main effect of group was statistically significant for hours playing games during week ( $p = .006$ ), during weekend ( $p = .013$ ) and hours watching TV during weekend ( $p = .013$ ). Participants who received the program "Theater Alive" spent fewer hours in sedentary behaviors in relation to the control group and also the ML + NUT group; they spent fewer hours playing computer at all follow-ups and progressively decreased hours spent watching television throughout the study.

**Conclusion:** These results are positive considering that sedentary behaviors in adolescents seem to be powerful predictors of weight-related problems and TV and video games are an important source of aesthetic unrealistic and unhealthy ideal transmission.

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#### 26 - Role of anger and coping mechanism in patients with irritable bowel syndrome

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**Purpose:** Irritable bowel syndrome (IBS) is a painful condition associated with significant psychological distress. The etiology of this syndrome has been attributed to altered gastrointestinal motility, visceral hypersensitivity, and psychosocial factors, but most of all to dysregulation of the brain-gut axis. A number of studies have suggested that stress can lead to IBS exacerbations. The present study aimed to evaluate the experience and the expression of anger and the prevalent coping mechanisms in a group of patients with irritable bowel syndrome.

**Methods:** The study was a cross-sectional multivariate comparison between a group of patients with IBS ( $N = 37$ ) and healthy subjects ( $N = 32$ ). IBS subjects (after an examination by a gastroenterologist and a total colonoscopy) and healthy subjects underwent a clinical interview and psychometric examination. Assessment was conducted using the State-Trait Anger Expression Inventory second edition and Brief COPE Inventory.

**Results:** The results suggest difference in trait anger between IBS patients and healthy controls ( $p = 0.04$ ). Regarding state anger, no significant differences were documented. When considering the different coping mechanisms, IBS patients showed significant differences on Self Distraction ( $p = 0.04$ ), Active Coping ( $p = 0.007$ ), Substance Use ( $p = 0.011$ ), Venting ( $p = 0.03$ ), and Acceptance ( $p = 0.01$ ).

**Conclusions:** IBS patients had significant higher levels of trait anger than controls. Different coping styles may influence the ability to tolerate, reduce or eliminate a source of stress such as IBS related symptoms. These results suggest that future research in IBS should investigate the role of anger and coping style plays in onset, symptoms severity and outcome.

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