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### B. Interactive poster presentations

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## Abstracts

### B. Interactive poster presentations

#### How do Spaniards use antimicrobials? A study to reduce self-medication and to promote the prudent use of antibiotics

Jesús Rodríguez Marín, José Joaquín Mira Solv, Ma Virtudes Pérez-Jove, Lidia Ortiz Henarejos, Mercedes Guilabert Mora, Isabel María Navarro Soler

**Objective:** To assess whether Spaniards do a prudent use of antibiotics. **Methods:** A cross-sectional study was conducted. A total of 1526 patients were surveyed. Sample size was determined for a sampling error of less than 3% for  $p = q = 0.50$ , and for a 95% confidence level. Respondents were selected at random from all the patients attended at a selection of health centres or hospitals of the public health sector in Spain. **Results:** In spite of an adequate information about the prudent use of antimicrobials, the self-medication continues (OR = 0.8; IC = 0.5–1.4). Self-medication is more frequent among those who do not know that the use of antibiotics can generate resistance (OR 1.8 95% IC 1.3–2.5) and keep left-over doses (OR 3.1, 95%; IC 2.3–4.2). **Conclusions:** To transmit information, it is not enough to change self-medication.

#### Psychosexual factors and prostate-related problems in men

Aavik Toivo

**Background:** Prostate related problems may increase the level of sexual dysfunction in men. This study was designed to examine the associations between self-reported sexual behaviour, desire and sexual functioning and prostate-related problems. **Methods:** Cross-sectional study of 109 men. 56 were first-time outpatients at the Andrology Unit. Diagnosis included mainly BPH with symptoms lasting for at least 3 months prior to the visit. 53 were controls. **Measures:** International Index of Erectile Function, Giessen Prostatitis Symptom Score, Sexual Desire Inventory. **Findings:** Sexual functioning was negatively ( $r = -0.54$ ) correlated with PRS, and age ( $r = -0.37$ ) and positively correlated with desire ( $r = 0.60$ ), sexual activity ( $r = 0.68$ ) and satisfaction with orgasm ( $r = 0.61$ ). **Discussion:** Higher degree of prostate related symptoms was negatively correlated with satisfaction with orgasm and that the patient and control group significantly differed in their orgasm rating. The results support the idea that it is important to assess sexual health in men with prostate problems.

**A study of relation between social skills and social supports in elementary school children**

Abe Michiyo, Kobayashi Hiroyuki, Kitami Yuina and Mori Kazuyo

**Background:** Acquisition of social skills might be effective on the school adaptation and prevention for maladjustment of children. The purpose of this study was to examine the relation between social skills and social supports in elementary school children. **Methods:** The subjects were 218 Japanese elementary school children (104 boys, 114 girls, aged 10–12 years). The questionnaire included social skills scale which was consisted of four factors ('social-skill', 'self-assertion', 'self-understanding', 'self-control') (Mori et al., 2005) and social supports scale for children (Mori, 1990). **Findings:** The result of correlation analysis showed the relationship between self assertion, self-understanding and social supports. The results of multiple regression analysis revealed that social support of 'friends' and 'teachers' influenced 'social-skill'. **Discussion:** The results suggest that social supports were important to acquisition of social skills.

**The relationship among illness representations, risk representations, empathy and preventive health behaviours**

Adams Alyssa and Crawley Edward

Illness and risk representations are traditionally studied in a chronically ill population. However, healthy individuals also develop perceptions of illness, which may be influenced by their ability to empathise. It was predicted that empathy and perceptions of skin cancer risk would be associated with preventive health behaviours. 127 healthy undergraduate students completed questionnaires assessing illness and risk representations of skin cancer, empathy, and health behaviours. Empathy and personal control dimensions were each positively correlated with health behaviours. Regression analyses indicated that empathy and risk representations, individually and in combination, significantly predicted health behaviours. The addition of risk representations to the predictive model, which included empathy and illness representations, significantly added to the explained variance. Health communication messages may be most effective at improving engagement in health behaviours when aimed at fostering empathy and empowering individuals to take an active role in improving their health and minimising their risk of illness.

**Traumatic symptomatology in Greek Cypriots crossing the 'green line'**

Adonis Marios

Acute stress disorder (ASD) and Post-traumatic stress disorder (PTSD) are two disorders that develop following exposure to trauma. It was hypothesised that Greek Cypriot who visited the occupied areas following the opening of the 'green line' in 2003 may experience their visit as traumatic and hence develop symptoms of ASD. One hundred and sixty-three participants (53% women) aged 18–82 were recruited from the general population and completed a set of self-report questionnaires that measured ASD, depression, anxiety, social support and stress. Eighty-five percent of the participants visited the occupied areas and (37%) were refugees. Thirty-one participants (22.5%) met criteria for ASD following their visit to the occupied areas. Refugees were found to score significantly higher on the ASD scale than non-refugees. The results show that the visits to the occupied areas may constitute a traumatic experience and refugees experience such an event as more traumatic than non-refugees.

**Marital adjustment in families of children with attention deficit hyperactivity disorder (ADHD)**

Ajhdehfa Leila, Golkarian Parisa and Holisaz Maryam

**Objective:** This study examines marital adjustment in parents of children with ADHD in comparison with parents of children without ADHD. **Method:** Two groups of Iranian parents were selected through convenience sampling. One group who had children with ADHD ( $N=20$ ) and a control group ( $N=20$ ). The diagnosis of ADHD was established through clinical interviews with parents according the criteria in DSM IV-TR. Both groups of parents completed Dyadic Adjustment Scale (DAS; Spanier). *t*-test was used for analysing hypothesis. **Findings:** Results show that there is a significant difference between two groups of parents in marital adjustment ( $p<0/01$ ). **Discussion:** These results suggest that mothers of children with ADHD are likely to have a lower marital adjustment than a control group.

**Recreative night culture and risk behaviour *versus* friends groups**

Albuquerque Carlos, Cunha Madalena, Ferreira Manuela and Students 8°CLE

**Background:** Adolescence is characterised by the active participation in the experience of recreational nightlife culture. To evaluate the risk behaviour of adolescents and youth during the night out in town was the aim of this transversal study. **Methods:** The sample included 416 participants of both genders aged between 16 and 30 years, regulars of nightlife spots at high risk. **Findings:** The results revealed that participants leave less than once a month at night to another city, during which the outgoing of most of them remain in the same group and that men spend more money than women. Individuals who trade group of friends during the night are more likely to adopt risky behaviours. **Discussion:** Consuming alcohol or other drugs, have unprotected sex, driving under the influence of alcohol, were some of the risk behaviours identified, however the participants consider these behaviours essential for their enjoyment.

**The burden of the informal carers of the dependent individual in the domiciliary context**

Albuquerque Carlos, Marilia Pinto, Rocha Paula, Oliveira António, Andrade Ana and Chaves Claudia

**Background:** In western societies, the aging population and the social-labour pressures cause difficulties to the families with dependent individuals at domiciliary context. The purpose of this study is to know the main factors that determine the burden of informal carer of the dependent individual in the domiciliary context. **Methods:** We used a non-probabilistic sample, formed by 66 informal carers, mostly female (73.9%), with an average age of 57.24 years. **Findings:** Noted the existence of a statistically significant association between the burden of the informal carers, and the variables: age, employment situation, kinship, monthly income, functioning family. There is no significant effect of gender on the burden of the informal carer. **Discussion:** The results touched the researchers to the importance of adjusting the specific health care to the expectations and needs of those informal carers.

**Satisfaction of patients with the treatment of pain**

Albuquerque Carlos, Martins Rosa, Cunha Madalena, Pontinha Carlos, Cunha Graça, Antunes Pedro, Cerveira Joel and Gomes Carla

**Background:** Pain is a complex phenomenon and encompasses multiple dimensions: biofisiological, biochemical, psychosocial, behavioural and moral. The purpose of this study

is to identify the variables such as socio-demographic and clinical that most influence the satisfaction of patients with the treatment of pain. **Methods:** We based in non-probabilistic sample consisting of 144 individuals, most women with a diagnosis of acute and chronic pain. The data collection instrument was Pain Treatment Satisfaction Scale (PTSS). **Findings:** We conclude that there is no significant effect on the variables: religion; sex; clinical situation underlying the origin of pain. We noted the existence of a statistically significant effect between satisfaction with treatment of pain and the variables: rehabilitation program, age, employment status; monthly income; state civil; type of pain. **Discussion:** This study demonstrates that there is still much to be done, so that health professionals must plan and execute specific programs focused on the treatment of pain.

### **Emotional demands, emotional dissonance and job satisfaction at Romanian public service workers**

Aldea-Capotescu Roxana

Based on the theoretical frameworks of emotion regulation theory proposed by Gross (1998), this study examines the emotional demands (The Frankfurt Emotion Work Scale, Zapf et al., 1999) and their relationship to job satisfaction (the Job Descriptive Index; Smith et al., 1969) in a sample of 233 Romanian public service workers providing a range of customer services ( $M = 36$  years,  $SD = 9.00$ ). Results showed that requests to control negative emotions, requests for neutrality regarding client interactions, emotional sensitivity and control explains a significant percentage of 14% ( $F = 7.44$ ,  $p < 0.01$ ) of variance in the emotional dissonance. Lower satisfaction with supervision is predicted by the existence of organisational requirements to control negative emotions, to express neutrality and emotional dissonance (Adjusted  $R^2 = 10$ ,  $F = 6.62$ ,  $p < 0.01$ ). Resulting implications for the implementation of programs to promote emotional health in organisations in the public domain are discussed.

### **Differences in illness representations, anger expression and functional impairment between migraine and tension-type headache**

Aliki Meimardou, Dermitzakis Emmanuil and Fwkas Kwstantinos

**Objective:** In this study we sought to compare two headache diagnoses in anger expression, illness representations and level of impairment. **Method:** 84 outpatients from Papageorgiou General Hospital (migraine = 48, tension type = 36) answered demographic questions and completed the following measures:

- The State-Trait-Anger-Expression-Inventory (STAXI)
- The Brief-Illness-Perception-Questionnaire (B-IPQ)
- The Migraine-Disability-Assessment-Score (MIDAS).

**Results:** In terms of anger expression, the two groups differed in anger externalisation ( $t = 2.208$ ,  $p = 0.03$ ). Significant differences were also found in the following illness representation aspects: control beliefs ( $t = 2.150$ ,  $p = 0.036$ ), number of symptoms ( $t = 2.58$ ,  $p = 0.012$ ) and illness understanding ( $t = 2.41$ ,  $p = 0.019$ ). Tension-type patients attributed more headache in psychological factors as opposed to migraineurs ( $F = 3.194$ ,  $p = 0.017$ ). Finally, tension-type patients reported increased headache frequency ( $t = 3.287$ ,  $p = 0.003$ ), although migraine patients lost more days from work due to headache ( $t = 2.024$ ,  $p = 0.020$ ).

**Discussion:** Differences between the two groups as described above could be useful in tailoring interventions accordingly and improving treatment effectiveness.

**Associations between BMI, perceived attractiveness and bullying in Romanian school aged children**

Alina Paula Cosma, Ana Maria Popescu, Adriana Baban and Mihai Varga

The prevalence of obesity has rapidly increased worldwide, especially in children and adolescents. Bullying behaviour is also on the raise in Romanian schools, as data from the HBSC 2006 survey indicates (26% of boys and 16% of girls aged 11 report being bullied), and it is known that such behaviours hinder the social and psychological development of youth and obesity is associated with poor outcomes in both physical and mental health. Self-image is being shaped during preadolescence, therefore we examined associations between bullying behaviours and perceived attractiveness with overweight and obesity status in a representative sample ( $N=4800$ ) aged 11–16 years old. Current participants took part in the national HBSC 2010 survey and measures were obtained through self-report. The relationship between BMI and peer victimisation related to perceived attractiveness and gender differences helps shape the understanding of the phenomenon and supports prevention programs addressing bullying in school settings

**Parenting premature babies in the first 2 years of life: The importance of health professionals**

Amorim Mariana and Veiga Elisa

**Background:** The surprise of premature birth evokes feelings of disability, anguish and anxiety in the parents. We aimed to understand the importance of health professionals in the experience of parenting a premature baby. **Methods:** We conducted semi-structured interviews with six mothers and two fathers whose babies were 2 years old and born with  $<32$  weeks and  $\leq 1500$  grams. Data analysis was oriented by the principles of grounded theory. **Findings:** The parents' speech allowed us to generate these categories: 'admission as a traumatic experience', 'concern about baby's health', 'importance of medical monitoring'. The concern about child's health and development was present during these 2 years and health staff assumed a vital role in providing informational and emotional support. **Discussion:** Besides the stressing experience, these parents were able to successfully overcome the difficulties and look to the future with optimism. Health professionals' support was one of the most important contributors for familiar resilience.

**The nature of differences between two professions in six Norwegian hospitals**

André Beate and Sjøvold Endre

**Background:** The gap between professions in healthcare can be caused by structural or cultural differences. This study's aim was to investigate the nature of differences between 169 physicians and nurses in six Norwegian hospitals. **Method:** The respondents answered a survey based on the Systematising Person-Group Relations (SPGR) methods. All analyses were carried out according to SPGR scoring and analyses manual: mean, *t*-test and standard deviation were used. **Results and conclusions:** Physicians experience their culture as empathetic, with more enthusiastic and engaged colleagues, while the nurses described the culture as characterised not only by caring, but also by criticism and assertiveness. The nurses experience considerably more friction in collaboration than their physician colleagues. **Relevance to clinical practice:** The differences found between the physicians and the nurses seem to be of a more structural character than cultural. Structural changes must be made to make the work situation better for nurses.

### Coping strategies and social functioning in 9–16 years old chronically ill children

Andreea Mihaela Mihalca and Wladyslawa Pilecka

**Background:** This cross-sectional study aims to explore age-related differences in coping strategies and social functioning in children with chronic diseases (CD). **Methods:** 28 children (17 boys) aged 9–16 diagnosed with a CD (e.g. diabetes type I, asthma) were assessed using CERQ-k (Garnefski et al., 2007) and LCI-y (Adams et al., 2002). **Findings:** There were significant positive relationships between child's age and the use of rumination ( $\tau=0.474$ ), planning ( $\tau=0.405$ ) and catastrophising ( $r=0.420$ ). Catastrofising correlated positively with non-illness-related social problems ( $\tau=0.596$ ) and distress ( $\tau=0.683$ ) in 9–11 years group, and with total number of social problems ( $\tau=0.435$ ), and illness-related distress ( $\tau=0.497$ ) in 12–16 years group. Overall, putting into perspective correlated negatively with the number of illness-related social problems ( $\tau=0.337$ ) and distress ( $\tau=0.339$ ). **Discussion:** Studying the relationship between coping strategies and social functioning is of practical importance for enhancing chronically ill children's adjustment.

### Anxiety, coping strategies and support networks of parents having children with cerebral palsy

Andrikopoulou Alexandra and Loumakou Maria

**Background:** The adjustment factors of parents rearing children with cerebral palsy have been shown to be: support networks, social interaction, spiritual support and families' positive perception for disability. **Method:** 72 parents of pre-school children with tetraplegia and 68 parents having children with hemiplegia or diplegia who attend rehabilitation programs of the Hellenic Society for Disabled Children: (a) the state-trait anxiety inventory; (b) the ways of coping questionnaire and (c) the family support (Analysis of variance (ANOVA)). **Findings:** Parenting stress related to the severity of the disability, but was not statistically significant ( $p<0.10$ ). Greater use of problem-focused coping strategies related to lower levels of psychological distress. Strategies use was quite similar for mothers and fathers for both groups. The 65% of participants indicated that the formal support was occasionally helpful. **Discussion:** Family function, parents' appraisals, social support, stress management are important factors for parents in coping with cerebral palsy.

### Feasibility of preconception screening for thalassemia in Indonesia: Exploring the opinion of Javanese mothers

Anne Marie Plass, Costrie Ganes Widayanti, Annastatia Eridiati, Sultana Faradz and Erik Sistermans

Thalassemia has become a major public health issue in Indonesia. This study aimed to explore the awareness of thalassemia, and attitudes regarding carrier testing among Javanese mothers. A quantitative questionnaire, designed using TpB constructs, was applied cross-sectionally. 180 mothers participated (RR=94%), 74 had an affected child. Both attitudes towards receiving information on thalassemia and carrier testing were very positive. Awareness was poor: mothers, both with and without affected child, had barely heard of thalassemia, or of carrier testing. Attitudes towards carrier testing explained 23% of future reproductive intentions ( $R^2=0.44$ ;  $p=0.001$ ). Responding mothers expressed high levels of interest in receiving information on both thalassemia and carrier testing. The less educated and the more deprived they were, the keener they were to receive this information. Overall, awareness of thalassemia was low. Even mothers with affected children seemed unaware of the recurrent risk of having an affected child in a subsequent pregnancy.

**Effects of tailored Internet interventions on medication adherence: A systematic review of the literature**

Annemiek Linn, Marcia Vervloet, Liset van Dijk, Edith Smit and Julia van Weert

**Background:** As medication, non-adherence is considered to be an important health risk, and numerous interventions to improve adherence are developed. The use of Internet-based interventions, tailored to the needs and situation of patients, is increasing. This systematic review aims to investigate which tailored Internet interventions are effective to improve medication adherence. **Methods:** Comprehensive literature searches were undertaken through the databases Pubmed, PsycINFO, EMBASE, CINAHL and Communication Abstracts. The methodological quality of the RCT's and CCT's and methods for measuring adherence were reviewed, following the guidelines of the Cochrane Collaboration. **Results:** Thirteen studies were included. All Internet interventions clearly used moderately or highly sophisticated tailoring methods. Data synthesis revealed that there is evidence for the effectiveness of Internet interventions in improving adherence. **Conclusion:** This review shows promising results on the effectiveness of Internet interventions to enhance patients' adherence to prescribed chronic medications. Results can be useful for future development of interventions.

**Assessment of health-related quality of life in patients with diabetes, cardiac and lung diseases**

Antanaitiene Milda and Klimašauskiene Virginija

**Background:** The aim is to disclose differences in health-related quality of life (HRQoL) in males and females with diabetes, heart and lung diseases. **Methods:** 117 patients with diabetes, heart or lung diseases undergoing hospital treatment were investigated by using WHOQoL-Bref. **Findings:** Males with diabetes reported worse HRQoL in psychological and level of independence domains than males with heart disease ( $p < 0.001$ ). Diabetic females reported worse psychological health than females with lung disease ( $p < 0.001$ ). Females with heart disease reported worse level of independence than females with lung diseases ( $p < 0.001$ ). Females with diabetes and heart disease reported worse HRQoL in environmental domain than in females with lung diseases ( $p < 0.05$ ). Negative correlation was found between age and HRQoL in males and females. **Conclusion:** No specific patterns of HRQoL domains were found for patients with diabetes, cardiac and lung diseases.

**Young adult-family connectedness factors affecting separation anxiety in adulthood**

Antoine Pascal, Nandrino Jean-Louis and Dodin Vincent

**Background:** The aim was to explore which emotional, financial and functional connectedness factors between adolescent and family predict separation anxiety among young adults. **Methods:** Data were self-report for Multigenerational Interconnectedness Scale and Adult Separation Anxiety (ASA), both are French version. The sample consisted of 85 women and 78 men, aged between 18 and 30 years. **Findings:** Principal components analysis confirmed unidimensional construct of ASA. For MIS, an analysis with *a priori* three-components solution showed good convergence of the items into three subscales. Female participants scored higher in anxiety separation and in emotional and functional connectedness than males. Regression indicated that 30% of variance of separation anxiety was predicted by Emotional and Functional Connectedness ( $\beta = 0.44$ ,  $\beta = 0.20$ , respectively). **Discussion:** Female adults were higher than males in two kinds of connectedness. Those subscales were significant predictors of separation anxiety. These results are important when planning prevention and individual/family treatment for health issues in young adulthood.

**An investigation on supportive resources and coping styles with stressors in university students of medical sciences in Razavi Khorasan State in 2010**

Anvari Marjaneh

and new expectation of them, are factors that distort their adjustment and make them using many coping styles such as problem- and emotional-centred for new adaptation. Meanwhile, there are many supportive systems such as family, friends and significant others that help them in coping. This paper tries to study the perceived stress, coping styles and supportive resources in students. Present research is a survey one. Using multi-stage sampling, the sample volume estimated about 440 according to Krejcie and Morgan formula. Three questionnaires were used for data gathering: Sarafino daily hassles questionnaire, Moss and Belings coping styles questionnaire and multidimensional perceived social support. Results showed no significant relationship between stress and problem-centred coping but significant with emotional-centred style ( $p < 0.05$ ). Moreover, there were no difference between males and females in problem-centred style but significance in emotional centred ( $p < 0.005$ ) and there were significant relationship between stress with total social support and family support ( $p < 0.005$ ) and with significant others ( $p < 0.01$ ). Sex differences in social support was significant at ( $p < 0.05$ ) and in significant others support ( $p < 0.001$ ). According to results, and vital role of coping styles with stress for making psychosocial adaptation of people, it is necessary for families as the first educational centre to have more supporting role in teaching coping styles for better adaptation of their children.

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**Pre-school children's weight status: Influence on attitudes, beliefs and parental feeding practices**

Aparicio Costa Maria Graça, Cunha Madalena, Duarte João, Pereira Anabela, Ramalho Andreia, Castro Raquel, Belo João, Lopes Cátia and Ferro Joana

**Background:** Parenting child-feeding practices can be linked to child's self-regulation of food intake and childhood obesity. **Objectives:** To assess attitudes, beliefs and feeding parenting practices and their relationship with children's weight status. **Methods:** Cross study, with 234 parents, (mean age 34.5y) and 234 children aged 3–6 years, living in centre of Portugal. Child Feeding Questionnaire was used (Birch et al., 2001), and BMI was measured using 2000 CDC reference. **Findings:** Parenting practices of restriction ( $X^2 = 16.78$ ;  $p = 0.001$ ), perceived child weight ( $X^2 = 21.92$ ;  $p = 0.000$ ) and concern about child weight ( $X^2 = 9.10$ ;  $p = 0.028$ ) are significantly related with obese children. Parent's pressure to eat is significant on normal weight children ( $X^2 = 8.47$ ,  $p = 0.037$ ). **Discussion:** Results indicate the relationship between parental feeding practices and nutritional status of children, thus that reinforces the importance of valuing beliefs and parenting practices in nutritional programs, as means to prevent childhood obesity.

**Parent-reported health-related quality of life in Greek children with severe hearing loss**

Apostolopoulou Ioanna, Poulios Antonios and Nikolopoulos Thomas

The present research aims to report health-related quality of life in children with severe hearing loss and effects of age at diagnosis and intervention. We studied sixty-five 7–11-year-old children with severe hearing loss and fifty-seven hearing children, whose parents completed the Child Health Questionnaire. The children with severe hearing loss scored significantly poorer on five CHQ scales (General Health, Physical Functioning, Role Emotional/Behavioural, Behaviour, Self-Esteem). Age at diagnosis and intervention were

found to be an important factor regarding children's CHQ scores: the earlier the diagnosis, the better General Health ( $p<0.05$ ) and Family Cohesion ( $p<0.01$ ) are reported; and the earlier the intervention, the better Role Physical ( $p<0.05$ ) and Self Esteem ( $p<0.05$ ) are reported. Health-related quality of life of children with severe hearing loss is poorer than that of their hearing peers. Early diagnosis and intervention improve significant dimensions of quality of life – therefore should be promoted.

**Perceived impact of pregnancy in a sample of Portuguese adolescents: Implications for multidisciplinary preventive intervention**

Araujo Pedrosa Anabela, Pires Raquel, Canavarro Maria Cristina and Carvalho Paula

**Background:** Research suggests that for some adolescents' pregnancy is a way of strengthening social ties. This study aims to identify the perceived impact of adolescent pregnancy, and to explore predictors of positive or negative perception. **Methods:** In this cross-sectional study ( $N=489$ ), perceived impact of adolescent pregnancy was analysed; logistic regression models were built to study the contribution of individual, relational and social variables, assessed through semi-structured interview and adjective scales. **Findings:** Adolescents mostly perceived pregnancy as having a positive impact (72.8%); variables from different contexts arise as predictors, the most significant being support from health services, school drop-out, urbanity and support from partner [Final model:  $\chi^2(7) = 165.206$ ,  $p<0.001$ ]. **Discussion:** Adolescent pregnancy is not a universal negative event, but research enlightening its possible deleterious effects on developmental paths supports the need for prevention, which still finds significant pitfalls. An ecological and multidisciplinary perspective is crucial to an effective intervention.

**Procedural justice and depression/anxiety: The moderating role of distributive justice**

Arshadi Nasrin

Upon the conceptual framework of cognitive appraisal theory, this study examined the moderator role of distributive justice in relationship between procedural justice and depression/anxiety. A randomly selected sample of 270 employees in an industrial organisation in Iran was used to test the hypotheses. The moderated hierarchical regression analysis showed that distributive justice buffered against the negative effect of procedural justice on depression/anxiety. This study also demonstrated the importance of each form of justice in acting as a coping tool for employees to lessen feelings of depression and anxiety. Such results contribute to a better understanding of the nomological network of variables predicting employee distress.

**Self-concept enhancing interventions in physically-disabled adolescents as a means of protecting them from distress**

Arshava Iryna and Nosenko Eleonora

The self-concept construct is rightly claimed (Marsh & Craven, 1997, 2006) to be highly relevant to important individual and societal problems that stem from low self-esteem. This presentation demonstrates a possible model of self-concept enhancement interventions on a sample of 119 adolescents suffering of myopathy, arthrogryposis and juvenile cerebral paraparesis, probably the most detrimental type of pathology for the physical self-concept. It has been found out that through involving the subjects into the attainable and socially appraised types of self-regulated activity: artistic, intellectual, social, such as participating in manufacturing local folk-art souvenirs, exhibited and sold afterwards at simulated fairs;

looking after younger children, participating in intellectual contests, it appeared possible to enhance individuals' self-reference, self-esteem, anticipated inferred self. Measures of mood states with the help of PANAS confirmed the increase of positive emotions in the sample of adolescents.

### **The interactive effect of stress and coping on the general health of working women**

Asad Shamaila and Najam Najma

**Background:** Perception of stress and the ways for coping are important factors influencing general health. More women entering the work force (Khatoon, 2005) are experiencing, sustained stress to cope, hence their mental well-being getting affected (Mukhopadhyay, 1997). The current study explored the relationship between stress, coping strategies and their effect on general health. **Method:** 300 women working from different organisations participated in this study. These participants completed Working Women Stressors Scale (WWSS; developed by researcher) (COPE; Carver, Scheier, Weintraub, 1989) and General Health Questionnaire (GHQ28; Goldberg & Hillie, 1979). **Findings:** The results showed that daily personal stressors, coping strategies (venting of emotions, denial and acceptance) are the predictors of working women's general health. **Discussion:** Pakistani working women have numerous daily/personal stressors. Dysfunctional coping strategies may be affecting their general health and need support to manage their psychosocial demands. They can perform their dual role hassles by developing effective coping strategies.

### **Childbirth representation after childbirth experience: A qualitative study**

Astrid George, Barbara Houbre and Elisabeth Spitz

**Objectives:** The objective of this exploratory study is to compare the discourse of primiparous after giving birth. Our study is aimed to highlight the changes in the subjective representation within the first month. **Method:** 10 French women were followed after birth. Two semi-structured interviews were conducted 1 and 3 month postpartum. The interview questioned the desire of pregnancy, experience of pregnancy and the experience of childbirth, the relationship with caregivers and the relationship with the child. A content analysis was conducted. **Results:** The results show that the representation of birth within the first month ameliorates significantly to positive recollection, but not for women with traumatic birth experience. Painful souvenirs maintain and complications at childbirth are related to painful experiences associated within pregnancy and the relationship with caregivers. **Conclusions:** The main results encourage the presence of management of primiparous after birth.

### **Anxiety, self-efficacy and PTSD after childbirth**

Astrid George, Rita Luz and Elisabeth Spitz

**Objective:** The aim of this study is to examine the relationship between prenatal anxiety, self-efficacy and posttraumatic stress disorder after birth. **Method:** 233 French women completed Hospital Anxiety and Depression Scale (HAD) and the Self-efficacy Scale (SES) in late pregnancy. Two months after birth, 75 women filled out HAD, SES and PPQ (Perinatal Posttraumatic Stress Disorder Questionnaire). Prenatal PTSD was controlled. **Results:** In our study, 17 women (22.1%) showed clinically significant PTSD symptoms after birth. We found no relationship between self-efficacy and PTSD. Prenatal anxiety and prenatal self-efficacy are negatively related ( $r = -0.14$ ,  $p < 0.05$ ). Prenatal anxiety and PTSD are related ( $r = 0.45$ ,  $p < 0.01$ ) as well as postnatal anxiety and PTSD ( $r = 0.52$ ,  $p < 0.01$ ). **Discussion:** Our results

show a relationship between prenatal anxiety in the late pregnancy and the development of PTSD postnatal. Prenatal anxiety is a significant risk factor for traumatic stress after birth experience.

### Referral experience is key to engagement in a maternal and early years healthy weight service

Atkinson Lou, Olander Ellinor and French David

**Background:** Women who enter pregnancy with a  $BMI > 30$  are at increased risk of serious maternal and foetal complications. MAEYS is a home-based care pathway for obese pregnant and post-natal women, who are referred to MAEYS by their healthcare professional. This study explored the reasons why eligible women decline, or disengage from MAEYS. **Methods:** Semi-structured interviews with women who declined ( $N = 7$ ) or disengaged from ( $N = 11$ ) MAEYS were audio-recorded, transcribed verbatim and analysed thematically. **Results:** The most common reasons for declining the service were inadequate explanation of the service by the referrer, being offended by the referral and fear of being judged. Inconsistent contact from MAEYS, external factors and lack of willpower were cited as reasons for disengaging. Discrepancy between the expectations and reality of the service was also noted. **Implications:** Detailed and sensitive explanation of the service by referrers has the potential to significantly increase the uptake and maintenance of MAEYS.

### Acceptability and feasibility of a maternal and early years healthy weight service (MAEYS)

Atkinson Lou, Olander Ellinor and French David

**Background:** MAEYS is a home-based care pathway for deprived obese women during pregnancy and up to 2 years post-natal, currently implemented in the West Midlands area of the UK. This study aimed to elicit the views of MAEYS' participants and health trainers, regarding the impact of MAEYS. **Methods:** Semi-structured interviews and focus groups with women using MAEYS ( $N = 20$ ) and health trainers ( $N = 10$ ) were audio-recorded, transcribed verbatim and analysed thematically. **Results:** Study participants reported many health-related benefits, as well as effects on psychosocial factors including increased self-esteem, and less social isolation. While receiving information was seen as beneficial, the success of the service was attributed more to the personalised service, regular weight monitoring and forming a partnership with the health trainer. **Implications:** MAEYS has demonstrated acceptability to providers and recipients. MAEYS is a novel, non-clinical, community/home-based intervention which shows promise as a potentially cost-effective early intervention to prevent childhood obesity.

### A parsimonious, integrative model of psychological correlates of UK university students' alcohol consumption

Atwell Katie, Abraham Charles and Duka Dora

**Background:** This study examined the predictive utility of correlates of alcohol consumption identified in previous research and tested a multivariate model predicting alcohol dependency in a sample of first-year undergraduate students. **Methods:** A self-report, cross-sectional questionnaire completed by 230 students measured both stable and modifiable correlates of alcohol dependence. Stable correlates included age of onset, personality traits and religiosity. Modifiable measures included drinking motives, self-efficacy, alcohol-related expectancies, prototype perceptions and normative beliefs. **Results:** The model highlighted the importance of age of onset, sensation-seeking, social drinking motives, self-efficacy and university friend

descriptive norm measures. Self-efficacy and social drinking motives were particularly important correlates. A significant interaction indicated that earlier onset was associated with higher levels of alcohol dependence for low and moderate, but not high levels of self-efficacy. **Conclusions:** The model presented could be used to identify students at risk of alcohol dependence and inform campus based intervention design.

#### **The differential effects of rumination, distraction and reappraisal on anger regulation**

Anger is a frequent emotion in everyday life, with significant, often disruptive effects on the person experiencing it and on interpersonal functioning. The regulation of anger is thus of considerable importance, both at the individual and at social level. The goal of this study was to compare the differential effects of three distinct emotion regulation strategies – rumination, distraction and reappraisal – on the regulation of anger in a group of adolescents aged 14–18 ( $N=66$ ). Anger was induced by means of negative scenarios that participants were asked to imagine themselves in. Participants were then given the rumination, distraction or reappraisal instruction. Our results indicate that participants who ruminated over a negative event reported the same intensity of anger as they did after the negative mood induction, while those who were distracted and those who reappraised the event reported less anger. The clinical implications of these results are also discussed.

Presenter: Szentagotai Tatar, Aurora, Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania

Author: Topuzu, Mihaela, Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania

#### **Systematic review to identify active ingredients in behaviour change interventions targeting physical activity in adults with type 2 diabetes**

Avery Leah, Flynn Darren, van Wersch Anna, Trenell Michael and Sniehotta Falko

**Background:** Type 2 diabetes (T2D) is the most prevalent metabolic disease and represents a significant burden on individuals, families and society. An active lifestyle improves glucose control. There is a need to better understand how behaviour change theory and associated techniques can help adults with T2D achieve/maintain a physically active lifestyle. **Methods:** Electronic databases were searched for randomised controlled trials of behavioural interventions targeting physical activity in adults with T2D. A taxonomy of theory-linked behaviour change techniques (BCTs) was used to identify intervention components. **Results:** A total of 19 studies were identified. Seven made explicit references to theory, whereas nine utilised BCTs (e.g. goal setting, self-monitoring and prompt practice) without explicit references to theory. **Conclusion:** There is a systematic failure to report theory and fidelity of BCTs in studies targeting physical activity in T2D. Discrepancies also exist between the description and implementation of theory, raising concerns about fidelity.

#### **Does unequalness in feelings toward mother and father matter?**

Bacikova-Sleskova Maria and Orosova Olga

**Background:** The aim is to study the possible associations between adolescents' unequal feelings toward mother and father and their health risk behaviour. **Methods:** Data from adolescents, living with both biological parents ( $N=2799$ ; 75% of whole research sample; mean age 15.3; 50% males), were analysed using logistic regression. Perception of parents questionnaire was used to measure positive and negative feelings toward each parent.

Regular smoking, drunkenness and marijuana use represented the risk behaviours. **Results:** Having much more negative feelings toward father than mother was risky for smoking (OR 2.3), drunkenness (OR 1.8) and marijuana use (OR 2.5). Much intense negative feelings toward mother than father increased the probability of regular smoking (OR 3.8) and marijuana use (OR 3.0). Interestingly, unequalness in positive feelings was not important. **Conclusions:** Decreasing unequalness in negative feelings toward mother and father may be an important protective factor for adolescents' risk behaviour.

### Relationship between parent's age and parenting styles in parents of children with attention deficit hyperactivity disorder (ADHD)

Baghani Tahereh, Ajhdehfar Leila and Holisaz Maryam

**Objective:** This study examines the relationships between parent's age and parenting styles to determine if there is any relationship between variables or not. **Method:** Thirty-three mothers of children with ADHD (children's mean age: 8 years), who were chosen based on convenience sampling participated in this study. The diagnosis of ADHD was established through clinical interviews with parents according the criteria in DSM IV-TR. They completed Baumrind's parenting styles scale and a demographic scale. Correlational design was used as a statistical method. **Findings:** Results indicate significant correlation between parent's age and parenting styles. There is a positive relationship between parent's age and applying permissive style ( $r=0.47$ ,  $\sigma = 0.01$ ,  $N=33$ ), while there is no relationship between authoritative and also authoritarian style with parent's age. **Discussion:** These results suggest that older parents apply permissive style.

### Risk factors of divorce

Balog Piroska, Mészáros Eszter, Kovács Éva, Ádám Szilvia and Kopp Mária

**Background:** The aim of this study was to analyse risk factors of divorce based on Hungarian Epidemiological Panel (HEP, 2002–2006). **Methods:** HEP is a national representative follow-up study ( $N=4459$ ). In hierarchical logistic regression analysis, the effects of age, gender, education, marital stress (shortened Stockholm Marital Stress Scale), depression (shortened Beck Depression Inventory), anxiety, having children, subjective economical status, divorced parents, subjective health status, as assessed in 2002 on prognosis of divorce in 2006 were examined. **Findings:** Age (OR 0.95 (0.93–0.98), education (OR 2.27 (1.07–4.81) and high marital stress (2002) (OR 3.83 (2.09–7.01) have been found as prognostic factors for divorce (2006). In this model, subjective economical status (OR 0.85 (0.72–1.01),  $p=0.09$ ) and that their parents have been divorced (OR 0.42 (0.16–1.12),  $p=0.08$ ) showed a tendency effect. **Discussion:** High marital stress, high education and younger age in 2002 contributed independently to divorce in 2006.

### Associations between opioid usage and multidimensional outcomes following inpatient interdisciplinary chronic pain treatment

Banou Evangelia, Murphry Jennifer, Mason Elizabeth and Clark Michael

**Background:** This study evaluated differences in multi-domain treatment outcomes among opioid and non-opioid using veterans who participated in an interdisciplinary chronic pain rehabilitation program. **Methods:** Participants were 258 chronic pain patients admitted to an inpatient interdisciplinary pain program that required discontinuation of opioids. Participants completed multi-domain measures at admission, discharge and 3-month

follow-up, and were grouped based on the usage of opioids at admission. **Findings:** Multivariate analyses revealed significant improvement at discharge for all groups ( $p < 0.001$ ). There were no differences in outcomes between those titrated off of opioids and those not using opioids, but participants who used opioids at follow-up were worse at maintaining improvement. Multivariate predictors of the return to opioid use post-discharge were also explored. **Conclusions:** Findings indicate that opioid discontinuation was not associated with treatment outcomes, and that continued abstinence from opioids was associated with better outcomes. Clinical implications and limitations of this study will be discussed.

**Determinants of caregiving-related esteem among informal caregivers in Luxembourg, 2 years after their care-recipients' stroke**

Barbara Bucki, Elisabeth Spitz and Michèle Baumann

**Background:** Mental health promotion policies are concerned by informal caregivers' (ICs) suffering. What are the determinants of ICs' caregiving-related esteem? **Methods:** (a) Cross-sectional study. (b) 62 Luxemburgish ICs of stroke-survivors 2-year-post-event. (c) Variables: oCaregiver Reaction Assessment's (CRA) five dimensions: caregiving-related esteem (dependent variable), impact of caregiving on health, impact on finances, impact on schedule, lack of family support, oCaregiver Satisfaction with Community Services scale, oLeisure/couple changes/social repercussions scores. (d) Regressions adjusted on ICs' sex and age. (e) Multiple regression including significant factors. **Findings:** (a) Caregiving-related esteem is determined by social repercussions ( $p = 0.002^{**}$ ), changes in couples ( $p = 0.004^{**}$ ), impact on health ( $p = 0.004^{**}$ ) and three CSCS' dimensions: confidence ( $p = 0.012^*$ ), problem management ( $p = 0.034^*$ ) and information about stroke ( $p = 0.040^*$ ). (b) ICs with high caregiving-related esteem ( $R^2$  adjusted = 0.275) are weakly impacted on their own health ( $\beta = -0.39$ ;  $p = 0.011^*$ ) and on their couple life ( $\beta = -0.36$ ;  $p = 0.026^*$ ). **Discussion:** Support programs centred on ICs' caregiving-related esteem can reinforce ICs' health capability.

**The influence of psychological intervention on the level of acceptance of illness in dialysis patients and patients with multiple sclerosis**

Bargiel-Matusiewicz Kamilla, Januszek Maciej and Kroemeke Aleksandra

The main aim of the presented psychological intervention in patients with chronic illnesses was to improve the acceptance of illness. This study was a randomised controlled trial using a convenience sample of fully informed and consenting 171 patients with end-stage renal disease and with multiple sclerosis who were assigned to experimental (psychological intervention) or control (usual care) groups. Participants in experimental group participated in meetings with a psychologist during 5 weeks. Instrument comprised: Acceptance of Illness Scale. After the application of a psychological intervention, the experimental group had higher level of acceptance of illness: the average before  $M = 24.14$ ,  $SD = 6.17$  and the average after intervention  $M = 25.77$ ,  $SD = 5.64$ ;  $t(90) = 1.53$ ;  $p < 0.01$ . No significant statistical difference between the first and the second measurements were noted in the control group. The applied psychological intervention influences patients' acceptance of illness on positive way. It may help to concentrate upon possible form of activity.

**Subjective perception of symptoms by patients with Parkinson's disease**

Bargiel-Matusiewicz Kamilla and Wons Agata

The presentation concerns psychological aspects of Parkinson's disease, particularly subjective perception of symptoms. This study was a trial using a convenience sample of 54 fully

informed and consenting patients with Parkinson's disease. Instrument comprised was The Evaluation of Functioning Survey developed by the authors of this presentation based on results received from the Institute of Psychology in Würzburg. The authors let the patients speak for themselves, and describe their everyday struggle with the illness. The presentation contains descriptions exemplifying of the patients' subjective feelings related to difficulties caused by the disease. The patients' statements (e.g. 'Recently I was supposed to speak to a microphone in front of a large group... my hand started shaking and I could not control it'; 'Sometimes, when I am about to take the first step, I feel like I am about to jump into an abyss') show they need support from their family and environment.

### **A systematic review of the effectiveness of mobile health interventions for the management of diabetes**

Baron Justine and Newman Stanton

**Background:** Mobile technologies are increasingly used by diabetic patients to track medical information. However, the evidence based on their effectiveness in supporting diabetes self-management remains weak. This review evaluates the research conducted. The primary outcome investigated is HbA1c, attention is also given to patient-reported outcomes. **Methods:** An electronic search was conducted to identify studies investigating the effectiveness of mhealth interventions allowing patients to record and send glucose readings to a central server. Studies were quality assessed. **Findings:** 20 studies were reviewed. Studies were methodologically poor. Variability and poor reporting made the comparison difficult. Evidence on the effectiveness of mhealth interventions was inconsistent. Secondary outcomes including patient satisfaction, acceptability, self-care, self-efficacy, adherence and quality of life were similarly inconclusive. **Discussion:** mhealth research needs to focus on psychological processes to understand how mhealth could lead to improved outcomes. This will facilitate the design and implementation of cost-effective self-management interventions.

### **Meditation or exercise for preventing respiratory infection**

Barrett Bruce

**Methods:** Randomised trial. 154 people aged  $\geq 50$  years were randomly-assigned to: (1) 8-week trainings in mindfulness meditation; (2) 8-week exercise trainings or (3) wait-list control. Primary outcome was area-under-the-curve-global-severity as self-reported on the WURSS-24 on all ARI illness days. Healthcare visits and days-missed-to-work were assessed. Viruses were identified using nucleic acid probes. **Results:** There were 26 ARI episodes and 235 illness days in the meditation group, 26 episodes and 241 days for exercise, and 40 episodes and 454 days for control. Mean-global-severity was 152 for meditation, 258 for exercise and 384 for control. Compared to controls, global severity and days-of-illness were decreased for meditation ( $p = 0.02$  and  $p = 0.03$ ) and exercise ( $p = 0.03$  and  $p = 0.03$ ). There were 67 ARI-related days-missed-to-work for control, 32 for exercise ( $p = 0.04$ ) and 16 for meditation ( $P < 0.001$ ). ARI-related healthcare visits were not significantly different. Viruses were identified in 42% of meditation samples, 52% from exercise and 54% from control. **Conclusions:** Training in meditation or exercise may be effective in reducing ARI illness burden.

**A multidisciplinary approach to understanding psychological aspects of polycystic ovary syndrome (PCOS)**

Barry John A.

Polycystic ovary syndrome (PCOS) is associated with a range of psychological problems. These problems are generally attributed to the distressing symptoms of PCOS (e.g. fertility problems) or with the raised testosterone levels usually seen in PCOS. This presentation describes research undertaken as part of my psychology PhD and postgraduate work, involving gynaecologists, endocrinologists and other specialists in London hospitals between 2006 and 2011. The course of the research has led to the improvement and development of new research tools, and demonstrates how bringing several areas of expertise together can lead to findings that would not have emerged from research in any one of the disciplines alone.

**The impact of expressive writing intervention on the changes of blood pressure of patients with cardiovascular disease**

Bartasiuniene Regina, Sinkariova Liuda and Petroliene Raimonda

**Background:** Elevated blood pressure is a major cardiovascular risk factor. Researchers reported that expressive writing results in significant improvements of blood pressure. **Aim:** To examine the effects of expressive writing on blood pressure changes in rehabilitation hospital patients with cardiovascular disease. **Methods:** BP was evaluated before and after each of the four writing-sessions in 68 patients, randomly assigned into expressive writing, neutral writing or non-writing groups. **Results:** The within-group findings exhibited significant decrease in systolic BP in expressive writing ( $p=0.033$ ) and neutral writing ( $p=0.001$ ) participants, and significant decrease in diastolic BP in neutral writing ( $p=0.001$ ) participants after intervention. The between-group findings demonstrated greater decrease in systolic BP ( $p=0.034$ ) and diastolic BP ( $p=0.002$ ) in neutral writing participants compared to expressive writing participants. **Conclusion:** Results from this study are consistent with previous findings that expressive writing may be beneficial for rehabilitation hospital patients with cardiovascular disease as a blood pressure lowering strategy.

**Post traumatic stress and its relationship to social environment**

Bartosova Katerina

The aim of this research was to prove or disprove a relationship between measureable levels of post traumatic stress (PTS) and social environment on a group of Czech adolescents. Data from the Czech part of an international project 'The Social and Health Assessment' (SAHA) were analysed in the process. 4980 pupils from 150 schools in the Czech Republic completed the SAHA questionnaire. PTS is a complex phenomenon which significantly influences people's lives. A direct PTS link with perceived quality of neighbourhood ( $r=-0.16, p<0.01$ ), feeling of security at home ( $r=-0.28, p<0.01$ ), feeling of security at school ( $r=-0.23, p<0.01$ ) and chicane ( $r=0.24, p<0.01$ ) was proved. Other significant differences were found in the sample concerning age and gender. Older children more often displayed symptoms of PTS. As for gender aspects, PTS was more commonly found between girls when compared to boys. Further research is needed.

**Job burnout among policemen and firemen – The effect of job-related affectivity and fatigue at work**

Basinska Beata

**Background:** Emotional exhaustion and disengagement are core components of job burnout. In this study, the effect of job-related affectivity and fatigue on burnout was examined in high-risk occupations. **Methods:** The group consisted of 89 policemen and 85 firemen. Correlational design was used. The Oldenburg Burnout Inventory (Halbesleben & Demerouti, 2005), Job-related Affective Scale (Van Katwyk et al., 2000) and index of fatigue were applied. **Findings:** During the work, the policemen experienced less positive and more negative affectivity than the firemen. In addition, they were more tired and burned-out the work. The effects of affectivity and fatigue on burnout were different in these groups. Among policemen, fatigue directly influenced exhaustion and, together with the lack of positive affectivity, disengagement (energetic aspect). However, among firemen burnout was caused by negative emotions only (affectivity strain aspect). **Discussion:** In view of different mechanisms, different ways of fight with burnout should be used.

**The relationships between illness perceptions, cognitive coping strategies and negative emotions in women with fertility problem**

Bastounis Anastasios

Self regulation theory proposes that patients formulate their own representations of illness from information learnt from one's culture and social exchanges with significant others. Our assumption was that there is a direct path between illness perceptions (five domains of SRM), cognitive coping strategies (catastrophising and rumination) and negative affect. The participants were 243 women confronting infertility problems. According to the results, stronger illness identity (1st domain), rumination and catastrophising appeared to be directly related to the negative affect. Moreover, greater perceived consequences (4th domain) of the health threat seem to be the predictor for the use of rumination. Also, stronger identity of the disease, understanding of the internal/external cause (3rd domain) of the disease and greater perceived consequences appeared to be directly related to catastrophising.

**Effects of an Internet-based cognitive behaviour treatment for insomnia on self-report of emotional states: Preliminary results**

Battagliese Gemma, Baglioni Chiara, D'Elia Francesca, Riemann Dieter, Violani Cristiano and Lombardo Caterina

Recent studies have shown that insomnia is linked to increased negative emotions and decreased positive emotions. The aim of this study was to evaluate the efficacy of an internet-based cognitive-behaviour treatment for insomnia (CBT-I) in ameliorating self-reports of emotional states in the evening and in the morning. Until now, 10 patients with insomnia (8F, 2M), diagnosed according to DSM-IV criteria were assigned to either a CBT-I or a waiting-list (WL) group. Self-reports of positive and negative emotional states collected through emotion diaries filled in during the week preceding the treatment and the week following the end of the treatment were compared. Preliminary results showed that the CBT-I group at post-treatment reported reduced negative emotions in the morning both as compared to the WL group and to the pre-treatment. Preliminary results suggest that internet-delivered CBT-I is efficacious in ameliorating daytime symptoms of insomnia as altered emotional states.

**Two years post-stroke, predictors of survivors' life satisfaction: Common associations between Luxembourg and Portugal**

Baumann Michèle, Lurbe i Puerto Kàtia, Bucki Barbara and Leandro Maria-Engràcia

Two years post-stroke, we analysed the survivors' LS by looking at its associations with their QoL and their informal caregivers' QoL and drawing from a national survey in Luxembourg (LU) and a Bragança district survey in Portugal (PT). **Method:** Face-to-face structured interviews at home. **Findings:** For LU, the 94 stroke survivors' LS was linked with all survivors' Newsqol (Newscastle Stroke-Specific Quality of Life)\* dimensions, with strong links for feelings and sleep. No association was observed with their 62 caregivers' Whoqol-bref domains. For PT, the 50 survivors' LS was correlated with all Newsqol' dimensions (except vision) with strong relations for mobility, self-care, feelings and sleep, and with all 46 caregivers' Whoqol-bref domains (physical, psychological, environmental and social relationships). **Discussion:** Common associations exist with stronger links for PT. Survivors' QoL is a predictor of LS which is a useful patient-centred marker for the practice of the psychologists who develop family interventions and counselling programmes.

**The role of community health workers in reducing cardiometabolic risk: A systematic review**

Ben Meftah Jamila, Crone Mathilde R., van Dijk Sandra, Gebhardt Winifred A. and Middelkoop Barend J.C.

**Background:** Community health workers (CHWs) are involved in programs to improve health behaviours and reduce cardiometabolic risk in high risk populations. The aim of this review is to assess systematically: which CHW-led interventions are effective, which behaviour change techniques (BCTs) play a key role in the effectiveness of the interventions; what are the specific tasks and competencies of CHWs? **Methods:** Databases were searched on relevant papers published from 2000 onward. Authors were approached for more information on BCTs used by CHWs. Interventions were scored on the 40-item taxonomy of behaviour change techniques developed by Abraham & Michie (2011). **Findings:** CHWs employ several combinations of BCTs to reduce cardiometabolic risk, such as: specific goal setting, barrier identification, self-monitoring, social support, prompt rewards and follow-up. **Discussion:** Combining effective BCTs in CHW-led interventions may lead to an improvement in starting and maintaining healthy behaviours and a reduction in cardiometabolic risk in high-risk populations.

**Memories and prevalence of posttraumatic stress disorder in an intensive care unit**

Bender Rovatti Karla, Kern de Castro Elisa and Teodoro Maycoln

This study evaluated the prevalence of PTSD indicators in patients who were hospitalised in ICU 6 months after discharged, and examined the relationship between PTSD and mnemonic memories. Participants were 41 adult patients with different diseases who answered questionnaires about PTSD, memories and clinical information. It was identified that 24.4% had PTSD symptoms. These patients presented more affective memories than patients without PTSD ( $t=2.29$ ,  $p<0.05$ ). Affective memories correlated with total PTSD and its dimensions reliving ( $r=0.443$ ,  $p<0.01$ ) and excitability ( $r=0.403$ ,  $p<0.01$ ). Hierarchical regression analysis showed that sex (woman) and the presence of affective memories was PTSD predictors, explaining 38.2% of the variance.

### Sense of coherence as a buffer of academic stress on psychological well-being among university students

Benka Jozef, Pircakova Tatiana and Gajdosova Beata

**Background:** Based on salutogenesis theory, the aim of this study was to explore how well sense of coherence (SOC) predicts change in psychological well-being (PWB) and somatic symptoms under academic stress. **Methods:** 106 university students (mean age = 22.09, SD = 1.01; 59% female) were contacted during both the regular term and exam period and provided data on perceived stress, somatic symptoms, PWB (BDI, PANAS) and SOC. Linear regression models on change in PWB explored predictive power of SOC. **Findings:** Students reported more depression, more somatic symptoms, more negative affect and less positive affect during the exam period ( $p \leq 0.001$ ). SOC predicted change in depression ( $\beta = -0.69$ ;  $R^2 = 0.43$ ;  $p \leq 0.001$ ), negative affect ( $\beta = -0.37$ ;  $R^2 = 0.13$ ;  $p \leq 0.001$ ) and somatic symptoms ( $\beta = -0.46$ ;  $R^2 = 0.20$ ;  $p \leq 0.001$ ) but was unrelated to change in positive affect. **Discussion:** SOC was strongly negatively related to an increase of negative PWB components and somatic symptoms and this way was an effective buffer under stress. However, it was unrelated to changes in positive affect.

### A simple self-help coping intervention can reduce psychological distress and avoidance of potentially threatening health information.

Bennett Paul, Phelps Ceri, Brain Katherine, Hood Kerenza and Murray Alexandra

The study evaluated the impact of a self-help intervention, based on coping effectiveness training, designed to reduce distress in patients waiting for genetic risk information. All referrals into the All-Wales Medical Genetics Service over 1 year were randomised into intervention or control conditions, completing questionnaires at referral, 4 weeks later (while still awaiting genetic risk results) (T2) and 1 month post-risk notification (T3). At T2, participants in the intervention condition, reporting moderately high levels of worry at T1, reported lower levels of distress than those in the control condition. At T3, those in the intervention group, reporting low and moderate levels of worry at baseline, were significantly less distressed. Participants in the intervention group with high baseline avoidance and negative affect scores were significantly more likely to remain in the study than those in the control group. Implications for the wider use of this type of intervention will be discussed.

### Old and in pain: Effects of aging stereotypes on older people's pain experiences

Bernardes Sónia, Marques Sibila and Pereira Sabina

**Background:** This study explored enduring and situational influences of aging stereotypes (AS) on older people's clinical and experimentally-induced pain experiences. **Method:** In Time 1, 58 older adults ( $M_{age} = 74.7$ ) filled out a measure of AS endorsement and the Brief Pain Inventory (BPI; Cleeland, 1989). Three months later (Time 2), participants collaborated in an experimental study on the effects of AS priming (Levy, 1996) on the reported clinical pain (BPI) and experimentally-induced pain (by a Cold Pressor Task) threshold and tolerance. **Findings:** Participants who more strongly endorsed a negative AS reported more severe daily pain ( $R^2 = 0.14$ ;  $\beta = 0.40$ ,  $p = 0.003$ ) at T1 but not at T2. Also, the activation of a negative AS increased participants' pain thresholds ( $\beta = -0.43$ ,  $p = 0.001$ ), especially for the ones who had more strongly endorsed AS at T1 ( $\beta = -0.31$ ,  $p = 0.059$ ). **Discussion:** These findings stress the importance of considering a broader psychosocial perspective to understanding and promoting health-related outcomes

### **Adolescents'oral health: What do you know? What to do? What is observed?**

Bica Isabel, Cunha Madalena, Rodrigues Vitor, Costa Jose, Costa Patricia, Madureira António, Andre Suzana, Andrade Ana and Albuquerque Carlos

**Objectives:** Describe the knowledge and identify the practices of oral hygiene in adolescents. **Methods:** A cross-sectional descriptive study. A non-probability sample of 323 adolescents in the third cycle of basic education. Questionnaire on knowledge and practices related to oral health. 77.40% of teenagers have reasonable knowledge about oral health, especially the females with 87.50%; 53.56% of teenagers consider it necessary to brush their teeth twice a day; 38.39% of respondents indicated that one should use dental floss once a day; 42.11% of the adolescents did not answer about the concept of plaque. Most teens brush their teeth once a day (50.46%); 44.27% report never using dental floss; 13.96% have caries; 54.35% shows accumulation of plaque visible to the naked eye; The DMFT of the sample is from 2734 participants. **Conclusions:** Adolescents have better knowledge of oral hygiene practices and therefore a high DMFT index.

### **How strongly is youth subculture membership associated with adolescent substance use?**

Bobakova Daniela, Kolarcik Peter, Madarasova Geckova Andrea, Reijneveld Sijmen A. and van Dijk Jitse P.

**Background:** Youth subculture membership (HipHop, Punk, Skinheads, Technoscene, Metal) is a possible predictor of adolescent substance use. The aim of this study was to explore the strength of the association between youth subcultures and substance use considering possible confounders. **Methods:** We used data from 15-year-old elementary school pupils ( $N=1504$ ; mean age = 15.48) who participated in the Health Behaviour in School-aged Children 2009/2010 study. The effect of belonging to a youth subculture on substance use (smoking, drinking alcohol, drunkenness and cannabis use) was adjusted for gender, socioeconomic position and peers' influence. **Findings:** Belonging to a youth subculture was significantly associated with substance use (OR/CI: smoking: 3.10/2.27–4.24 drinking 2.33/1.74–3.10) drunkenness 2.39/1.90–3.01) and cannabis use 2.09/1.24–3.52). Gender and socioeconomic position hardly affected this association. Substance use by peers explained from 13% to 37% of this association. **Discussion:** Interventions should focus on adolescents belonging to subcultures – they are at higher risk of substance use.

### **Communication skills workshop: How to deliver bad news in paediatric settings**

Bogdanic Ana, Grubic Marina, Gregurincic Ivanka, Filipovic-Grcic Boris and Kniewald Hrvoje

In order to provide optimal care for young patients, and support their parents, health professionals need adequate communication skills. **Aim:** Improve health professionals' knowledge and skills in communication with parents of sick children. **Participants:** 140 Health professionals from neonatology and gynaecology departments in all main Croatian hospitals. **Description:** Two-day workshop consisted of lectures in which health professionals were introduced with particularities of communication in paediatric settings and workshops in which they had the opportunity to practice their communication skills. Participants also watched short movie with parental testimonies. **Evaluation:** All of the participants found this education very helpful for their future work and rated it as excellent (average grade 4.8 on a scale from 1 to 5). Most of the participants felt more competent in communication after this workshop. They stressed the need for more such workshops due to inadequate education in communication skills during their studies.

**Patients' and healthcare professionals views/experiences of atrial fibrillation and oral anticoagulant therapy: A meta-synthesis**

Borg Xuereb Christian, Shaw Rachel L., Smith Danielle E., Lip Gregory Y.H. and Lane Deirdre A.

**Background:** Atrial fibrillation (AF) patients are prescribed oral-anticoagulant (OAC) therapy, often warfarin, to reduce stroke risk. However, it is under-prescribed and sometimes refused by patients. We explored existing qualitative evidence about patients' and health professionals' experiences of OAC therapy. **Method:** Data from nine studies were synthesised qualitatively. Quality was appraised using the CASP tool. **Findings:** Three themes emerged: (1) deconstructing the medical consultation, (2) AF, OAC therapy and the patient experience and (3) challenges in OAC prescription and acceptance. Synthesis uncovered perspectives that could not be achieved through individual studies. **Discussion:** Physicians' and patients' experiences present a dichotomy of opinion on decision making, which requires further exploration and changes in practice. Outcomes of workload pressure on both health professionals and patients should be investigated. There is also a need for ongoing support and education to both patients and physicians, which is critical to achieve best practice and treatment adherence.

**Evaluating health behaviours among old men for planning psychoeducational group interventions**

Borges Lilian Maria and Seidl Eliane Maria Fleury

**Background:** Group interventions to promote health and prevent disease among elderly require gender issues to be taken into account. The objective was to identify health needs of old men and plan group interventions to set up health behaviours. **Methods:** This study was conducted using qualitative techniques of data collection and analysis. Thirteen men participated, mean age of 69 years, married and with different chronic diseases. They answered a semi-structured interview to identify repertoires of health behaviours and define individual goals. Analysis of contents was used. **Findings:** Three thematic categories were identified: healthy habits (e.g. practice of physical activity, healthy eating habits), search and utilisation of health services (e.g. doctor consultations and preventive exams) and social skills (e.g. express feelings in an assertive way). **Discussion:** This preliminary assessment allowed planning the strategies to attend the specificities of participants and favoured a comprehensive approach of old men's health.

**Fatigue in airline pilots: The importance of objective and psychosocial aspects of the work environment**

Bostock Sophie and Steptoe Andrew

Pilot fatigue is associated with a higher risk of airline accidents. Objective work measures such as flying hours are known drivers of fatigue, but the relative importance of psychosocial work stressors is unclear. This cross-sectional survey of pilots assessed fatigue (Fatigue Severity Scale), objective work measures (combined into a work index), perceptions of work demands and control (Karasek demand-control model) and organisational justice. 492 questionnaires were returned (41.7% response rate). Significant fatigue ( $FSS \geq 5.0$ ) was reported by 45% pilots. In multiple linear regression, fatigue was predicted independently by higher perceived demands ( $\beta = 0.162, p < 0.001$ ), lower job control ( $\beta = -0.147, p < 0.001$ ) and higher than average work index (2.501,  $p = 0.002$ ), adjusting for age, financial strain and chronic

illness. Organisational justice was associated with lower fatigue ( $\beta = -0.102$ ,  $p < 0.001$ ), independently of objective work index and covariates. Efforts to prevent pilot fatigue should address perceptions of unfairness and low control, in addition to objective work demands.

#### Association between social network characteristics and lifestyle behaviour

Bot Sandra, Lakerveld Jeroen, Kingo Lise, Dekker Jacqueline and Giel Nijpels

**Background:** The relationship between social network characteristics and physical activity, sedentary behaviour and dietary behaviour was studied using the personal network approach. **Methods:** 50 Participants (age  $46.6 \pm 5.3$ ) were interviewed to assess network size, density, number of family members and friends living nearby, and the perceived intensity of relationships. Linear regression analyses were used. **Findings:** Network size ( $\beta = 9.3$ ; 95%CI = 1.5–17.1) and number of network members living nearby (family  $\beta = 7.9$ ; 95%CI = 4.7–31.0; friends  $\beta = 22.9$ ; 95%CI = 3.7–41.9) were positively related to physical activity. Network density was negatively associated with sedentary behaviour ( $\beta = -27.7$ ; 95%CI = -47.5 to -7.9). Network intensity was positively associated with vegetable intake ( $\beta = 8.2$ ; 95%CI = 0.6–15.7). We found no relation with fruit intake. **Discussion:** Several associations between network characteristics and lifestyle behaviour were found. Involving the social network in lifestyle interventions may increase their effect on lifestyle behaviour.

#### Development of a self-management intervention for survivors of testicular cancer using antecedent target measurement (ATM)

Bourne Claire, Martin Faith, Turner Andy, Batehup Lynn and Jesuthasan Jananee

**Background:** Testicular cancer is the most common cancer in men aged 15–34 and although post-treatment prognosis is generally very good, psychosocial impacts and fear of reoccurrence are amplified in this age group. It is therefore important to develop interventions to meet survivors' informational and emotional needs. This study aims to systematically develop a self-management intervention using ideas generated by survivors and experts. **Methods:** A needs assessment used interviews to discuss with survivors and experts reasons why aftercare services were not supporting survivors. Participant's reasons were prioritised using an online survey. **Findings:** Three topics emerged as the most important and changeable: information needs, psychological health and roles. Strategies to address these topics were devised and relevant measures quantified the impact of the intervention. **Discussion:** The systematic intervention development method was successful in allowing cancer survivors to generate important potential areas of change and the intervention developed is currently being piloted.

#### Tutors' and participants' experiences of a manualised self-management programme (SMP)

Bourne Claire, Turner Andy, Jesuthasan Jananee and Wallace Louise

**Background:** Manualised behaviour change interventions allow for a quality assured product, accurate replicable intervention content and provide tutors with a standardised protocol. This study aims to determine experiences of tutors and participants delivering and attending an SMP for people living with long-term conditions. **Method:** Interviews were carried out with tutors ( $N = 20$ ) and participants ( $N = 28$ ) of an SMP and framework analysis was conducted.

**Results:** Although programme delivery was consistent, the enjoyment and benefit of delivering and attending the SMP was reduced as the manual limited discussion time was inflexible and eliminated the tutors' lived experiences. Manual rigidity also often resulted in programme drop-out and hindered participant outcomes. **Conclusions:** It is recommended that SMP tutor training identifies areas of manual flexibility and focuses on improving confidence and competence in facilitation and presentation skills. This can prompt greater discussion of salient issues, improve well-being and increase participant engagement.

**Increasing psychological well-being in individuals with cerebral palsy: Longitudinal results of a psychological group intervention**

Brandaو Diana and Pais Ribeiro Jose

This study evaluates the impact of a psychological group intervention (PGI) in promoting psychological well-being (PWB) in individuals with cerebral palsy (CP). CP describes a group of chronic conditions characterised by motor dysfunction, of which the main cause is non-progressive brain damage (UCP, 2001). The sample consisted of 94 individuals with CP, of whom 48 participated in Intervention (IG) and 46 belonged to the control group (CG). PWB was assessed before (T1) and after (T2) the intervention, and 12 months later (T3), using the Portuguese version of the Scales of Psychological Well-Being (Ryff, 1989, adapted by Novo, Silva & Peralta, 2003). The PGI was conducted during 8 months. The results show an increase of PWB at T2 ( $t(47) = -2.28, p < 0.05$ ) and T3 ( $t(46) = -2.84, p < 0.05$ ), only for the IG. This seems to indicate a long-term positive impact of the PGI in the PWB of individuals with CP.

**Factors predicting clinically improved health related quality of life in COPD patients after multidisciplinary rehabilitation**

Bratas Ola, Espnes Geir Arild, Rannestad Toril and Walstad Rolf

**Background:** The aim of this study was to predict the effect of lung function on a clinical improved health-related quality of life (HRQL) in patients with chronic obstructive pulmonary disease (COPD) after 4-weeks multidisciplinary rehabilitation. Since the association between lung function and HRQL in COPD patients is usually low, we hypothesised no post rehabilitation effect. **Methods:** A longitudinal follow-up study of 136 consecutive male and female patients aged 40+ with minor to major COPD severity. **Findings:** Patients with minor COPD were more likely to achieve clinically improved HRQL after rehabilitation than patients with major COPD (OR 4.2, 95% CI = 1.9–9.3,  $p = 0.001$ ), with stronger effect for female than for male patients (OR 7.1, 95% CI = 1.9–39.0,  $p = 0.025$ ). **Discussion:** Lung function predicts clinically improved HRQL after rehabilitation, affecting COPD patients' ability to deal with symptoms, perform physical activities and to reduce the psychosocial strains of the disease, especially for female patients.

**Testing the feasibility and acceptance of an internet-based early-intervention for at-risk student drinkers**

Brendryen Havar

**Background:** Balance is an automated internet-based early-intervention for at-risk drinkers. Balance provides a brief screening procedure and a comprehensive follow-up component containing 75 therapy sessions. This study aims to test the feasibility and acceptance of Balance among students. **Methods:** Prospective surveys. Data-collections at baseline, 2 and 6

months post. A representative sample of 10,600 students was invited (by e-mail) to use the intervention. **Findings:** 11% of the invited participated in this study ( $N=1130$ ). 71 students signed up for the intensive therapy program. According to self-reported consumption, most participants belonged to the target group and tended to rate Balance as being user friendly, credible, and entertaining. Still, the subjects failed to identify themselves within the target group, and they reported some discontent regarding personal relevance. **Discussion:** This pilot study shows that such an intervention is practically feasible and demonstrates a moderate degree of user acceptance.

**The mediating role of work–family interaction between job demands and burnout in Romanian medical professionals**

Bria Mara, Ratiu Lucia, Baban Adriana and Dumitrascu Dan L.

**Background:** The aims of this study were to investigate (1) the relationship between job demands and burnout, (2) the mediating role of work–family interaction between job demands and burnout and (3) the role of gender differences in burnout and work–family interaction. **Methods:** 150 medical professionals were tested for burnout with Maslach Burnout Inventory. Emotional and quantitative demands were evaluated with the Questionnaire for Experience and Evaluation of Work. The work–family interaction was assessed with Survey Work–home Interaction NijmeGen. **Findings:** Multiple regression analysis results indicated that both quantitative and emotional demands are predictors for emotional exhaustion and depersonalisation, but only emotional demands are predictors for depersonalisation. Work–family interaction partially mediated the relationship between job demands and burnout. There were also gender biases for burnout and work–family interaction, women being more vulnerable. **Discussion:** This study highlights the specific job demands faced by Romanian medical professionals and the role of work–family interaction.

**Parenting a diabetic child: Self-efficacy and disease's active support**

Brites Rute, Martins Maria Helena, Nunes Odete and Monica Pires

The parenthood study, in chronic disease situations, assumes a major importance. Numerous researches find evidence that parents play a vital role in child adjustment to diabetes, directly, as role-models, or indirectly, once the impact of this disease affects both parenting and family processes. In this context, we analysed this illness impact in parents, through the assessment of self-efficacy and disease's support. In a quantitative study with a sample of 244 parents, of healthy and diabetic children, the two groups' comparison using a parental self-efficacy and disease support measures showed that diabetic children parent's demonstrate significant higher scores of parental self-efficacy ( $t(209)=4.5$ ,  $p<0.001$ ). Some self-efficacy dimensions correlates with parents involvement in disease management ( $\rho=0.23$ ,  $p<0.05$ ;  $\rho=0.21$ ,  $p<0.05$ ) but not to perceived involvement level ( $\rho=0.09$ ,  $p>0.05$ ). These findings support the idea that paediatric psychology should enable the articulation between children's care and parents' needs, by promoting bi-focal multidisciplinary interventions.

**Materialism, stress and risk health behaviours among future educators**

Brouskeli Vasiliki and Loumakou Maria

**Background:** We investigated materialism among future educators and its relationship with stress and several risk behaviours. **Methods:** This survey included 228 students in educational

studies. The questionnaire included a short form of the Material Values Scale with three subscales (acquisition centrality, acquisition as the pursuit of happiness and possession-defined success) the Perceived Stress Scale and questions on several health behaviours. **Findings:** Materialism scores above average were reported by 40% of the participants. Materialism and particularly the component of materialism as happiness pursuit was related to higher levels of stress ( $r = 0.20$  and  $r = 0.26$ , respectively). **Discussion:** Since children tend to pattern themselves upon their educators, health promoting interventions among future teachers should take into account the effects of materialism to people's health.

### Satisfaction with life, and psychosomatic health among future educators

Brouskeli Vasiliki and Sarafidou Jasmin-Olga

**Background:** Life satisfaction among future educators and its relationship with a number of health factors, that previous research indicated as important, was investigated. **Methods:** Participants in the survey were 228 students in educational studies. The questionnaire included scales measuring Satisfaction with Life, Psychosomatic Symptoms and Stress, as well as demographic data and questions assessing perceived health status and health behaviour. **Findings:** Many future educators reported stress levels and psychosomatic symptoms above average (45% and 36%, respectively) as well as some lack of satisfaction with their health (53%). All these factors were found to be negatively associated with life satisfaction (correlation coefficient with stress:  $r = -0.38$  and  $r = -0.23$  with psychosomatic symptoms). **Discussion:** Findings suggest that life satisfaction of prospective teachers is affected by certain aspects of their psychosomatic health and calls for special emphasis to teachers' health promotion, as teachers serve as powerful models for children.

### The association between resilience, physical activity and heart rate variability in everyday life

Brown Jennie, Dockray Samantha, Salavecz Gyöngyvér and Steptoe Andrew

**Background:** The aims were to see whether resilience was associated with heart rate variability (HRV), and whether habitual physical activity was a mediator of the association. **Methods:** Objective physical activity, heart rate and HRV measures (including high frequency (HF), low frequency (LF) and HF/LF ratio) were recorded from 202 healthy working women during a work and leisure day and evening. Self-reported physical activity and resilience (Resilience Scale, Wagnild & Young, 1993) were collected via questionnaire. **Findings:** Higher resilience was associated with greater HRV, as seen by significant associations between resilience and HF HRV and HF/LF ratio during the work day and evening, independently of demographic factors, body mass and smoking. Self-reported physical activity was related to resilience but not to HRV, therefore was not a mediator of the association. **Discussion:** As reduced HRV increases risk for cardiovascular disease, resilience may protect health in part through its association with increased HRV.

### Anxiety buffering, support, benefit finding and quality of life among caregivers of Huntington disease patients

Bukowska- Durawa Alicja, Zaleskiewicz Tomasz and Luszczynska Aleksandra

**Objectives:** This study analyses relationship between social support, benefit finding and quality of life (QOL) of caregivers of patients with Huntington's disease. Further, anxiety buffering processes were evaluated using Terror Management Theory framework. **Method:** Measures of social support, benefit finding and QOL were administered to 70 nonprofessional caregivers.

Anxiety buffer was evaluated using experimental design (with a random assignment to the mortality salience and control groups). **Results:** The mortality salience group showed an increase ( $p < 0.01$ ) of worldview defence which was indicative of well-functioning anxiety buffering. Benefit finding predicted QOL aspects of caring, satisfaction with life and feelings about life ( $p < 0.01$ ). Perceived instrumental and emotional support and the interaction of benefit finding and need for support predicted life satisfaction ( $p < 0.01$ ). **Conclusions:** Finding benefit in caregiving and seeking social support improves caregivers' QOL. Well-functioning anxiety buffer may protect caregivers from a decline in QOL.

#### **Driving under the influence of alcohol: Population survey**

Bulotaite Laima and Astrauskiene Audrone

Facts about driving under the influence of alcohol are usually detected after motor vehicle crashes or routine drivers testing on the roads. Such data does not show us the real situation – how many drivers are driving under the influence of alcohol. The aim of this study was to evaluate drinking habits among Lithuanian adults, driving under the influence of alcohol. We analyse the data of Lithuanian adult population alcohol and drug use survey, performed in 2008 by the Drug Control Department under the Government of the Republic of Lithuania. The results showed that 14.9% of 15–64-year-old Lithuanian population were driving under the influence of alcohol at least once in his/her lifetime, 5.1% – during last 12 month, 1.4% – during last 30 days. The results revealed that driving under the influence of alcohol is related to the frequency and amount of drinking.

#### **Developing socio-emotional competencies of preschoolers in Romania: The efficacy of SELF KIT program**

Buzgar Nicoleta Ramona, Dumulescu Daniela, Muresan Alisia and Opre Adrian

In Romania there are already clear attempts to bring rational-emotive and behavioural education (REBE) principles to the attention of educators, teachers and school counsellors. In this study we demonstrate that REBE is efficient in developing social and emotional competencies in children aged 4–6 years old, using a special REBE program – SELF KIT (Social-Emotional Learning Facilitator KIT). Preschool children ( $N = 137$ ) were assessed with Platform of Child Development Evaluation (PedA) to identify the socio-emotional profile of children and after that, an 8 weeks intervention program was implemented. Using a  $3 \times 2$  design (intervention type *vs.* team expertise), our results, analysed with ANOVA, show that emotional and social competencies improve significantly after the program ( $p < 0.05$ ) and conduct disorders decreased ( $p < 0.05$ ). Preliminary data collected in this pilot study represent strong arguments in supporting the viability and ecological validity of SELF KIT program.

#### **A qualitative evaluation of general paediatric outpatient services: Staff and stakeholder views**

Cameron Elaine, Heath Gemma, Cummins Carole, Greenfield Sheila, Pattison Helen, Kelly Deirdre and Redwood Sabi

**Background:** In light of 'closer to home' policy and growing demand for services, Birmingham Children's Hospital is considering a satellite clinic model for delivering paediatric outpatient services in community settings. This study explores healthcare professionals, managers and commissioners views of innovative models of health service delivery. **Methods:** Thirty-seven semi-structured interviews were carried out with healthcare professionals and other

stakeholders recruited from primary and secondary care. Interviews were audio recorded, transcribed and analysed using a framework method. **Findings:** Participants discussed perceptions of satellite clinics and the 'closer to home' policy at several levels, including the national context, service design and individual clinician-family interaction. Analysis generated the following topics: organisational issues; working practices; infrastructure; philosophy of care; health spaces; attendance and service outcomes. **Discussion:** Findings of this study will facilitate the design of effective closer to home services, which may impact on patient satisfaction, quality of care and access to healthcare services.

### **Partner influence on health behaviour change in patients with heart disease**

Canady Brittany, Collins Charlotte, Blankenship James and Mowery Hope

**Background:** Health behaviour change is vital in reducing heart disease. This study examines how patients and partners view and address health behaviour change following angioplasty. **Methods:** This study includes questionnaire data from 56 patient–partner dyads collected at two time points (immediately following an angioplasty procedure, and at 1 month post-procedure). Questionnaires were designed to target changes related to heart–healthy behaviours. **Findings:** Results show positive health behaviour changes in the month following angioplasty, with lower alcohol ( $p < 0.01$ ) and fat consumption ( $p < 0.001$ ), and increased exercise ( $p < 0.001$ ). Eighty percent of patients found their partners helpful, with most reporting that their partners spoke with them about these changes. Partners considered changes in diet and exercise most important, and were more likely to talk about these changes than alcohol reduction or smoking cessation. **Discussion:** Partner support appears to impact behaviour change. Including partners during health behaviour interventions may improve behaviour change outcomes.

### **Validating a theoretical framework for implementation and other behaviour change research**

Cane James and Michie Susan

**Background:** An integrated theoretical framework of 12 domains, developed for cross-disciplinary implementation and other behaviour change research, has been applied across a wide range of clinical situations. This study tests the validity of this framework. **Methods:** Validity was tested by behavioural experts sorting the original 128 component constructs using closed and open sort tasks. The extent of replication was tested by Discriminant Content Validation and Fuzzy Cluster Analysis. **Findings:** There was good support for 12 domains (average silhouette value across domains  $>0.25$ ), with two added and two dropped. 'Beliefs about consequences' produced an additional, separate 'Reinforcement' cluster and 'Motivation and Goals' was sub-divided into 'Intention' and 'Goals'. 'Knowledge' did not form a cluster and 'Nature of the Behaviour' had low validity. **Discussion:** The refined framework has a strengthened empirical base and provides a method for theoretically assessing non-implementation of professional and other health-related behaviours as a basis for intervention development.

### **Communication and disease management: A qualitative study on coronaropathy and hypertension**

Cappelletti Erika, D'Addario Marco, Sarini Marcello and Steca Patrizia

Little attention has been paid to patients' actual needs and to communication barriers that impede disease management efforts. Aim of this study was to identify patients' communication

needs and related issues and to compare these findings with the perception of patients' needs and communicative barriers by physicians. We focused on patients affected by coronaropathy and hypertension. Four focus groups were conducted and analysed (IPA method). Participants were 16 patients (8 for each pathology) and 11 physicians (6 cardiologists and 5 hypertension specialists). Both patients and physicians mainly focused on therapy management information and on life changes due to the disease. Differences about the search of information were detected: it is a way to support the interaction with physicians for the patients, while it is considered possibly dangerous by the physicians. The comprehension of patients' information preferences and the awareness of patients' evolving information needs could strongly improve the quality of chronic disease management.

### **The detection of domestic violence by Spanish health care workers**

Carme de Castro, Montserrat Planes, Marc Sáez, Anna Bonmatí, M. Eugènia Gras and Mark Sullman

**Objectives:** This paper examines the extent to which health professionals identified domestic violence in their normal work in their health care district. **Method:** The target population included all 962 doctors, nurses and social workers in a Health Care District in the north-east of Spain. The participation rate was 47.4% ( $n=456$ ). Data were collected through a voluntary and anonymous self-report survey. **Results:** Half of the participants had detected at least one case of domestic violence, while 31.7% had identified more than one. 45.1% of the sample systematically asked their patients about the possibility of domestic violence when they had psychosomatic symptoms. Nevertheless, only 23.5% had been trained for treating this problem. **Conclusions:** Many more health professionals must be trained so that they are able to identify domestic violence in their patients because nationally it is a common health problem.

### **Emotional regulation in students with or without disability**

Caroline Desombre, Gérald Delelis, Souad Anegmar, Manel Hanafi, Véronique Christophe and Pascal Antoine

**Background:** As strategies of emotion regulation, cognitive reappraisal (changes that modifies the emotional impact of an emotion-eliciting situation) and expressive suppression (the inhibition of emotion-expressive behaviour) have particularly been studied. Nevertheless, an aspect has not been developed: minority status seems to be associated with the greater use of suppression (the less effective strategy). Does a disabled person generally regulate his/her emotions in this same way? **Methods:** Forty-eight students (24 with disability, 24 without disability) filled out the French version of Emotion Regulation Questionnaire (ERQ). **Findings:** The disabled students use more suppression ( $M=4.28$ ) than the non-disabled ones ( $M=3.07$ ),  $p<0.01$ . This result is not influenced by sex, is not found for reappraisal and is furthermore greater than those of a reference population. **Discussion:** Being a disabled student corresponds to a minority status and can bring additional troubles during the time spent at school and university.

### **Using the theory of planned behaviour to examine the effectiveness of a multi-media presentation intervention on testicular self-examination behaviour**

Caroline McGilligan and Siobhan O'Neill

**Objective:** The effectiveness of a multi-media intervention on testicular self-examination (TSE) and male's psychosocial mediating variables based on the Theory of Planned Behaviour

(TPB), and to assess the predictive effect of mediating variables on male's intentions to perform TSE behaviour. **Methods:** A cluster-randomised control trial (CRCT) among four colleges of N Ireland, of whom 890 respondents were followed up at 1, 6 and 12 months. The intervention was evaluated relative to a leaflet from 'Action Cancer' and the questionnaire, only. **Results:** The intervention group had significantly higher scores than the leaflet and control condition. All variables mediated the effects of the intervention with the exception of PBC and instrumental attitude. Intentions to perform TSE was positively associated with instrumental and affective attitude, subjective norm, self-efficacy; moral norm and anticipated regret at baseline, and was associated with their instrumental and affective attitudes, self-efficacy, moral norm and anticipated regret at post intervention 1 month follow-up. However, affective attitude proved to be non-significant at T3 and T4. **Conclusions:** Findings from this study suggested that TPB is an appropriate framework for explaining the effect of psychosocial factors and a useful guideline to design the targets and key approaches for TSE interventions.

### Stressful life events in homeless people

Carrinho Paula and Pereira Anabela

This paper describes the stressful life events suffered by a sample of 100 homeless adults in Coimbra, Portugal. Subjects were interviewed with the List of Threatening Experiences (Brugha and Cragg, 1990) adapted in Portuguese version, supplemented by nine additional items specifically related to homelessness. Participants then rated each life event in regard to its causal contribution to their homeless situation. Findings showed that homeless people have suffered an important number of stressful events in their lives. Most of these events occurred Before (55%), or During (30%), the first homelessness episode. In regard to the perceived causality of the stressful events, we found that homeless people have multicausal view of their own problems. In fact, three categories of events were subjectively related to their current homeless condition: economic problems, breakdown of social ties and mental illnesses.

### Are there gender differences in coping with neck pain following acute whiplash trauma?

Carstensen Tina, Frostholm Lisbeth, Oernboel Eva, Kongsted Alice, Kasch Helge, Jensen Troels and Fink Per

**Background:** Little is known about gender differences in coping after whiplash. The aim was to examine possible interaction of gender and coping on recovery after whiplash trauma. **Methods:** 740 participants completed questionnaires on collision characteristics, psychological distress and socio-demographics shortly after collision, the Coping Strategies Questionnaire at 3 months follow-up, and a VAS scale on neck pain after 12 months. **Findings:** No interaction between gender and coping on neck pain after 12 months was found. 'Distraction' increased the odds for neck pain for both men and women ( $OR = 1.03$  (95% CI: 1.01; 1.05), 'reinterpreting' ( $OR = 1.03$  (95% CI: 1.01; 1.06), 'catastrophising' ( $OR = 1.14$  (95% CI: 1.10; 1.18) and 'praying and hoping' ( $OR = 1.10$  (95% CI: 1.05; 1.13) for each point on these scales. **Discussion:** Clinically relevant influence of 'catastrophising' and 'praying and hoping' to prognosis was found, therefore we should identify patients predominantly using these strategies.

**Is social support equally beneficial for working climate and health of women and men at different professional grades?**

Casini Annalisa, Godin Isabelle, Clays Els and Kittel France

**Aim:** To examine the association between social support at work (SSW), health factors and working climate as a function of gender and professional grade. **Methods:** Belstress III database comprising data on 2983 workers of seven (semi-)public companies were used. Socio-demographic, working climate, mental and physical health indicators were collected. Professional grade and gender stratified logistic regressions were performed for evaluating the association between SSW and current health, stress, anxiety, bulling and mobbing. **Results:** SSW is always associated with health and working climate factors except for low qualified men. For women at the intermediate grade, the ORs for the association between low SSW and current health (1.37), stress (1.75), anxiety (1.56), bulling (6.78) and mobbing (3.49) are the lowest compared to those of all others groups. **Conclusion:** SSW is beneficial for workers' health and working climate, but not at the same degree for women and men at different professional grades.

**Precocious intervention on child and family (building support relationship upon family capability of empowerment development)**

Castro/Hipólito Cláudia/João

Portuguese Governmental policy, as defined by Law 281/2009, 06 October 2009, establishes the assembling of a multidisciplinary team to support children and families considered at risk (biological and social). Public and private partner entities with their professionals gather with the family, each with their own characteristics, needs and interest, aiming the creation of a Customised Family Support Plan towards the improvement of the life quality of the children and their families and the ability of the parents to cope with their reality. The goal of this research is to present the procedures and tools used in these Customised Family Support Plans, as well as to raise questions on the precocious intervention and the role of the professionals towards the achievement of the proposed goals objectives.

**Keywords:** precocious intervention; empowerment; family; multidisciplinary team; government

**Emotion dysregulation in eating and sleep disorders**

Emotion dysregulation has been considered a risk factor for several disorders (e.g. Aldao et al., 2010), including eating disorders (ED) and insomnia: ED patients show higher difficulties in regulating emotions and greater experience of negative emotions (e.g. Harrison et al., 2009). As regards insomnia, previous evidence indicated that poor sleep is associated to higher level of emotion instability and greater experience of negative emotions (e.g. Baglioni et al., 2010). To these issues, three studies will be presented evidencing that: (1) both ED patients and people high in eating restriction show higher use of expressive suppression than a control group; (2) both people reporting full-blown and sub-syndromal sleep disorders show higher suppression than control groups; (3) emotion suppression predicts the co-occurrence of symptoms of ED and symptoms of insomnia in nonclinical samples. The role of emotion suppression will be discussed based on these sets of data.

Presenter: Lombardo, Caterina, Department of Psychology, University of Rome 'La Sapienza', Italy

Author: Battagliese, Gemma, Department of Psychology, University of Rome 'La Sapienza', Italy

Author: David, Monica, Department of Psychology, University of Rome 'La Sapienza', Italy

Author: Baglioni, Chiara, Department of Psychiatry and Psychotherapy, Freiburg University Medical Center

Author: Riemann, Dieter, Department of Psychiatry and Psychotherapy, Freiburg University Medical Center

Author: Violani, Cristiano, Department of Psychology, University of Rome 'La Sapienza', Italy

### **The impact of cultural activities on paediatric hospitalised patients' quality of life**

Catunda Carolina and Lemétayer Fabienne

This study focused at the cultural activities contribution (music, clowns, etc.) offered to children on their quality of life, during their hospital stay (at least 3 days). The Quality of Life was evaluated with the Quality of Life Systemic Inventory for Children (QLSI-C) (Missotten, Etienne & Dupuis, 2007). In this study, 39 children from 8 to 12 years old participated: 8 hospitalised with activities (Group 1); 11 hospitalised without activities (Group 2) and 20 recruited from ordinary schools (control group). All of them responded to the Children's Depression Inventory (Kovacs, 1982). Results show significant difference ( $p < 0.05$ ) in QLSI-C in some areas: Alimentation (between Group 2 and control group); Clothing (Group 1 and Group 2); Sport (group 1 and control group). Significant correlations ( $p < 0.01$ ) were also found between QLSI-C and depressive symptoms. Discussion highlighted the need to examine closely the role of cultural activities in short- and also long-term hospitalisation.

### **Social understanding and empathy: The basis for healthy classroom relationships**

Cavojova Vladimira, Ballova Mikuskova Eva and Belovicova Zuzana

The aim of this study is to explore the links between social understanding and prosocial behaviour in classroom. 197 children aged 11–15 participated in this study. Two facets of social understanding were measured – theory of mind skills and empathy. School behaviour was assessed by peer-nominated questionnaire. Cluster analysis revealed four behavioural types, which significantly differed in prosocial and antisocial behaviour. Types differed also in cognitive and affective empathy and ToM skills in favour of the most 'prosocial' type. The most popular are prosocial children showing high social understanding. Children can also tolerate antisocial behaviour of their classmates, if this is compensated by helping and cooperation. Our findings showed that empathy and ToM skills can lead to better classroom relationships, and hence a healthy classroom climate. This positively affects health and well-being not only in school but also in children's life and is the best prevention against bullying.

### **The definition of quality of life in solid organ transplantation: A psychological qualitative model**

Chantal Piot-Ziegler and Iris 8A team, John David Aubert and Manuel Pascual

Quality of life has been extensively discussed in acute and chronic illnesses. However, a dynamic model grounded on the experience of patients in the course of transplantation has not been developed to our knowledge. In a qualitative longitudinal study, patients awaiting solid

organ transplantation participated in semi-structured interviews: Exploring topics pre-selected on previous research literature review. Creative interview was privileged, open to themes patients would like to discuss at different steps of the transplantation process. A qualitative thematic and reflexive analysis was performed, and a model of the dimensions constitutive of quality of life from the perspective of the patients was elaborated. Quality of life is not a stable construct in a long-lasting illness-course, but evolves with illness constraints, treatments and outcomes. Dimensions constitutive of quality of life are defined, each of them containing different sub-categories depending on the organ-related illness co-morbidities and the stage of illness course.

### **Emotional experience in patients awaiting lung transplantation: A qualitative analysis**

Chantal Piot-Ziegler, Aurelia Bruegger and John David Aubert

Emotional reactions in the course of transplantation are usually explored through negative (stress) or emotional states (depression) considered as being pathological. The pre-transplantation positive and negative emotions reported by the patients are comprehensively described in this analysis. Qualitative semi-structured interviews were conducted shortly after registration on the waiting list with 15 lung-awaiting patients. In a qualitative analysis, focused on emotional experience, a very rich emotional discourse was underlined. This experience is related to specific situations, stakes and existential questions. All these emotions help to describe more precisely the very intimate experience of the difficult and stressful situation while awaiting transplantation. It also helps to better understand the impact of the paradoxical situation of transplantation when a person is waiting for an organ, which will improve quality of life and survival, but which also depends on the end of another person's life.

### **Biased online interpretation of pain homophones in irritable bowel syndrome**

Chapman Sarah C.E. and Martin Maryanne

**Background:** Biased interpretation of ambiguous information as related to pain and illness is thought to reinforce illness schemas in irritable bowel syndrome (IBS). We investigated whether a bias towards interpreting ambiguous homophones as related to illness is present in IBS. **Methods:** Twenty IBS participants and 33 healthy controls were presented with illness, social threat and neutral homophone primes. After 1s, primes were followed by target words which were either (1) related to the threat meaning, (2) related to the neutral meaning, (3) unrelated or (4) nonwords. Time taken to make a lexical decision regarding the target was measured. **Findings:** IBS participants showed greater priming than healthy controls for neutral target words presented after illness primes. There were no differences between groups on any of the other indices. **Interpretation:** These results suggest that neutral meanings of ambiguous illness stimuli may be facilitated at long stimulus onset asynchronies in IBS.

### **A meta-analysis of the physiological, behavioural and psychological variables predicting *in vitro* fertilisation treatment outcome**

Chapman Sarah, Purewal Satvinder and van den Akker Olga

**Background:** This meta-analysis analysed the effect sizes of physiological, behavioural and psychological factors influencing Live Birth (LB) after *In Vitro* Fertilisation (IVF) treatment. **Method:** A bibliographic search for publications evaluating predictors of LB after IVF was

undertaken using PubMed, PsycInfo, Embase and ScienceDirect. Study quality, moderator effects, study heterogeneity and the presence of publication bias were assessed. **Findings:** Titles and abstracts of 1231 records were screened; 438 full-text records were reviewed and 155 papers met the inclusion criteria. Physiological predictors including age, infertility indication and treatment factors predicted LB, however there was some suggestion of interaction effects. Behavioural (smoking and weight) and psychological predictors were limited by the low number of studies, however initial analysis points to complex associations. **Conclusion:** This review demonstrates the need for high-quality studies investigating the impact of psychological and behavioural predictors of LB after IVF, and the associations between these factors and physiological predictors.

### **Worry about appearance among adolescents exposed to a media literacy intervention**

Charzynska Edyta

This study examined the effectiveness of a media literacy intervention designed to reduce worry about appearance among late adolescents. A 2 (group: two-session media literacy intervention, control)  $\times$  3 (baseline, post-intervention, 1-month follow-up)  $\times$  2 (sex: girls, boys) mixed design was used. Four classes of 154 secondary school students were randomly assigned to either a control or an intervention condition. All participants completed the following measures: Polish adaptation of the Penn State Worry Questionnaire and the Worry Domains Questionnaire, the Eating Disorder Inventory and the experimental version of the Muscularity Attitudes Questionnaire. The intervention girls reported lower worry about the increase in body mass at follow-up ( $p < 0.001$ ), but not at post-intervention ( $p = 0.23$ ). For boys, the intervention group reduced worry about not being muscular enough only at posttest ( $p < 0.001$ ). This study reveals the need to consider gender differences related to worry about appearance.

### **Relationship between marital satisfaction and locus of control in mothers of children with attention deficit hyperactivity disorder (ADHD)**

Cheraghi Mona, Holisaz Maryam and Fallahi Fatemeh

**Objective:** This study examines the relationships between marital satisfaction and locus of control to determine if there is any relation between variables or not. **Method:** Thirty-seven mothers of children with ADHD, (children's mean age: 8.1 years) who were chosen based on convenience sampling, participated in this study. The diagnosis of ADHD was established through clinical interviews with parents according the criteria in DSM IV-TR. They completed the Enrich Marital Satisfaction Scale and Roter's Locus of control scale. Correlational design was used to show the relationship between marital satisfaction and locus of control. **Findings:** Indicate significant correlation between mother's locus of control and their marital satisfaction. There is negative correlation between external locus of control and marital satisfaction ( $r = -0.50$ ,  $\sigma = 0.01$ ,  $n = 37$ ). **Discussion:** These results indicate that higher marital satisfaction associated with internal locus of control and lower marital satisfaction accompanied by external locus of control.

### **Road traffic injury prevention strategies: A behavioural approach**

Chereches Razvan, Rus Diana, Lucacel Raluca Maria, Sirlincan Emanuela Oana and Baba Catalin Ovidiu

Traffic injuries kill over 1.2 million people each year and are the causes of 20–50 million non-fatal injuries. This study is part of an innovative pilot-project conducted in Cluj-Napoca,

Romania, that used police reports and emergency department data to draw a map of accidents using Global Information Systems technology. The purpose of our investigation was to analyse the behavioural factors that modifies the risk of road traffic crashes by taking into consideration the categories developed by Petridou & Moustaki. Our results emphasise behaviours that increase the risk of road crashes, considering that roughly one-third of the traffic crashes occurred in normal conditions: normal weather and road conditions, daylight and dry road. Future intervention strategies on traffic injury prevention should be based on education and behaviour change in order to reduce the high number of road traffic injuries by addressing behavioural factors that interfere with traffic safety.

### **Building engagement and healthy organisations**

Christensen Marit

The aim of this project was to develop theory and methods investigating individual and organisational health – i.e. the relationship between positive factors in the psychosocial work environment, individual well-being and organisational performance. The background was to look at how the field of positive occupational health psychology seem to offer some interesting insights as potential responses to challenges in the Nordic labour markets in the coming decades. A working model was developed and tested, including four factors: job resources, individual trait-like resources, work-related experiences and attitudes, and organisational and individual outcomes. Several Nordic quantitative studies on positive factors at work were included in the project, both cross-sectional and longitudinal studies. The results showed that different types of job resources seem to act as ‘energisers’ of employees and consequently as triggers of positive processes leading to employee well-being and positive individual and organisational outcomes.

### **Quality of life in patients with chronic kidney disease**

Cicognani Elvira, Laghi Marinella and Mazzoni Davide

**Background:** In Italy, the number of patients living with chronic kidney disease, receiving dialysis treatments and kidney transplantations has increased. Chronic kidney disease can compromise daily activities, but psychosocial consequences of symptoms and treatments are not completely understood. The aim of this work is to assess QoL in relation with other psychosocial variables and treatment condition. **Method:** 138 Questionnaires were collected in a dialysis centre. The sample includes 104 patients in dialysis (haemodialysis and peritoneal) and 34 who received kidney transplantation. The questionnaire included the following: QoL, psychological well-being, illness representation, coping strategies and social support. **Findings:** Results show higher levels of QoL in patients after transplantation. Patients on the waiting-list show a better profile of QoL, whereas no relevant differences emerged based on the type of dialysis on psychosocial variables. A different pattern of psychosocial variables explains differences in QoL. **Discussion:** Clinical and non-clinical implications for patient management will be discussed.

### **Sexual health needs among migrant adolescents: Implications for the reorganisation of health services**

Cicognani Elvira, Marmocchi Paola, Strazzari Eleonora and Agostini Giorgia

**Background:** In Italy, local health services are facing increasing requests of counselling and intervention over sexual risk behaviours, unwanted pregnancies, STD and abortion among migrant adolescents. Aim of this study is to investigate risk factors and obstacles in the use of

preventative health services among this population in order to devise appropriate interventions. **Method:** An intervention programme was developed including a preliminary questionnaire study on a sample of 500 migrant adolescents (14–21-year-old) and a sample of Italian peers; interviews and focus groups with parents, health and social workers. **Findings:** Risk factors for this population include access to information on risk behaviours, prevention practices, health services; types of sources of information used and sexual practices associated with cultural factors. Risk and protective factors are partly culture-specific and differ according to the degree of acculturation. **Discussion:** We will discuss the implications for interventions by local health services for this population.

#### **End of life: Professional care providers' narrations**

Cipolletta Sabrina and Oprandi Nadia

The present research aims to explore the experiences of health professionals dealing with the end of life. A qualitative study involving 37 health professionals of surgical, medical, intensive care units, hospice and home services of Northern Italy was conducted using focus groups to collect data and Grounded Theory to analyse them. A lack of organisation and communication with the dying persons and their families emerged from the discussion within the four groups. A difficulty emerged in defining a good death underlying the ethical dilemmas, which involve places to die, palliative care and end-of-life decision making. Care at the end of life remains a neglected topic within the health care services with a subsequent sufferance on the part of the health professionals. It needs to be placed at the centre of research and health system organisation.

#### **Neurobiology of emotional dysregulation in social anxiety**

Anxiety disorders have been characterised as emotional dysregulation disorders. Social phobia (SP), in particular, has been strictly linked with other specific features like increased self-focused attention and an attentional bias towards socially negative stimuli. However, few studies correlated clinical features of the disorders with changes in neurobiological parameters. We recruited 26 subjects on a continuous from normality to SP, as assessed by Liebowitz Social Anxiety Scale. Ten subjects were above the diagnostic cut-off for the disorder. Functional connectivity and chaotic dimensions indices were measured and correlates with anxiety levels. We found a decrease in functional connectivity between amygdala and precuneus with the increase of social anxiety. Moreover, we found changes in the chaotic indices in the same two regions. Since precuneus is involved in self-mentalising and self-attribution of emotional states, we suggest these changes might represent the biological counterparts of increased self-focused attention and consequently of the emotional dysregulation.

Presenter: Gentili, Claudio, Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Pisa, Italy

Author: Cristea, Ioana, Department of Psychology, Babes-Bolyai University, Cluj-Napoca, Romania

Author: Vanello, Nicola, Department of Information Engineering, University of Pisa

Author: Guazzelli, Mario, Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Pisa, Italy

### Developing an understanding of patient uncertainty in rheumatic conditions

Cleanthous Sophie, Cano Stefan, Michael Shipley, Isenberg David and Newman Stanton

**Background:** Patient uncertainty in chronic conditions is complex, multidimensional and poorly understood. The aim of this study was to explore patient uncertainty in two rheumatic conditions: systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). **Methods:** A qualitative investigation was conducted including: (i) consultation with rheumatology experts ( $n=8$ ) and (ii) in-depth interviews with SLE ( $n=17$ ) and RA patients ( $n=15$ ). Interviews were recorded and transcribed verbatim. A detailed line-by-line coding of uncertainty themes was carried out to inductively develop uncertainty domains. **Findings:** An uncertainty conceptual framework was developed comprising five domains: symptoms and prognosis, medical management, self-management, impact and social functioning. Both experts and patients agreed on the key aspects of uncertainty in terms of content, source and the potential impact on patients' quality of life. **Discussion:** Future management of uncertainty should include: patient support, information and education and empirically testing their efficacy by the development of an appropriate measure to quantify uncertainty.

### Paediatric epilepsy: CBT improves health, psychological well-being and cognition

Constantinou Marios and Kerekla Maria

Epilepsy is a medical diagnostic entity that is often associated with anxiety and depression; which in return are often related to a higher number of seizures. Twenty-one children (aged 8–12) diagnosed with epilepsy (a homogeneous group with temporal lobe epilepsy with simple partial seizures) underwent CBT (8 weeks). Children were medicated (no changes during treatment) and had on average 5.4 recorded seizures per month. Parent/teacher evaluations (CBCL) were used to assess their anxiety and mood every other week and a neuropsychological evaluation was administered pre-post treatment. A control group of 19 matched children did not receive CBT during the same period. The children who underwent CBT experienced 3.2 fewer seizures ( $p<0.01$ ) than their peers and had significantly lower CBCL-scores on anxiety, withdrawal, depression ( $p<0.01$ ) and better neuropsychological functioning (memory, attention and executive functioning;  $p<0.05$ ). Overall, CBT appears to significantly benefit children medically, psychologically and cognitively.

### Trauma experiences following 'person under train' incidents for train drivers

Corina Doroga and Adriana Baban

Facing adversity may elicit both negative and positive changes in the individual. The main objective of this study is to investigate both types of consequences that train drivers involved in 'person under train' incidents retrospectively experience. Secondly, we investigate how different cognitive processing strategies relate to the experienced trauma. Participants are 164 train drivers who completed measures of PTSD symptoms, The General Health Questionnaire, The Posttraumatic Growth Scale, The Bi-directional Changes in Being Scale and The Cognitive Processing of Trauma Scale. Results reveal that both positive and negative changes are prevalent in this population and they are significantly associated with higher levels of posttraumatic stress symptoms and growth. Findings indicate that greater use of adaptive cognitive processing strategies like acceptance or positive reframing predicts positive changes following trauma. Discussion focuses on the clinical relevance of changes

following trauma and the importance of broadening the spectrum of potential reactions to adversity.

### **Peace operations and posttraumatic stress disorders (PTSD)**

Correia António, Hipólito João and Vasconcelos Maria de Lourdes

The posttraumatic stress disorder (PTSD) was acknowledged for the first time as psychopathological nosology in the 3rd edition of DSM-III (1980). However, still a big controversy is rolling over its aetiology and symptoms which are related to traumatic stressor exposure. The longitudinal study (Dobbs, 2009) involving military personnel who served in Iraq and Afghanistan wars was expected to prove large PTSD rates, but that did not happen. Another study (Bertelsen, 2009) has identified a substantial percentage of PTSD with previous symptoms. This study aims to assess both PTSD and its related pathology in a sample of 145 military engaged in peace operations. In order to meet this goal, we will use a questionnaire with several scales to measure the traumatic event, emotional adjustment, self-esteem, coping and social support. This study is simultaneously longitudinal and quantitative. We expect to identify both PTSD and related pathologies. Thus, this study pretends to contribute to put into practice an intervention and accompanying preventive program for the military.

### **Age at first drink and problematic drinking behaviours: A longitudinal analysis**

Cosco Theodore, Morgan Karen and McGee Hannah

**Background:** Age at first drink (AFD) is an independent predictor of future problematic drinking behaviours. **Methods:** Data was collected in 2007 via face-to-face interviews ( $n = 10,364$ ; response rate 62%). In 2009, participants from the 2007 sample were interviewed via telephone ( $n = 1045$ ; response rate 81%). Problematic drinking behaviour was indicated by score ( $>6$ ) on the Consumption Subscale of the Alcohol Use and Disorders Identification Test (AUDIT-C). Linear regression was conducted with the 2009 AUDIT-C score, using age at first drink and 2007 AUDIT-C score as explanatory variables. **Results:** Age at first drink accounts for 1.4% of the variability in problematic drinking behaviours in 2009 [ $F(1, 859) = 13.13, p = 0.0003$ ]; problematic drinking in 2007 accounts for 42.7% [ $F(1, 859) = 642.42, p < 0.00001$ ]. **Conclusions:** These results suggest that previous problematic drinking behaviours are more predictive of the longitudinal trajectory of problematic drinking than the age at first drink.

### **Perception of the elderly, institutionalised, regarding their oral health**

Costa Jose, Cunha Madalena, Montero Javier, Bica Isabel, Carvalho Daniel, Castanheira Edite, Guedes João, Coimbra Sofia and Lopes Tiago

Our aim is to assess the perception of institutionalised elderly and who attend day care centres, the region of Viseu, regarding their oral health. Cross-sectional descriptive study consists of 435 institutionalised elderly in nursing homes and day centres in the municipality of Viseu (30.57%) males and 302 (69.43%) females. Present a minimum age of 57 years and maximum of 105 years, with a mean age of 80.94 years. Questionnaire perception of oral health. 55.17% of elderly people have a perception of good oral health, 27.36% have a reasonable perception of oral health and 3.79% have a perception of poor oral health. We found that men ( $x = 7030$ ) have a better perception of oral health than women ( $x = 11,725$ ). These differences were statistically significant ( $z = -3329, p = 0.008$ ).

### Health education during pregnancy among Portuguese women and immigrants

Coutinho Emilia, Chaves Claudia, Leite da Silva Alcione, Pereira Carlos, Duarte João, Nelas Paula and Parreira Vitória

**Background:** Information during pregnancy contributes towards responsible parenting. The intention is to analyse the information received by pregnant Portuguese women and immigrants. **Methods:** Quantitative, cross-sectional descriptive and exploratory study, with a sample of 1496 mothers (423 immigrants and 1044 Portuguese women). A questionnaire was designed to gather information on the variables. **Findings:** More information was received by nurses (27%) than doctors (25%). 24.6% of women did not receive clarification during pregnancy. Nurses gave more information to immigrants (31.5%) than Portuguese women (24.9%), whereas doctors gave Portuguese women more information (29%) than immigrants (16%). Immigrants received less information (28.6% none) than Portuguese women (22.8% none). Immigrants considered the information received to be more useful ( $p = 0.005$ ), guiding ( $p = 0.003$ ), necessary ( $p = 0.007$ ), pertinent ( $p = 0.002$ ), specific ( $p = 0.027$ ), sufficient ( $p = 0.000$ ), pleasant ( $p = 0.009$ ), profound ( $p = 0.003$ ), clear ( $p = 0.017$ ), efficient ( $p = 0.000$ ), simple ( $p = 0.009$ ) and complete ( $p = 0.002$ ). **Discussion:** Although immigrant women received less information, they attributed more value to it.

### Stress management interventions decreasing anxiety and work–family conflict

Cserhati Zoltan, Adam Szilvia, Stauder Adrienne, Konkoly Thege Barna, Balogh Piroska, Purebl Gyorgy, Szekely Andras and Kopp Maria

**Background:** Effects of stress management interventions were investigated in workplace setting. **Methods:** 472 Employees from diverse background received one of the two different types of 16 h stress management interventions or 3 h lecture on stress and coping (comparison group). 302 Employees (64%) participated in the 1-year follow-up. **Measures:** Siegrist Effort-Reward Imbalance at work (ERI), Cohen Perceived Stress (PSS10), Spielberger Trait Anxiety Inventory (STAI-T), Carlson Work-Family Conflict, subjective health complaints (PHQ-15) and WHO Well-Being (WWB-5). **Findings:** Work-related stress remained unchanged in all groups. In SMI groups there was significant decrease in perceived stress ( $p < 0.05$  and  $p < 0.01$ ), anxiety ( $p < 0.01$  and  $p < 0.001$ ) and work–family conflict ( $p < 0.001$ , both groups), while there was no significant change in comparison group. PHQ-15 decreased significantly in all groups, while there was no significant improvement in WWB-5. **Discussion:** Stress management intervention was beneficial for individual stress-related symptoms, while had no effect on work-related stress. Research supported by Hungarian Ministry of Health.

### Risk behaviour and recreative night culture *versus* socio-demographic context

Cunha Madalena, Ferreira Manuela and Chaves Cláudia, Students 8°CLE e 19 CLE

Several challenges related to social and demographic contexts are placed to young and adolescents during the night out. The transversal study was to assess the risk behaviour in 416 adolescents/young visienses male and female aged between 16 and 30 years, attending 4-night entertainment places that have been classified as high risk. The results revealed that: the younger and better the socio-economic level, the most serious risk behaviour; men have higher risk behaviour than women; individuals with higher qualifications have higher risk behaviour than those with lower education level; the more the money spent per night, the greater the

tendency to adopt risky behaviours. From the results it appears that participation in the night life influences the risk behaviour of adolescents and youth.

### **Knowledge and condom use in vulnerable people**

Cunha Madalena, Serrano Ana Rita, Oliveira Diana, Marques Lisete, Machado Tiago, Marques Ana, Correia Carla, Figueiredo Carla, Almeida Catarina, Baptista Isabel, Bento Manuela and Almeida Maria João

Sex with multiple partners without condom use, misuse and/or not systematic use is associated with the transmission of HIV/AIDS. Cross-sectional study on a sample of 200 participants (120 persons who exert Prostitution and 80 Homeless), 40% men and 60% women with a mean age of 36.3 years, revealed that: 70% believe that the use of condom is the most effective way to prevent HIV/AIDS transmission, only 5% considered relevant to have just one partner in order to prevent transmission. Most participants (75%) are using condoms and having casual sex, of these only 55% use condoms. About the knowledge level, 35% present deficit, 5% reasonably and 60% good knowledge. Those who have the better knowledge about HIV/AIDS are the ones that use less the condoms. Women and older participants have a better level of knowledge about modes of transmission.

### **Subtypes of adverse childhood and health risk in looked after children**

Curran Emma, O'Neill Siobhan, Coman William and Cassidy Tony

**Objectives:** To investigate the effect of complex interactions between types and numbers of adverse childhood events and prevalence of a wider range of health risk behaviours in looked after children. **Methods:** A survey of 287 looked after children using the Strengths and Difficulties Questionnaire and the Resilience Scale in conjunction with records of a range of traumatic experiences. **Results:** Latent class analysis identified a three-class model based on the levels of experience of psychological abuse, physical abuse, sexual abuse, emotional abuse, parental substance abuse and parental mental health issues with class 1 which accounted for 48.2% of children as the strongest predictor of health risk. **Conclusions:** This study helps to elucidate the combined impact of trauma and provides evidence of the need for more effective screening.

### **Stability of smoking behaviour amidst individual and social change: A longitudinal analysis of Irish young-adults**

Currie Laura, Morgan Karen and McGee Hannah

**Background:** The aim of this study was to describe socio-demographic patterns of smoking and identify social and life transition contexts relating to behaviour change among young-adults.

**Methods:** This longitudinal study re-contacted a representative sample of Irish young-adults (aged 18–37 in 2007) from SLÁN 2007 ( $n=1039$ ; 83% response rate) using a previously validated telephone interview methodology. Questions assessed smoking status, quit intentions, attitudes and socio-demographics. **Results:** Smoking prevalence remained relatively stable at 34% (20–29 years: 32%; 30–39 years: 35%) in 2007 and 33% (20–29 years: 33%; 30–39 years: 32%) in 2009, despite considerable change in individual and social context. While 21% of current-smokers in 2007 ( $n=345$ ) had quit by 2009, 9% of ex-smokers ( $n=152$ ) had relapsed and 6% of never-smokers ( $n=528$ ) had initiated by 2009. **Conclusions:** The resilience

of smoking behaviour by young-adulthood highlights the importance of targeting resources towards preventive interventions.

### **The relationship between stress reaction and lifestyle factors of new employees**

Daijima Naoko and Mori Kazuyo

Mental health problems have recently increased among new employees in Japan. The purpose of this research was to find the relationship between stress reaction and lifestyle of new employees. Outcome measure was health check questionnaire (include psychological stress reactions, physical complaints, health behaviours and TTM). **Time:** April and September in 2000. The subjects were 121 new employees (100 males and 21 females) aged 19–27 of one company in Japan. The results indicated that the new employees with high psychological stress reaction were having daily life issues such as sleeplessness and quick eating. Also the new employees who had frequent physical complaints show that they had signs such as  $\pm 3$  kg change in weight within a year, walking fast, sleeplessness and snacking. The results might give the effective idea for the following intervention.

### **Patterns of affect and well-being in high *versus* low adolescent perfectionists: Do goal orientation and achievement make a difference?**

Damian Lavinia, Negru Oana and Baban Adriana

Perfectionism has been widely studied in academic contexts, as it has proven to be very prominent in evaluation situations (Frost et al., 1990). This study employs a correlational design in order to tap into the complex relations between perfectionism (as measured by the Frost Multidimensional Perfectionism Scale, Frost et al., 1990), achievement goal orientation (as measured by the Patterns of Adaptive Learning Scales, Midgley et al., 2000), achievement (as reflected by school grades), affect (as measured by the Positive and Negative Affect Schedule, Watson et al., 1988) and well-being (as measured by the Psychological Well-Being Scale, Ryff & Keyes, 1995) on a sample of adolescents ( $N=236$ ). Results reveal different patterns for participants scoring high *versus* low in perfectionism with respect to affect and well-being, depending on their school achievement and goal orientation ( $p<0.05$ ) (approach *vs.* avoidance). Important implications for educational and health research and practice are discussed.

### **Providing support to beginning university teachers**

Daniela Necsoi, Daniela Porumbu and Iolanda Beldianu

This paper provides the rationale and describes the framework for a support and professional development network for beginning university teachers. The implementation and the outcomes of the support network are described too. The goal was to investigate the use of collaborative consultation in reducing occupational stress and in providing informational, emotional and practical support to 15 beginning faculty members. The impact of the support network on beginning teachers was examined using three data sources: follow-up interviews, an online survey and indicators like network's longevity and the number of the participants. The results indicated that the network provided teachers with the opportunity to clarify their thinking about complex research and educational issues and make more informed decisions about their professional practice. In addition, the network provided teachers with increased self-confidence, increased emotional support, more enthusiasm for work, increased reflection, ability to adopt a more critical perspective and improved research skills.

**Resonance – Ingredient for a healthy life**

Daniela Porumbu, Daniela Necsoi and Io landa Beldianu

This study is a qualitative research upon 17 subjects participating in a personal development group in an NLP School called Resonance. One of the most important competence developed is self-competence, which means being in resonance with yourself. Resonance is the feeling that you have control over yourself, you are in agreement with yourself and you have control over your own destiny and are responsible for the quality of your thoughts and emotions. The basic belief of NLP is that each has very specific abilities that are unique. Living resonance helps us to discover and live these capacities. Subjects were assessed at the beginning and at the end of the program using a quality of life survey. Subjects registered a reduction in physical symptoms and a significant increase in physical and mental health. Self-competence, developed over 180 h, proved to be a prerequisite for resonance and one of the health's secrets.

**Cognitive, behavioural and social factors contribute to fatigue and psychological distress in chronic fatigue syndrome**

De Gucht Veronique, den Engelsman Marielle, van der Kleij Rianne and Maes Stan

**Background:** The aim of this study was to assess the contribution of illness perceptions (IPs), coping and social support to fatigue, anxiety and depression in patients with chronic fatigue syndrome (CFS). **Methods:** 215 Members of a patient support group filled in questionnaires assessing IPs, cognitive coping (CC), behavioural responses to illness (BRIQ), social support (SS), fatigue, anxiety and depression. **Results:** Low personal control, perceived impact of CFS and all-or-nothing behaviour, all significantly contributed to fatigue ( $p < 0.01$ ). The CC strategy 'concentration on positive things' significantly predicted the motivational fatigue component ( $p < 0.001$ ). Perceived impact of CFS ( $p < 0.001$ ), concentration on positive things ( $p < 0.01$ ) and both degree and quality of SS ( $p < 0.05$  and  $p < 0.01$  resp.) significantly contributed to anxiety and depression. **Discussion:** When designing interventions, the impact of IPs, representing perceived impact and control over CFS, behavioural responses, adaptive cognitive coping strategies and social support on CFS should be taken into account.

**Relation between social support and postpartum depression in a sample of Brazilian low income women**

De Lima Salum e Moraes Maria, Otta Emma, Raad Bussab Vera Silvia, Almeida de Carvalho Flavia and Tania Kiehl Lucci

This study integrates a more extended research about factors associated to postpartum depression (PPD) in a sample of women living in a low income region of São Paulo City, Brazil. Our aim was to investigate the relation between social support during pregnancy and postpartum depression. 212 women in the last trimester of pregnancy attending four public Primary Care Health Services responded the MOS Social Support Scale. In the third month after delivery, they responded the Edinburgh Postnatal Depression Scale. A statistically significant negative Pearson correlation ( $-0.341; p < 0.01$ ) was found between the scores of the two scales, indicating that social support during pregnancy is a relevant factor associated to the risk of developing PPD. This result not only stresses the importance of psychological support during pregnancy, but also after childbirth, in order to prevent the appearance or aggravation of women's depressive state, with possible implications for their child's development.

**Double trouble: Restrained eaters do not eat less, and feel worse**

De Witt Huberts Jessie, Evers Catharine and De Ridder Denise

While dietary restraint does not appear to reflect actual caloric restraint, it has been found to be a risk factor for eating pathology. These findings raise the question what, if not caloric restriction, dietary restraint entails. The finding that restrained eaters do not eat less than they intend to may provide an answer. Based on this disparity between the intention to restrain oneself and actual behaviour, we hypothesised that restraint does not predict food intake but eating-related guilt. This was tested in three studies ( $N=148$ ) using unobtrusive measures of food intake; different restraint scales and different guilt measures. Results confirmed that restraint is not an indicator of actual limited food intake ( $p>0.25$ ), but rather a reflection of a disturbed relationship with food manifested in guilt ( $p<0.05$ ). This finding has important implications for the concept and definition of restraint and its consequences. These implications will be discussed.

**HAPA predictors of physical exercise initiation, adherence and withdrawal in postmenopausal women**

Débora Godoy-Izquierdo Débora, Padial Ana, Vélez Mercedes, López-Chicheri Isabel, Mendoza Nicolás, Salamanca Alberto, de Teresa Carlos and Godoy Juan F.

**Background:** This study aimed to test the HAPA constructs in relation to exercise behaviour initiation and maintenance among postmenopausal women who were long-term regular exercisers or who wished to adhere to a supervised exercise program and did it (adhered) or did not (non-adhered). **Methods:** One hundred and thirty-six postmenopausal women completed a self-report on physical exercise and HAPA's protocol to evaluate psychological variables related to exercise behaviour at baseline, during and after a supervised exercise program in which the experimental group (adhered plus non-adhered women) was enrolled. **Findings:** Forward step logit regression analyses according to the HAPA model were conducted. Initiation of exercise behaviour was inversely predicted by outcome expectations at baseline. Short-term maintenance (adherence to the supervised program) was directly predicted by action planning at post-intervention. Relapse at 3 months follow-up was directly predicted by coping planning at post-intervention and follow-up. **Discussion:** Our findings support the predictive power of the HAPA model with regards to exercise behaviour adoption among middle-age women. They also provide information for planning tailored interventions to increase physical exercise among postmenopausal women.

**Relationship between nurse job satisfaction and ways of coping**

Deklava Liana

**Background:** The research was performed to clarify, what ways of coping the nurses are choosing the most often, do there exist connections between stress coping and job satisfaction, and whether job satisfaction indices are higher for nurses who use task coping. **Methods:** Respondents were 210 nurses from five hospitals. This study uses Lazarus and Folkman's Ways of Coping Checklist, Questionnaire Job satisfaction survey. Paul E. Spector. **Findings:** The results reflect that most of the nurses use the emotion focused coping. Research has proved strong negative correlation between job satisfaction and emotion coping ( $r=-0.749, p=0.01$ ) and average strong positive correlation with task coping ( $r=0.572, p=0.01$ ). **Discussion:** As the education level and the age of the respondent method increases, the stress prevention changes

from emotion-based to problem-oriented strategy. Job satisfaction levels are higher for those nurses who uses the task coping.

**Therapeutic processes and outcomes within nurse-led interventions to assist adjustment to multiple sclerosis: A qualitative perspective**

Dennison Laura, Yardley Lucy, Moss-Morris Rona, Kirby Sarah and Chalder Trudie

**Background:** Cognitive behavioural therapy (CBT) improves psychosocial adjustment in people with multiple sclerosis (MS). However, current evidence from randomised controlled trials (RCTs) may not capture all relevant outcomes and explains little about change mechanisms. This study used qualitative methods to explore therapeutic processes. **Methods:** Thirty MS patients were interviewed about their experiences of CBT or Supportive Listening within an RCT. Grounded theory techniques were used to capture key themes and construct a model of therapeutic processes. **Findings:** Participants within both interventions described positive outcomes. These were diverse and highly individual. Two therapeutic processes appeared to drive change: (1) focusing/sharing and (2) learning/practicing strategies for living with MS. Active engagement in therapy appeared critical and factors that contributed to it were identified. **Conclusion:** The analysis highlights outcomes and potential change mechanisms which the RCT did not capture. It offers insight into change processes and optimal intervention delivery in this population.

**Psychopathology and resilience in an injured trauma sample with extended stays in the ICU**

De Roon-Cassini Terri, Valvano Abbey, Brasel Karen and de St. Aubin Ed

**Background:** Individuals who experience a traumatic injury with an extended stay in the ICU are at risk of lower quality of life (QoL). The objective of this study was to determine the trauma event, ICU stay, psychological and resilience factors related to QoL in this population.

**Methods:** Mixed-methods cross-sectional investigation of 63 injured patients using in-person interviews assessing recall of trauma event and ICU stay, anxiety, depression, PTSD, hardiness, religiousness, personal and social well-being, and QoL. **Results:** Average age was 44 years, 70% were male, 53% experienced a motor vehicle crash, 20% met criteria for PTSD, 10% for depression and 15% for anxiety. Overall quality of life was poor (mean PCS = 27) and aspects of the trauma event and ICU stay correlated with psychological distress and resilience. **Conclusions:** Mental QoL has some expected and modifiable correlates, while psychological well-being, level of resilience and psychopathology are not related to physical QoL.

**Participation, collaboration, empowerment and equity in holistic primary health care**

DeSmet Ann, Hermans Koen and Van Audenhove Chantal

**Background:** Participation, collaboration, empowerment and equity are core principles in health promotion. We investigated how social service users under financial stress evaluated the application of these principles in 'patient'-professional communication.

**Method:** 531 Current social service users aged 18–65 were interviewed (2008–2010) and rated nine communication items (e.g. equal treatment, shared decision-making, information, respect) on importance and realisation (5-pt Likert scale). **Results:** Most users felt respected (78%) but experienced unmet needs in equal treatment (Diff

pt. = 0.90), being involved in decisions (Diff pt. = 0.53) and receiving treatment process information (Diff pt. = 0.47). These unmet needs related to higher treatment stigma ( $r = 0.17$ ,  $p = 0.001$ ) and were higher for those more deprived ( $r = 0.19$ ,  $p < 0.001$ ), more depressed ( $r = 0.14$ ,  $p < 0.01$ ) and with poorer perceived general health ( $r = 0.12$ ,  $p = 0.01$ ). **Discussion:** Equity and empowerment can be improved in frontline care by enhancing process information and shared decision-making, especially for the neediest.

**The importance of social community factors as buffers against depressive symptoms among social service users with chronic illness**

DeSmet Ann, Hermans Koen and Van Audenhove Chantal

**Background:** Resilience and social support are important buffers against depression when adjusting to chronic illness and financial stress. Is their influence the same for those with chronic illness (CI) and without (WCI)? **Method:** 368 Social service users were interviewed using BDI-II; MOS Social Support Scale; resilience scale; social cohesion scale. **Results:** There are 66% CI users, 34% WCI. Of CI users, 47.5% has moderate to severe depressive symptoms, this is significantly lower for WCI users (17.4%). Forward stepwise linear regression revealed that depressive symptom severity for WCI users was influenced by 'positive social interaction', financial stress and resilience (adj.  $R^2 = 0.33$ ). For CI users, 'positive social interaction', resilience and neighbourhood cohesion were significant (adj.  $R^2 = 0.48$ ). **Discussion:** Besides general buffers of resilience and positive social interactions, community factors like neighbourhood cohesion are more important for CI users. Depression prevention here needs to include both community and personal factors.

**Psychological, functional and biological factors of age changes in self-perceived health of old people**

Despot Lucanin Jasmina and Lucanin Damir

The aim of this study was to investigate the associations of psychological, functional, cognitive and biological factors with age changes in self-perceived health of old people. Subjects were 411 residents of 11 retirement homes in Zagreb, Croatia, 104 men, 307 women, aged 56–96 years (average 79) at baseline, ambulatory and not diagnosed with dementia. Variables were measured individually, in the institution, by trained interviewers, at baseline and at 2 years follow-up: sociodemographic, self-perceived health, functional ability, cognitive function, depression and social participation. Biochemical variables were measured from the vein blood sample, collected at baseline. Functional ability, depression and certain biochemical factors (lipoprotein levels, etc.) were significantly associated with self-perceived health. Strength of associations differed cross-sectionally and longitudinally. The implications of these findings are in better understanding of factors that contribute to survival in old age, as the most strongly associated with self-perceived health are to a certain degree modifiable.

**Social support and return to work after ischemic heart disease**

Dias António, Pereira Carlos, Saraiva Regina Célia, Nunes Maria Madalena and Carvalho Maria Isabel

The work is not in the wage has become a source of psychic satisfaction, in that social support exerts influence on the psychological adjustment, particularly in heart disease. If the return to work is around 80–90%, why is a discrepancy between negative 20% and 30%? Associate

returning to work after ischemic heart disease with the functionality of the family and social support was our goal. It was a quantitative and transversal study. The sample was not probabilistic, with 164 subjects with ischemic heart disease in outpatient follow-up. We used sociodemographics, Graffar scale, Apgar Family and Social Support Scale. The family functioning ( $t=4593$ ,  $p=0.000$ ) and social support ( $t=3,811$ ,  $p=0.000$ ) influence significantly the return to work. For greater success in returning to work is essential to involve the family as a concerted strategy in a rehabilitation program and a custom effective social support system.

### **Impact on the life quality of informal caregivers**

Dias António, Saraiva Regina Célia, Pereira Carlos, Monteiro Maria João, Costa José, Dias Ana Rita and Dias João Pedro

Informal Caregivers play an important role in caring for dependents, as their numbers increased. We intend to know the impact on Life Quality of Informal Caregivers. It was a quantitative and transversal study. The sample was not probabilistic, with 250 informal carers. We used sociodemographics, QASCI Scale (Physical impact, Emotional and Social Development) and Quality of Life. Perception of Life Quality by Informal caregivers was low with 37.6%, reasonable with 22.4% and high with 40.0%. The vulnerability to stress (0.636,  $p=0.000$ ) and physical impact, Emotional and Social (0.636,  $p=0.000$ ) influence significantly the life quality of informal caregivers. It is crucial to any Informal Carer to ensure a support structure so as to help him bear the burdens of work. Thus, it is guaranteed to Informal Caregivers to maintain their health so they contribute to the welfare of others without endangering their own personal situation.

### **Assessment of psychopathology in Portuguese referred children: Preliminary psychometric data with the ASEBA battery**

Dias Pedro, Carneiro Alexandra, Lima Vânia Sousa, Machado Bárbara César, Xavier Maria Raul, Veríssimo Lurdes and Santos Sónia

The validation of instruments to specific populations is relevant to health psychology, since a well-structured assessment allows the design of enhanced interventions (Ivanova, 2007). This study aims to validate the Portuguese version of the ASEBA battery (Achenbach, 2001). In this presentation, preliminary results on the CBCL 6-18, TRF and YSR will be presented (alpha coefficients and group differences). A sample of 240 children and adolescents (6-18 years old), referred to four mental health services in Portugal was assessed with the ASEBA forms. All the ASEBA instruments show excellent alpha coefficients ( $\geq 0.86$ ). Group differences in internalising, externalising and total score were found concerning age and gender, in line with research conducted in other societies (e.g. Rescorla et al., 2007).

### **Quality of life, stigma and disclosure in HIV**

Dibb Bridget

**Background:** This study sought to understand the stigma experienced by people with an HIV positive diagnosis with the research questions: to what extent does stigma influence quality of life for this group and to what extent does stigma influence disclosure of the diagnosis to others? **Methods:** Using a cross-sectional design, 88 participants completed an electronic questionnaire. Measures included the MOS-HIV, Life Satisfaction Scale, CES Depression

Scale, stigma, Posttraumatic Growth Inventory, regret and disclosure. **Findings:** Regression analysis showed that perceived stigma accounted for 25% of the variance in the perceived mental health ( $F(87, 1) = 30.306 (0.000)$ ), where increased stigma was associated with reduced mental health. Stigma was not associated with disclosure. **Discussion:** Understanding the experience of stigma in HIV is important for health psychology as it is this understanding which raises awareness and may improve the care, support and quality of life of this group.

**Adolescents' eater prototypes and their association with behaviours: A matter of foods and eating situations?**

Dohnke Birte and Steinhilber Amina

**Background:** Adolescents have perceptions of the typical (un)healthy eating peer, but only the unhealthy prototype was found to correlate with unhealthy eating behaviour. Based on theory and empirical findings, we argue that evaluations and associations of eater prototypes vary with foods and eating situations. **Methods:** Prototypes and behaviours differentiated by the consumption of several foods in general and a social situation (school break) were assessed in 127 adolescents from two secondary schools. **Findings:** Healthy prototypes were more positive than unhealthy prototypes; healthy eaters during school break, however, less positive than healthy eaters in general. (Un)healthy prototypes were associated with (un)healthy eating behaviours during school break and in general. However, associations with eaters/eating during school break *versus* in general were stronger. **Discussion:** This supports that subtypes of the (un)healthy eating peer exist. They are characterised by foods and eating situations and influence particularly adolescents' eating in social situations.

**Attitudes towards reproductive options for childless individuals following a breast/ovarian cancer gene mutation test**

Donnelly Louise, Watson Maggie, Moynihan Clare, Bancroft Elizabeth, Evans D. Gareth, Eeles Rosalind, Lavery Stuart and Ormondroyd Elizabeth

**Background:** Individuals with a breast/ovarian cancer [BRCA] gene mutation have the choice to test an existing foetus or embryos for the same mutation. This study explored reproductive decision making and attitudes to prenatal diagnosis and pre-implantation genetic diagnosis [PGD]. **Method:** Data were collected through semi-structured interviews with 25 female participants and analysed using thematic analysis. **Findings:** Themes included: beliefs about severity of predisposition to cancer; treatment potential for cancer risk; awareness of reproductive options; the perceived value of a life at risk of cancer for self, family members and future children and practical barriers to PGD. **Discussion:** Most participants would not undergo prenatal testing and subsequent termination. PGD [which includes IVF] was viewed more favourably, but with reservations. Awareness of reproductive options was poor, highlighting a need for information. There were indications that psychosocial support may be required not only during reproductive decision making but also over the longer term.

**Pilot testing of a computerised mindfulness-based cognitive therapy intervention for a chronic pain population**

Dowd Haulie, Hogan Michael, McGuire Brian and Sarma Kiran

**Background:** This study aims to develop a computerised version of an existing mindfulness-based cognitive therapy (MBCT) programme and to test its effectiveness in a pilot study.

**Methods:** In a  $2 \times 2$  mixed-design, 126 participants were randomly assigned to computerised MBCT (MIA) and psychoeducation (PM) programmes. **Findings:** Participants in both programmes reported significant improvement across a range of measures, including pain acceptance (CPAQ-8), pain catastrophising (PCS), pain interference, ratings of pain at its worst and pain now (BPI) and global impressions of change (PGIC). This study also found unique benefits for the MIA programme, specifically, for ratings of pain now (BPI), ability to manage emotions, deal with stressful situations and enjoy pleasant events (PGIC). **Discussion:** The results suggest that computerised interventions for chronic pain may be effective in bringing about improvements in variables that reflect the functioning of people with chronic pain and that the MBCT programme had some unique benefits.

#### **The CHARMS Study: Health professional views of sexual function assessment and counselling for coronary patients**

Molly Byrne, Sally Doherty, Hannah M. McGee and Andrew W. Murphy

**Background:** Sexual function problems are common among coronary heart disease patients. We know very little about health professionals' beliefs or how they address these issues with their patients. **Methods:** A random national sample of general practitioners ( $n=61$ ) and hospital cardiac rehabilitation staff ( $n=60$ ) in Ireland responded to a postal questionnaire, measuring beliefs, current practice and assessing needs with regard to sexual assessment and counselling for patients. **Findings:** Majority (70%) of the GPs reported that they rarely/never discussed sexual problems with coronary patients. Cardiac rehabilitation staff reported the lack of assessment and counselling protocols for addressing sexual health problems, with little or no onward referral system available. While all cardiac rehabilitation staff and GPs believed addressing sexual problems was important, many reported lacking awareness, knowledge and confidence in doing so. **Discussion:** Services in this area are poor and need to be improved. Practice guidelines, patient education resources and service provider training are required.

#### **Acceptance and chronic pain: A qualitative study in people with fibromyalgia**

Drew Sinead and McGuire Brian

**Aims:** Acceptance is a valuable concept within theories of adjustment to chronic pain. Using a qualitative method, this study sought to elucidate the processes leading to acceptance of chronic pain and to offer a conceptual framework to account for these changes. **Method:** Interviews were carried out with five members of a Fibromyalgia Support Group and data were analysed using Grounded Theory. **Results:** The analysis revealed two main themes: (1) 'Stages of Personal Change' requires progressive movement through three sub-categories toward higher levels of acceptance, namely: 'finding the cure', 'changing the focus' and 'finding meaning'. (2) 'Awareness and Support', reflected the subjective importance of the level of medical and social awareness about fibromyalgia which strongly influenced an individual's ability to move through the stages of personal change toward higher acceptance. **Conclusion:** We provide preliminary information regarding the processes involved in achieving acceptance in chronic pain.

**Development and evaluation of a stress management program for adolescents: Researcher and counsellor alliance**

Dumont Michelle, Rousseau Nadia, Leclerc Danielle, Masse Line, Potvin Pierre and McKinnon Suzie

High and chronic stress can have a negative impact on personal well being. In order to offer a concrete tool for schools, a stress management program based on biological (Selye, 1975) and psychological (Lazarus & Folkman, 1984) stress was created. This poster presents its content, evaluation results and a portrait of its researcher–counsellor alliance. 138 adolescents were divided into experimental and control groups based on gender and perceived stress levels (PQ, Seiffge-Krenke, 2005). The program's efficiency was tested by using a questionnaire measuring the four dimensions targeted in the program and personal resources inventories. The results of the repeated measures analysis show significant improvements in the experimental group regarding perceived stress, body and thoughts. Finally, the researcher–counsellor alliance enabled the validation of the program's content with students with and without special needs.

**Terror management theory, diagnostic testing and the potential role of disembodying effects of technology**

Dunne Simon, Gallagher Pamela and Matthews Anne

Following previous research with over 55s, this study investigated if unconscious existential concerns could pose a barrier to middle-aged participants' uptake of the 'CVD Risk Biochip' device (for indicating one's risk of developing Cardiovascular Disease). An experimental questionnaire derived from Terror Management Theory was used on 78 male and female participants aged 40–55. Participants' gut-level reactions towards encounters with death, heart attacks or dental pain were initially prompted. This was followed by a distraction, information regarding the device and measures of participants' attitudes and intentions to use it. Results indicated that participants aged 40–55 primed with unconscious existential anxiety (either mortality or heart attack salience) did not elicit more avoidant responses towards the device than controls ( $p > 0.05$  in all cases). Unconscious existential anxiety may not constitute a barrier to use the CVD Risk Biochip for middle-aged participants due to certain disembodying effects associated with the use of such a technology.

**Psychosocial health in children and adolescents surviving cancer**

Eilertsen Mary-Elizabeth Bradley, Rannestad Toril, Killingberg Heidi, Indredavik Marit S., Reinfjell Trude and Vik Torstein

**Background:** To explore psychosocial health in children and adolescents surviving cancer 3 years after diagnosis compared with healthy controls, as assessed by adolescents themselves, their parents and teacher. **Method:** Case-control study included 50 children and adolescents diagnosed with cancer between 1 January 1993 and 2003 and treated at the Paediatric Department St. Olavs University Hospital, Trondheim, Norway. Data was collected by using the Strengths and Difficulties Questionnaire (SDQ), as well as the ASEBA questionnaire.

**Findings:** Children surviving cancer had more emotional symptoms, higher total problem scores and poorer academic performance, than their peers. Emotional problems were consistently reported by parents, teachers and adolescents themselves, particularly in children with brain tumours and among survivors with late effects and leukaemia. **Discussion:** When planning long-term follow-up care, rehabilitation of children and adolescents with cancer

should take into account their psychological health and the need to develop adequate supportive interventions and programs for long-term follow-up care.

### **Coping strategies as related to quality of life in ALS**

Elisabeth Spitz, Laurence Albertini and Sébastien Montel

**Background:** The aim of this study was to examine the coping strategies of 49 patients with amyotrophic lateral sclerosis (ALS) and their relationships with their perceived quality of life (QoL). **Methods:** A total of 49 subjects were given a document to fill in order to collect their demographic and medical data. Then, everyone was asked to complete a questionnaire of coping strategies, the Brief COPE, as well as a questionnaire of QoL, the SF-36. **Results:** The correlations analysis showed strong relationships between emotional support and SF-PF ( $p=0.01$ ) as well as SF-ERF ( $p=0.02$ ); venting and SF-MH ( $p=0.04$ ); positive reframing and MH ( $p=0.03$ ); disengagement and SF-ERF ( $p=0.03$ ). **Discussion:** Our study clearly demonstrated the relationships between some coping strategies and some dimensions of QoL. Indeed, we better understand the usefulness of taking care focusing on coping strategies in order to improve QoL in ALS.

### **Drunk driving attitude's change in the sample of Lithuanian learners – drivers: The role of personality traits**

Endriulaitiene Aukse, Marksaityte Rasa, Zardeckaite-Matulaitiene Kristina and Seibokaite Laura

Drunk driving is one of the most prevalent health risk behaviours and causes of traffic injuries in Lithuania. Authors argue that possible countermeasure for decreasing this risk might be driving education leading to attitude change. This study is intended to find out if the current driving training practices in Lithuania can change the drunk driving attitude, and how this change is related to personality. A cross-sectional survey using self-report questionnaire (with attitude towards drunk driving scale, scales of impulsivity, aggressiveness and Big five personality traits) was carried out. The total sample included 94 learners – drivers, who filled in the questionnaire at the beginning and at the end of their driving training program. Results showed that attitude towards drunk driving remained the same for 50% respondents, changed to more negative for 31% and changed to more positive for 19% of respondents. Changes were related to gender, but not related to personality traits.

### **A theory-based randomised controlled trial to increase participation in influenza vaccination in the workplace**

Ernsting Anna, Schwarzer Ralf, Lippke Sonia and Schneider Michael

**Background:** Vaccination effectively prevents seasonal influenza. However, attendance is lower than desired and should be increased. A German company implemented a theory-based intervention: Risk and resource communication should increase vaccination intention ('motivational intervention'; MI). An additional 'planning intervention' (PI) should promote participation. **Methods:** Employees were randomly assigned to two groups (MI:  $n=1,150$ ; PI:  $n=987$ ). Questionnaires were completed after the intervention and 4 months later. Regression and analysis of variance were conducted. **Findings:** Intention to participate was predicted by risk perception, outcome expectancies and self-efficacy ( $R^2=0.72$ ). The PI reported higher levels of planning ( $p<0.05$ ) and was more likely to get vaccinated ( $p=0.10$ ). **Discussion:** Risk perception, outcome expectancies and self-efficacy influenced the intention

to participate. Adding a planning component to the motivational intervention promoted self-regulatory competences which enhanced the translation of intentions into action. This should be considered in future vaccination campaigns.

### **The problematic drinking group and the individual factors in junior high school students**

Eto Kazuko and Asada Mana

**Background:** To elucidate the individual factors in members of the problematic drinking group in which alcohol is likely to cause health hazards in the future. **Methods:** A questionnaire survey consisting of 31 items related to alcohol use, family and others was conducted in 280 junior high school students. The QF Scale was used to divide students into the normal group, the drinking group and the problematic drinking group for investigation. **Results:** The response rate was 99.6%. The problematic drinking group accounted for 1.9% of the first-year students, 3.9% of the third-year students, 2.0% of males and 0.8% of females. The drinking and family conflicts were caused by students and their family themselves. **Discussion:** The problematic drinking group may have problems with family relationships.

### **Stress and coping strategies in the acute cardiovascular attack**

Fabiani Deborah, Colombini Emanuele, Erenini Francesco, Cecilia Sordi and Marco Timpano Sportiello

As well known on the ground of many previous researches, there is a correlation between stressful events and cardiovascular disease. The evaluation of coping strategies adopted by patients suffering from acute myocardial attack constitutes the basic aim of the present work. A lot of indicators suggest that coping strategies are stable and unrelated from the nature of stressful events. For a sample of 30 in-patients of cardiology department, we employed two types of self-report questionnaire: the first one, set up expressly for this study, aims at assessing the stressful events and the second one is the 'Brief cope' (Carver, 1997). The same patients were re-assessed 3 months later. Our data confirm the high stress vulnerability in patients affected from acute cardiovascular disease. Moreover, coping strategies are predictive both for recovery time and relapse risk. Adopting fit coping strategies supports positively the care outcome.

### **Relationship between locus of control and parenting styles in mothers of children with attention deficit hyperactivity disorder (ADHD)**

Fallahi Fatemeh, Cheraghi Mona and Larijani zarrin sadaat

**Objective:** This study examines the relationships between locus of control and parenting style to determine if there is any relationship between variables or not. **Method:** Forty-one mothers of children with ADHD, (children's mean age: 8.3 years) who were chosen based on convenience sampling participated in this study. The diagnosis of child ADHD was established through clinical interviews with parents according the criteria in DSM IV-TR. They completed the Rotter Locus of control and the Baumrinds parenting styles scale. Correlational design was used as statistical method. **Findings:** Results indicate significant correlation between locus of control and parenting styles. There is a negative relationship between locus of control and authoritative style( $r = -0.37$ , sig 0.01  $n = 41$ ). While no relation was observed between authoritarian or permissive style and locus of control. **Conclusion:** Results indicate that the lower locus of control score reveals internal locus of control associated with authoritative style.

**Caregiver and patient coping strategies in explanation of burden on families with chronic obstructive pulmonary (COPD) patient**

Fardi Monfared Mahshid and Dehghani Mohsen

**Background:** Considerable amount of studies have focused on the association of caregiver coping and burden; but no or few, if any, have investigated the impact of patient's coping on burden. Thus, this study aims at examining the role of both caregivers' and patients' coping strategies in caregiving burden among families encountered with COPD. **Methods:** 302 dyads of inpatients and their caregivers ( $N = 604$ ) completed Dealing with Illness Inventory (Namir et al., 1987). In addition, caregivers responded to Zarit 21-item Caregiver Burden Scale (CBI). **Results:** Regression analyses revealed that caregiving burden was related to and predicted significantly by patient coping strategies over caregiver coping strategies. **Discussion:** Consistent with former studies, these results provide further support for the importance of coping strategies in perception of burden. In addition, this study gives some direction to professionals where to focus their efforts to alleviate the existing burden.

**Keywords:** chronic illness, burden, coping strategies, COPD

**Physical activity intervention to improve motivation, psychological and physiological well-being in 11–14-year-olds**

Faulkner Susan and Rance Jaynie

**Background:** Physical Activity (PA) has been associated with reduced anxiety, depression and improved self esteem, cognitive function (Biddle et al 2000). Increase in childhood obesity is associated with the risk of cardiovascular disease and type2 diabetes (NICE2006). **Aims:** To examine the: participation in exercise, psychological and physiological well-being effect of a PA intervention on psychological and physiological well-being. **Methods:** 250 children aged 11–14 assigned to a 6-month, PA intervention to increase activity by 2 h a week for 18 weeks or control condition. Pre and post intervention measures of Self-Perception (Harter, 1988); Self-Efficacy (Wang and Biddle, 2001), PA Enjoyment (Kendsierski, 1999; Anxiety (Spielberger, 1973) and Depression (Faulstich, 1986). **Findings:** Positive effects on psychological well-being; reduction in depression and anxiety and improvements in self-esteem, concentration and motivation. **Discussion:** Increasing exercise participation in children has implications for reductions in CVD-risk, and improvements in psychological well-being and for on-going life-style changes.

**Development and implementation of a brief hospital-based intervention to improve psychosocial adjustment during cardiac rehabilitation**

Fernandes Ana, McIntyre Teresa and Maciel Maria Júlia

**Aims:** Study tested the efficacy of a brief psychosocial intervention for acute coronary syndrome (ACS) patients to promote emotional and cognitive adjustment. The theoretical framework was Leventhal's common-sense model. Evaluations were at discharge, 1 and 2 months follow-up. **Method:** Participants were 121 ACS inpatients at a Portuguese hospital. Design is a randomised controlled trial with two conditions: EG ( $n = 65$ ); CG ( $n = 56$ ). **Instruments:** Portuguese adaptations of HADS and IPQ-Brief. **Intervention:** Two 1 h inpatient sessions and one outpatient 20 min follow-up. Education about ACS risk factors and cardiac rehabilitation, illness representations and coping were key components. **Results:** ANCOVAs showed a significant group effect for emotional state at post-test (e.g. Anxiety:  $F(3,117) = 257, 19, p = 0.000$ ) and several illness cognitions (e.g. Duration:  $F(3,117) = 40.39, p = 0.000$ ). These

benefits were maintained at follow-ups. **Conclusions:** Results indicate that a psychosocial theory-based intervention can be efficient in promoting well-being and adjustment during cardiac rehabilitation.

### **Occupational stress and coping strategies in nurses**

Ferreira Manuela Maria, Nelas Paula, Chaves Cláudia and Albuquerque Carlos

**Background:** Stress influences the way individuals think, feel and behave and can cause low morale, absenteeism, turnover and a tendency to abandon the profession. We intend to evaluate the stress of obstetric nurses to determine the influence of socio-demographic, personal, professional, coping strategies and job satisfaction on stress. **Methods:** A quantitative, analytic-correlational study with a sample of 105 nurses. The questionnaire is composed by socio-demographic and occupational profile: Nurse Stress Index; Toulousiana Coping Scale and Work Descriptive Index. **Results:** The gender, time of professional exercise, shift work and be paid as a specialist or not do not influence the stress. The nurses feel moderately stressed in subscales of NSI. The older, with more professional exercise reveal more stress. Job satisfaction was not a predictor of stress, unlike the coping strategy. **Conclusion:** It is important to know the stress inducers to introduce changes in stressors and develop coping strategies in nurses.

### **Organisational learning in hospitals: A systematic review of the literature**

Florina Spânu and Adriana Baban

Extensive literature has been published on the need for organisational learning (OL) in hospitals. However, there is little empirical support for this. We conducted a systematic review of the empirical studies investigating OL in medical settings. Our foci were: What kind of research question do these studies address? How do they define and measure OL? What kind of antecedents or consequences do they investigate? What kind of research methodology do they use? What are their major findings? We analysed 1254 abstracts which resulted after searching Ebsco, Science Direct, ISI Web of Knowledge, Springer and Proquest databases. Less than 40 papers were qualified as empirical research, conducted in hospitals, investigating learning as an organisational/group level phenomenon. Our review shows that there is little consensus on defining or measuring OL and that there is a need for empirical research investigating the relationship between OL and variables like patient safety or health professionals' well-being.

### **Baby's diagnosis of congenital anomaly during the perinatal period: Determinants of parental adjustment**

Fonseca Ana, Nazaré Bárbara and Canavarro Maria Cristina

**Background:** Given the well-known effect of an infant disability diagnosis on parental adjustment, this study aimed to explore the role of individual (demographic, medical and obstetrical) and diagnosis variables on parental psychopathological symptoms and quality of life (QoL), 1 month after diagnosis. **Method:** In this cross-sectional study, 75 participants whose baby had a congenital anomaly answered BSI-18 and WHOQOL-Bref. Demographic and medical data were also collected. **Results:** Women had higher levels of anxiety ( $p=0.049$ ) and depression ( $p=0.019$ ) and lower psychological QoL ( $p=0.025$ ). Age was negatively associated with depression ( $p=0.022$ ). Psychopathological history was associated with lower psychological QoL ( $p=0.010$ ). Obstetric history and type of congenital anomaly were

unrelated to parents' adjustment, but uncertainty about diagnosis was associated with higher depression ( $p=0.026$ ). **Discussion:** Results indicate a set of vulnerability factors that mental health professionals should assess and take into account, in order to foster adaptation in at-risk groups.

### Predictors of generic and specific quality of life among paediatric cancer patients

Fonseca Marta, Missotten Pierre, Etienne Anne-Marie, Dupuis Gilles, Lemétayer Fabienne and Spitz Elisabeth

This study aims (1) to characterise generic and specific quality of life (GSQOL) of a Portuguese group of children with cancer and (2) to identify predictors of their GSQOL. Children aged from 8 to 12 years old ( $N=40$ ) completed the Quality of Life Systemic Inventory – Module Cancer (Missotten et al., 2008) and a socio-demographic questionnaire. Results show that time after diagnosis ( $\beta=-0.50$ ;  $p<0.01$ ) and the fact of relapse or not ( $\beta=-0.26$ ;  $p<0.01$ ) accounts for 17.5% of generic QOL variance. Time after diagnosis ( $\beta=-0.30$ ;  $p<0.01$ ) and the fact of undergoing or not cancer treatments ( $\beta=0.12$ ;  $p<0.05$ ) explain 27.9% of specific QOL variance. Findings support that paediatric cancer patients with a more recent diagnosis, those who relapse and those that are undergoing treatments are in a more vulnerable situation regarding their QOL and therefore need more attention by doctors and caregivers.

### Hospitalisation experience and psychological well-being in the elderly: A field study in Sardinia (Italy)

Fornara Ferdinando and Cerina Veronica

The present contribution concerns a field study focusing on the hospitalisation experience, which includes an array of both cognitive and affective implications, especially for elderly. The aim of this study is to analyse and compare the effects of different spatial-physical and social-functional features of hospitals settings in influencing psycho-social-environmental responses of hospital users. The study participants ( $N=100$ ) were elderly inpatients (i.e. above 65 years old), who were contacted in two hospitals which differ for their degree of spatial-physical humanisation. A set of measures covering the various aspects of the humanisation construct were inserted in a questionnaire filled in by the participants. Significant relationships were found among design humanisation, perceived hospital environment qualities, and other individual responses, such as satisfaction toward the hospital experience and feeling of broken home attachment. These outcomes provide empirical support to the importance of design quality for fostering health and well-being of older hospital users.

### Internal consistency of CIVIUP-R for assessing the perceived pros and cons of using condoms

Francesc Prat, Montserrat Planes, M. Eugènia Gras, Mark J.M. Sullman and Sílvia Font-Mayolas

**Objectives:** The aim of this paper was to investigate internal consistency of a self-report questionnaire assessing the perceived pros and cons of using a condom with an affective heterosexual partner. **Method:** The sample was composed of 1502 undergraduate students (53.4% females; average age 21.2 years) from a Spanish university. The data were collected through a self-administered questionnaire using a brief story. Participants rated nine pros and nine cons of condom use on a 5 points scale. **Results:** A principle component analysis specifying two factors was performed. The factorial solution explained 28.53% of the

variance. The internal consistencies (Cronbach's alpha) of the pros and cons scales were 0.58 and 0.72 respectively, with all the items contributing to the scale's internal consistency. **Conclusions:** The internal consistency of the CIVIUP-R was comparable to similar less specific instruments for assessing the pros and cons of condom use.

**Periodic prompts to increase exposure to online computer-tailored lifestyle program: Effect on re-visit rates**

Francine Schneider

**Objectives:** Impact of internet interventions is often hindered by suboptimal exposure rates. This study attempted to optimise exposure by studying the effect of periodic prompts to achieve sustained use of the program. **Methods:** Participants of an online computer-tailored lifestyle program ( $N=3448$ ) were randomly assigned to two conditions; the experimental group ( $N=1790$ ) was proactively reminded to revisit the program by an e-mail prompt after 3 months; control participants ( $N=1658$ ) received no reminders. Program revisits were objectively monitored during 6 months. **Results:** Although periodic prompting resulted in significantly higher revisiting rates ( $OR=28.92$ ;  $p<0.001$ ), overall program revisiting remained low. Within the experimental group 6.5% ( $N=117$ ) of the participants revisited the program *versus* 0.2% ( $N=4$ ) in the control group. **Conclusions:** Despite the effect of periodic prompting, actual revisiting rates were still sub-optimal. Additional research is needed to further optimise the use of prompts by focusing on frequency, content and mode of delivery.

**Importance of symptoms control: Self-regulation in children with diabetes type 1 and asthma**

Fryt Joanna and Gacek Michal

Chronic illnesses like diabetes and asthma may influence children self-regulation both in positive and negative way. Quality of symptoms control is one of the major factors responsible for that impact. We show how specific factors associated with symptoms control change self-regulatory skills (behavioural inhibition, shifting, planning, monitoring and emotional control). 138 children 8–11 years old (36 with diabetes, 31 with asthma, 36 healthy peers and 35 with ADHD) along with their parents participated in the study. The BRIEF Inventory (Gioia et al., 2000) was used to measure children's self-regulatory skills. Factors associated with symptoms control were monitored. Children with medium glycated haemoglobin level and no history of hypo- and hyperglycaemia have better self-regulation scores than healthy peers. Children with poor asthma control have worse scores than healthy peers, especially with emotion regulation, but better than children with ADHD. Implications for professional care of children with diabetes and asthma will be discussed.

**Relaxation techniques potential for reduction of alexithymic subjects reaction to stressor**

Gabija Jarašiūnaitė and Aidas Perminas

This study aimed at assessing the potential of progressive muscle relaxation and biofeedback relaxation in reducing psychophysiological reaction to an audiovisual stressor in individuals having alexithymia. 19 men and 71 woman aged between 18 and 30 were subjects of this study. The participants were randomly assigned into three different groups. Two groups received four relaxation training sessions (progressive muscle relaxation or biofeedback relaxation) once a week, between two measurements of their reaction to an audiovisual stressor. The third group was a control group. The identification of high and low alexithymia was based on the 20-item

Toronto Alexithymia Scale. Body temperature, skin conductance, heart rate and respiratory rate were recorded while measuring participants' reaction to the audiovisual stressor. Progressive muscle relaxation was more effective for the subjects with high alexithymia in reducing their physiological reaction to an audiovisual stressor than biofeedback relaxation.

### **The importance of success to mood change after Tai Chi classes**

Gaitan-Sierra Carolina

This study examined the determinants of positive affect (PA) and negative affect (NA) after engagement in a health promoting activity (Tai Chi), and the effects of false feedback on expectancy, intrinsic motivation (IM), effort and mood change. Participants were assigned to receive either positive ( $N=69$ ) or neutral feedback ( $N=69$ ) after performing two out of four Tai Chi sessions. Baseline and follow-up measurements were collected before and after completion of each session. Positive *versus* neutral feedback enhanced expectancy, effort, IM and PA, but not NA. For both PA and NA, the IM was predicted less when controlling for effort. Mediation analyses revealed that the relationship between IM and NA was mediated by effort but not for PA. In conclusion, the reduction in NA is due to the affective consequences of effort when engaging in an intrinsically motivated task. The increase in PA is the consequence of feeling successful at the task.

### **Why does Tai Chi improves well-being? The effects of perceived task difficulty on outcome as mediated by perceived effort and enjoyment**

Gaitan-Sierra Carolina

Studies show that Tai-Chi improves well-being: less is known about what mediates this effect. There are two possible psychological explanations. One is that people's expectations about gains from Tai-Chi produce well-being. The second one is that motivation facilitates it. This study compared the contribution of both variables on well-being. Ninety-two participants (67 females) performed four Tai-Chi classes delivered through videos and were instructed that the Tai-Chi exercises were either easy ( $N=46$ ) or difficult ( $N=46$ ) to perform. Variables assessed during this study were: expectancy, intrinsic motivation, task difficulty, perceived effort, perceived benefit and mood (PANAS scale, before and after). Compared with the 'easy' condition, 'difficult' participants perceived the exercises as more effortful, reported more benefit and increased their positive affect. Perceptions of effort and intrinsic motivation predicted positive and negative affect respectively and independently of expectancy. Motivation plays an important role when explaining the beneficial effects of Tai-Chi.

### **Relationship between personality characteristics and risk behaviour among young**

Gajdosova Beata, Orosova Olga and Benka Jozef

The aim was to explore the relationship between conscientiousness (Big Five), structured style (Resilience), self-regulation and smoking cigarettes and drinking among adolescents. Binary logistic regression models were conducted separately for girls and boys (501 students, mean age  $14.7 \pm 0.9$ ; 48.5% males) in order to explore the simultaneous contribution of measured variables. The models revealed that for boys higher level on structured style decreased the probability of drinking ( $\beta = -0.40$ ; odds ratio = 0.67;  $p < 0.05$ ). For girls higher level of structured style decreased the probability of drinking and smoking ( $\beta = -0.41$ ; odds ratio = 0.66;  $p < 0.05$ ;  $\beta = 0.27$ ; odds ratio = 0.76;  $p < 0.01$ ). In addition, higher level of conscientiousness ( $\beta = 0.12$ ; odds ratio = 0.71;  $p < 0.05$ ) and higher level of self-regulation

( $\beta=0.34$ ; odds ratio = 1.40;  $p<0.05$ ) increased the probability of drinking; interaction effect of these two variables is also significant ( $\beta=0.06$ ; odds ratio = 1.06;  $p<0.01$ ). In spite of conceptual proximity of the applied constructs, the results observed among girls supported the unique predictive power of structured style, conscientiousness and self-regulation with regard of their risk and protective impacts towards smoking and drinking.

#### **Changes in specific cardiac beliefs and illness perceptions after participation in cardiac rehabilitation**

Gallagher Jonathan, Doyle F., Wynne B., Heverin M., Al Hardan S., Pender N. and McAdam B.

**Background:** Belief about illness has been shown to predict behavioural and psychosocial outcomes in patients with coronary heart disease (CHD). We assessed whether cardiac beliefs or illness perceptions changed after participation in cardiac rehabilitation (CR). **Methods:** Patients with CHD ( $n=139$ ) completed a battery of questionnaire pre- and post-CR. Beliefs were assessed by the York Cardiac Beliefs Questionnaire (YCBQ) and the Brief-Illness Perception Questionnaire (B-IPQ). **Findings:** A significant reduction in inaccurate beliefs about CHD ( $p<0.001$ ), myocardial infarction ( $p<0.001$ ) and angina ( $p=0.002$ ) were seen post CR. Illness perceptions pertaining to control ( $p<0.001$ ) and understanding ( $p=0.002$ ) were improved, whilst illness concerns ( $p<0.001$ ) and the emotional impact of the condition ( $p=0.046$ ) were reduced. No change was seen for illness consequences ( $p=0.612$ ), timeline ( $p=0.275$ ), treatment beliefs ( $p=0.387$ ) or symptoms experienced ( $p=0.403$ ). **Discussion:** Cardiac rehabilitation successfully modifies specific cardiac misconceptions. Some illness perceptions were resistant to modification.

#### **A review of applications of the Self-Report Habit Index to healthy eating and physical activity**

Gardner Benjamin, De Bruijn Gert-Jan and Lally Phillipa

**Background:** Habits (i.e. learned automatic responses to contextual cues) prompt repeated behaviour and can override the influence of intentions on behaviour. The Self-Report Habit Index provides a standardised measure, permitting integration of evidence across behaviours and populations. This study reviews of the role of habit in nutrition, physical activity, active travel, looking at habit strength, correlations with behaviour and moderation of the intention-behaviour relationship. **Methods:** A systematic review of citations of the Self-Report Habit Index identified 21 unique datasets. Habit strength and correlations were synthesised via random effects meta-analysis and moderation tests using vote counts. **Findings:** Average habit strength was at the scale midpoint, and the weighted habit-behaviour correlation was medium-to-strong ( $r+=0.46$ ,  $p<0.001$ ). Eight of the nine tests showed habits to override the intention-behaviour relationship. **Discussion:** Habits is an important influence on behaviour. Methods to create healthy habits and break unhealthy habits are discussed.

#### **Impact of a multidisciplinary treatment on 300 patients hospitalised for chronic pain**

Gay Marie-Claire, P. Vrignaud, G. Miranda, D. Le Boucq, A. Hauviller, Morel Fatio, E. De Marque and C. Boudon

Pain mobilises numerous psychological variables, which involve the interaction of cognitions (attention, interpretation of the situation), feelings (fear, anger, anxiety) and behaviours (immobilisation, avoidance). These various aspects generally have an adaptive role, but in chronic pain these mechanisms can become dysfunctional and cannot perform their initial

function, and can even influence the appearance of psychopathologies. The Coubert Readaptation Center proposes a 3-week intensive treatment for these patients based on the collaboration of medical professionals (physicians, nurses, psychologists, physiotherapists, ergotherapeuts, etc.). They assess the physical and psychological symptoms before and at the end of hospitalisation and again at a 3- and 6-month follow-up. This research presents the pain pattern of 300 patients who came to the Center between 2007 and 2009. It especially aims at showing the general effect of the multidisciplinary treatment on alleviating pain and the weight of each specific factor (somatic, social and psychological) on the chronicisation process in the long run using Causal Pathways (Amos).

### **Why do we choose social isolation in emotional situations?**

Gérald Delelis, Pascal Antoine, Justine Duda, Amandine Dumortier and Charlotte Jasicki

**Background:** Social avoidance and isolation are known to have detrimental effects on the individuals, social interactions and psychological as well as physical health. This study aims to present the motives evoked for these behaviours. **Methods:** Eighty-five participants were asked to retrieve from their memories a negative recent and real situation that leads them to socially isolate and to freely write the motives of their isolation. **Findings:** A literature and data-driven semantic categorisation of the motives evoked by the participants leads to a set of five large categories and 13 sub-categories including all of them. The use of these categories was also studied and varies from 2.68% to 40.21%. **Discussion:** Knowing the reasons why people engage – or think they engage – in social isolation behaviours will help clinical practitioners to provide quickly their patients with alternative ways to adequately cope with the stressful situations their encounter.

### **Self-efficacy and self-esteem as predictors of participation in spinal cord injury**

Geyh Szilvia, Nick Eva, Stirnimann Daniel, Ehrat Sabine, Michel Franz and Lude Peter

**Background:** The relationship of self-efficacy and self-esteem with participation was explored in people with spinal cord injury (SCI) and compared with non-SCI subjects. **Methods:** A cross-sectional questionnaire survey was conducted with people with SCI ( $n = 102$ ), including a hospital staff comparison group ( $n = 73$ ). **Findings:** Self-efficacy ( $r = 0.54$ ) and self-esteem ( $r = 0.61$ ) were strong correlates of participation in people with SCI. They explained together with time since discharge and education; 48% of variance in participation in multivariate linear regression controlling for socio-demographics, lesion-related variables, pain, anxiety, depression, coping, sense of coherence and social support. The SCI group scored lower in 14 out of 15 questionnaire variables than the non-SCI group. In classificatory logistic regression self-efficacy and self-esteem did not predict membership in the SCI group. **Discussion:** Self-efficacy and self-esteem seemed to be compromised and strongly related to participation outcomes in people with SCI. They might represent important intervention targets to enhance participation in SCI.

### **Nutritional status, acute phase response and depression in metastatic lung cancer patients: Do they correlate?**

Giannousi Zoe, Gioulbasanis Ioannis, Pallis Athanasios, Mavrudis Dimitrios and Kalbakis Konstantinos

**Background:** Cancer-related cachexia syndrome is a complex disorder correlated with compromised quality of life and poor outcomes. The aim of this study was to examine the

relationship between nutritional status, inflammation assessment score and psychological adjustment in lung cancer patients. **Methods:** Mini Nutritional Assessment (MNA) and Hospital Anxiety and Depression Scale (HADS) were completed by 122 metastatic lung cancer patients. Additionally, an inflammation assessment score (GPS) was estimated for each participant, based on biochemical markers. **Findings:** Depression and anxiety were negatively and significantly correlated with nutritional status. Similarly, negative significant correlations were found between MNA and GPS scores, while GPS scores were positively and significantly correlated with levels of depression and anxiety. **Discussion:** The correlation of psychological distress and nutritional condition with higher levels of inflammatory response was confirmed in this study by providing evidence for the possible presence of a common pathophysiologic pathway between cancer-associated depression and inflammation-cachexia.

**Perceptions of breast cancer in Irish women: The role of experience in determining illness beliefs**

Gibbons Andrea, Groarke AnnMarie, Curtis Ruth and Keane Anne Marie

**Background:** This study compared differences in illness perceptions of breast cancer in Irish women with varying personal experiences of breast cancer. **Methods:** Women with breast cancer ( $N=40$ ) and women with or without a family history of breast cancer ( $N=80$ ) completed measures of illness perceptions (IPQ-R), optimism (LOT), anxiety, depression (HADS) and positive and negative affect (PANAS). **Findings:** ANOVA analyses revealed that healthy women consider breast cancer to have more serious consequences ( $p<0.005$ ), more symptoms ( $p<0.0001$ ) and a more chronic disease ( $p<0.0001$ ) than women with breast cancer. Healthy women were also more likely to hold stronger causal beliefs relating to behaviour, e.g. diet, smoking and alcohol ( $p<0.0005$ ). Women with breast cancer were more likely to attribute breast cancer to chance or bad luck ( $p<0.01$ ). **Discussion:** Healthy women's inaccurate perceptions of breast cancer have direct implications for adherence to breast cancer screening.

**The time course of risk perception of novel diseases exemplified by influenza H1N1 risk perceptions**

Giese Helge, Reuter Tabea and Renner Britta

How risk perceptions change during the course of a new emerging health threat has rarely been studied. Therefore, the aim of this longitudinal study was to describe the progress of cognitive and affective risk perception concerning a novel health-threat (influenza H1N1) across time. Participants evaluated numerical-cognitive (absolute and comparative likelihood, severity) and affective (threat, concern, worry) risk of influenza H1N1 infection before (October,  $N=629$ ) and after (December,  $n=429$ ) the 2009 peak of the influenza in Germany. Repeated measures MANOVA showed that both infection likelihood estimates increased in the course of time ( $F(1, 428) = 135.4, p<0.001$ ), whereas the severity estimate ( $F(1, 428) = 33.6, p<0.001$ ) as well as affective risk perception ( $F(1, 428) = 10.8, p<0.01$ ) decreased. These results suggest an adaptive change of lay-perceptions in response to experienced cases of the new influenza in the social environment.

**Poster/Oral Presentation Theory-based content of postnatal physical activity interventions: Coding behaviour change techniques for a systematic review**

Gilinsky Alyssa, Dale Hannah and Robinson Clare

**Background:** Physical activity is important for health and well-being. Women are often insufficiently active postpartum. A systematic review investigated the use of theory and behaviour change techniques (BCTs) interventions in this population. **Methods:** Interventions were identified through databases and coded using the 40-item taxonomy of BCTs by three coders. Coders rated whether techniques were present, absent or unclear for the intervention and control condition. **Findings:** Ten studies were included with a median of four intervention techniques being present, taking account of the comparison condition (range 0–11). Five studies described theoretical models but gave limited information on why techniques were selected. The most prevalent techniques used were goal setting (7), barrier identification (5) and self-monitoring (4), regardless of whether theory was mentioned. **Discussion:** Although interventions made use of evidence-based techniques, readers might benefit from studies drawing on a wider number and range of techniques and better describing theoretical links.

**The attentional bias in specific phobias: The case of blood phobia**

An impressive body of behavioural and electrophysiological investigations demonstrated that anxiety disorders are characterised by an attentional bias towards disorder-relevant stimuli, consisting in the continuous scanning of the environment for sources of potential threat and the assignment of processing priority to threat-related information. Interestingly, blood phobia stands as an exception: whereas an attentional bias towards phobia-related stimuli can be effectively highlighted during passive viewing in other specific phobics, a reliable attentional bias seems to only emerge in blood phobics either by forcing the cognitive system to distribute spatial attention between discrete stimuli or by inducing cognitive-emotional sensitisation via repeated exposure to the phobic object. Biased attention to threat represents a cognitive marker of pathological fear that might account for the maintenance of the disorder; its differential characteristics in specific phobias should be taken into account in the development of attention training protocols aimed at implicitly modifying biased attentional patterns.

Presenter: Buodo, Giulia, Department of General Psychology, University of Padua Italy

Author: Sarlo, Michela, Department of General Psychology, University of Padua Italy

Author: Palomba, Daniela, Department of General Psychology, University of Padua Italy

**Incorporating non-health outcomes in economic evaluations of health promotion? An exploratory discrete choice-based analysis**

Goebbels Adrienne, Dellaert Benedict, Knox Stephanie, Ament André, Lakerveld Jeroen, Bot Sandra, Nijpels Giel and Severens Johan

**Background:** It is increasingly recognised that economic evaluations fail to capture relevant outcomes of health promotion programs by not taking consumer perspectives into account. This study aimed to evaluate consumer preferences towards outcomes of health promotion (life style program) explicitly. **Methods:** A discrete choice experiment was conducted among participants in a life style program ( $n=132$ ) and controls ( $n=141$ ). Individuals had to choose between hypothetical post-life style program situations varying in terms of the health and non-health outcomes experienced. **Results:** Health outcomes (health status and life expectancy) and non-health outcomes (clothing size, relaxation, endurance, perceived control over life style,

income forgone and life style change of partner/children) both contributed significantly to consumer choices. But only substantial changes in any outcome influenced choice behaviour. **Discussion:** Besides health, non-health outcomes of health promotion programs are important to consumers. Future instruments for outcome assessment in economic evaluation of health promotion should incorporate non-health outcomes.

### **Are Portuguese nurses patient-centred?**

Gomes Ana, Grilo Ana, Rita Joana and Santos Margarida

**Background:** This study seeks to present an evaluation of role orientations in Portuguese nurses towards the interaction with patients as a central aspect of the quality of the health care process. **Methods:** 100 hospital nurses filled out the Patient-Practitioner Orientation Scale (PPOS), an instrument developed by Krupat et al. (2000) that measures the role orientations of the doctor-patient relationship, ranging from patient-centred to doctor or type of relationship. **Findings:** Total PPOS scores and sub-scales scores were lower in this sample than the scores found among Portuguese nurse students (Grilo et al., 2010). There is an important difference between scores obtained in the caring sub-scale and sharing sub-scale. **Conclusions:** This result calls for changes in nursing school curricula and the implementation of training in communication and caring skills. Research should identify the barriers for patient-orientation model.

### **Low back pain, stress and anxiety: A study of office workers**

Gonçalves Jorge, Vasconcelos Maria de Lourdes and Nunes Odete

The low back pain is a disease or syndrome that affects the lumbar spine. It reveals itself as a functional disabling pain (Harrison, 1998). It is estimated that over 80% of individuals have at least one episode of back pain throughout their lives. The aim of this study is to determine the prevalence of back pain in workers and to identify, evaluate and correlate factors that may contribute to the onset of back pain, such as stress and anxiety. The sample consists of 400 office workers aged from 18 to 65 years old. Instruments used: General Questionnaire, Toulousana Stress scale, Self-Test Anxiety Inventory (STAII). This study expects to find a strong and close relationship between back pain, stress and anxiety, thus contributing to improve the quality of life and occupational health.

### **Assistant professor/research fellow**

Gørill Haugan, Geir Arild Espnes, Toril Rannestad, Randi Hammervold and Helge Garåsen

Facilitating self-transcendence might be crucial for the well-being of elderly patients. **Background:** Self-Transcendence (ST) is considered a spiritual developmental process of maturity in adulthood, and a vital resource of well-being at the end of life. The aim of this study was to test whether there is an association between ST and well-being. **Methods:** Cross-sectional data were obtained from 202 cognitive well-functioning nursing home patients, using Reed's ST-scale and the FACT-G Quality of life questionnaire. **Findings:** SEM analysis indicates significant effects from ST on WB; ST-inter and the ST-intra have statistical significant effects on social, emotional and functional well-being, which strongly affect physical well-being through the path from functional, via emotional to physical well-being. **Discussion:** Facilitating ST through spiritual nursing interventions can be significantly beneficial to elderly patient's well-being and functioning, both physically and emotionally.

This research generates new and interesting research-questions on the pathways between humans' spiritual dimension and total well-being.

### **Health-related quality of life and mood characteristics in general population**

Gostautas Antanas, Gostautaite Middtun Nijole and Zekas Romualdas

**Background:** Health-related quality of life (QoL) as measured by the WHOQoL-100 is related to syndrome of clinical depression. The aim of this research was to investigate whether QoL correlates with intensity of specific mood characteristics (sadness and lack of energy) in general population. **Methods:** Statistical analysis was applied to data of 3600 participants of the QoL study Kaunas region (Lithuania). Participants of this study have completed WHOQoL-100 questionnaire and items reflecting intensity of sadness and lack of energy. **Findings:** Average scores of all 24 scales and 6 domains of QoL-100 in both male and female were lowered significantly ( $p < 0.05$ ) in subgroups with increasing intensity of sadness and lack of energy. **Discussion:** The changes in normal mood spectrum have similar impact on QoL as it is reported in depressive patients. **Conclusion:** Health-related QoL as measured by WHOQoL-100 is related to mood characteristics in general population.

### **Health-related quality of life and sleep disturbances in males and females with type 2 diabetes mellitus**

Gostautas Antanas, Lasaite Lina, Liuiziene Edita and Zasytyte Egidija

**Background:** Studies show that type 2 diabetes (DM2) has a negative impact on health-related quality of life (HRQoL). The aim is to disclose peculiarities of HRQoL and sleep quality among males and females with DM2 and relatively healthy participants (RHP). **Methods:** 88 patients with DM2 (mean age –  $63.07 \pm 10.48$ ; 30 males, 58 females) and 101 RHP (mean age of  $60.31 \pm 9.91$ ; 26 males, 75 females) were investigated. The WHOQoL-BREF and Pittsburgh Sleep Quality Index (PSQI) questionnaires were used. **Findings:** Females with DM2 reported worse HRQoL than males in physical, psychological and environmental domains ( $p < 0.05$ ), higher sleep disturbances and daytime dysfunctions ( $p < 0.01$ ). HRQoL negatively correlated with the quality of sleep in males and females with DM2 ( $p < 0.05$ ). Females from RHP group tended to use more sleeping medications than females with DM2 ( $p < 0.01$ ). In conclusion, negative impact of DM2 on HRQoL and quality of sleep is expressed more in females than in males.

### **Regulators on urban traffic: Maintaining health and safety in a collective**

Govaere Virginie

An activity analysis of regulators on urban traffic has been achieved. It seemed appropriate to consider this situation of working through the management of the unexpected by the collective. We analyse their activity trying to understand the adaptive capacities within collectives or organisation. This work was carried out by observations, interviews and questionnaire. We are interested in the activity of each, their distribution within the team. We compared strategies and costs experienced by regulators. To ensure their mission, the regulators are organised in pairs. There is no 'manual' procedure for associating a work situation to a procedure to implement, the management of the unexpected, the daily based on the expertise and experience of regulators. These experiences are constructed, adapted to each combination of situations and are collectively accepted. We seek to understand how regulators

are adapting to this complex activity, how regulators can maintain in terms of health and safety.

**The impact of oncologists' grief on oncologist well-being: A qualitative, exploratory pilot study**

Granek Leeat, Klassen Anne, Krzyzanowska Monika, Tozer Richard and Mazzotta Paolo

Caring for critically ill and terminal patients can generate grief in oncologists and other health care professionals (HCP's). If grief is not managed, HCP's in oncology settings can experience stress and burnout, alcohol and substance abuse and clinical psychiatric distress. HCP's inability to acknowledge grief has been associated with more apprehension and anxiety talking to patients about dying and overuse of futile resuscitation technologies. The objectives of this study were to explore the grief experience of oncologists from the perspective of physicians working in the field; to examine what interventions, educational programs or strategies oncologists report as helpful in managing their grief and to identify ways to improve the grief experience of oncologists who have frequent exposure to patient death. This study took a grounded theory approach. In-depth interviews with 15–18 oncologists were conducted. Analysis and data collection were carried out concurrently using the basic grounded theory constant comparative method.

**Relationship of illness severity with health- and life-satisfaction in patients with chronic heart failure undergoing a rehabilitation program**

Greco Andrea, Malfatto Gabriella, Pozzi Roberta, Monzani Dario, Villani Alessandra, Steca Patrizia and Parati Gianfranco

European guidelines for cardiovascular rehabilitation underline the importance of psychological factors in the achievement of improved clinical conditions in patients with cardiovascular disease (CVD). Nevertheless, little research has been done on psychosocial variables that may positively affect the impact of rehabilitation. Aim of this study was to investigate the possible influence of illness-representation (IR) and self-efficacy-beliefs (SE) on the impact exerted by illness severity on health- and life-satisfaction in patients undergoing a rehabilitation program because of heart failure due to chronic CVD. This study had a cross-sectional design, and involved 116 patients (mean-age = 65.6; SD = 10.0; 79.3% men). Illness severity was measured, in terms of left ventricular ejection fraction (LVEF), at admission in the cardiovascular rehabilitation department, whereas psychological factors were assessed 1 week later. Results showed that the relationships among LVEF and health- and life-satisfaction were mediated by IR and cardiac-risk-factors-SE ( $\chi^2(4) = 3.32$ ,  $p = \text{n.s.}$ ). Findings underlined the importance of working on IR and SE to improve health- and life-satisfaction in patients with CVD.

**Developing physiotherapy students' communications skills: An individual training**

Grilo Ana and Joyce-Moniz Luis

**Background:** This document seeks to present a communication skills training programme for physiotherapy students. **Methods:** The programme was applied to 30 physiotherapy students, in second and fourth years, and includes three individual sessions. In each session, the subjects were confronted with different scenarios representing problematic situations within the physiotherapist–patient interaction. These situations were related to specific assertive

communication themes. Subjects have to answer in direct speech to the simulated patient in the video. The effects of the training programme were measure in an experimental and control group. **Findings:** The individual sessions allowed a more effective communication in specific situations like handling emotional expression, making requests, answering questions/requests, giving criticism and receiving criticism. Students used more reflect feelings and less rigid answers. **Conclusions:** The results allow to state that the individual program of training provides some important leads for the promotion of communication skills among students of physiotherapy.

**Positive attitude towards illness and its relation with health locus of control among patients with depression**

Gustainiene Loreta, Kaminskaite Terese and Pranckeviciene Aiste

**Background:** When recovering from illness, it is important not just to use the achievements of medical science, but also to help people explore their inner powers and use them in order to recover or to find the meaning of disease for ones' life. The purpose of this study was to explore the relationship between the role of the locus of health control and positive attitude towards illness in patients with depression. **Methods:** 140 patients (77.1% females, 22.9% males) in the rehabilitation stage after a depressive episode were assessed by the Multidimensional HLC scale (Wallston, Wallston, DeVellis, 1994) and The Silver Lining Questionnaire (Sodergren, Hyland, 2000). **Findings:** Positive attitude towards illness was positively related to internal locus of health control among females ( $r=0.49$ ;  $p<0.0001$ ) and the external locus of control among males (0.47;  $p<0.007$ ). **Discussion:** Further studies in this area would add to psychological well-being of patients, especially clarifying gender differences.

**Indigenous health promotion: Evaluating healthy eating healthy action programmes in small Maori communities**

Hamerton Heather, Riini Denise, Mercer Christine, Morrison Laurie and McPherson Brighid

Maori, the indigenous people of Aotearoa, experience poorer health than non-Maori across multiple health measures. This paper describes a programme aimed at improving Maori health and discusses the importance of Maori ownership and control of health initiatives. A team of nurses and psychologists evaluated the effectiveness of a HEHA programme in six Maori health agencies, gathering information from managers, participants and community. Six case studies were compiled and a cross-case analysis was conducted using grounded theory. Effective interventions built on cultural values and practices were delivered by Maori closely connected to the community. Changes made by participants benefitted their families and community and demonstrated important shifts in thinking about nutrition and physical activity that could lead to more measurable change towards improved quality of life for people within communities. We concluded that 'bottom-up' approaches where communities determine their own priorities may be more sustainable than 'top-down' approaches.

**Does changing people's risk appraisals change their behaviour? A meta-analysis of the experimental evidence**

Harris Peter, Sheeran Paschal and Epton Tracy

**Background:** The assumption that increasing risk appraisals encourages behaviour change is core to several models in health psychology. Unfortunately, previous reviews contain

correlational data and therefore do not tell us whether changing risk appraisals changes behaviour. For this, we need a review limited to relevant experimental studies. **Methods:** We used meta-analysis to quantify the impact of significantly changing risk appraisals (risk perceptions, anticipated and anticipatory emotions, perceived severity) on subsequent intentions and behaviour. **Findings:** Across 217 studies measuring intentions ( $N=43,788$ ) and 93 studies measuring behaviour ( $N=19,983$ ), a random effects model indicated a significant overall effect of risk appraisals,  $d=0.31$  (CI = 0.26–0.35) and  $d=0.23$  (CI = 0.17–0.29), respectively. Restricting the analyses to studies with power = 0.55 or above (Coyne et al., 2010) changed little. **Discussion:** The experimental evidence indicates that increasing risk appraisals strengthens behavioural intentions and promotes behaviour change.

### **The influence of social support on health and mortality**

Haveman-Nies Annemien, Picavet Susan, Croezen Simone, Verschuren Monique, de Groot Lisette and van 't Veer Pieter

Cross-sectional associations between supportive social relationships and health have been established for different indicators. However, longitudinal evidence is less conclusive. Therefore, the influence of social support on health and long-term mortality is investigated by using longitudinal data. The first examination round of the Doetinchem Cohort Study (1987–1991) comprised 12,448 men and women aged 20–59 years. Three subsequent examination rounds have been completed after 6, 11 and 16 years. Mortality data were obtained from 1987 to 2008. Social support was measured by using the 16-item Social Experiences Checklist. The results demonstrated that unfavourable levels of social support were predictive for poor mental health (OR 1.60; 95%CI 1.21–2.12). Furthermore, survival analyses showed that stable low levels of social support were predictive for increased mortality risk (HR 1.57; 95%CI 1.03–2.39). The relationships found between social support and health outcomes need to be further investigated for other structural and functional indicators of social relationships.

### **The relation of the quality of friend's network with the hopelessness depression**

Hermosillo de la Torre Alicia Edith, Rivera Heredia Maria Elena, Enriquez Bielma and Jose Filiberto

The objective of this study was to establish the relationship between the hopelessness theorised by Abramson, Metalsky, and Alloy (1989) and the individuals' perception about their friends' network quality. An unrepresentative sub-sample of the 93 Mexican university students aged between 18 and 25 years (54.8% females, 45.2% males) was evaluated with the Scale of Quality of Networks (ECAR, Nava 2001,  $\alpha=0.91$ ) and with the Mexican adaptation of the Center for Epidemiological Studies Depression Scale (CES-D-R, González-Forteza, Jiménez-Tapia, Ramos-Lira & Wagner, 2008,  $\alpha=0.93$ ). The results showed that hopelessness has a positive significant correlation with the friend's network ( $r=0.21$ ,  $p<0.05$ ). These finding suggest that this kind of social support cannot be a contributory factor that reduces the effects of the hopelessness. The perception to have 'good friends' does not ensure that friends disconfirm negative views and helps acquire a more adaptive one.

### **Haemophilia – A psycho-clinical approach**

Hogea Lavinia Maria and Rascanu Ruxandra

**Purpose:** This study focuses on some aspects of haemophilia, aiming to highlight the relationship between alexithymic and these constructs: body image, pain and discomfort.

**Methods:** The study group consisted of 32 male patients with haemophilia type A and B, aged between 14 and 27 years. Data were obtained through anamnesis questionnaire, quality of life questionnaire WHOQOL and TAS. **Results:** Assumptions according to which there is a relationship between both body image and alexithymic, and between alexithymic and pain, were confirmed by obtaining a significant correlation,  $p < 0.05$  and  $p < 0.01$ . **Conclusions:** Knowledge of these aspects can play a major role in addressing patient regarding adherence to treatment, attitude towards illness and the therapeutic process.

**Keywords:** haemophilia type A and B; alexithymic; body image

#### **Relationship between marital satisfaction and parenting styles in mothers of children with attention deficit hyperactivity disorder (ADHD)**

Holisaz Maryam, Fallahi Fatemeh and Cheraghi Mona

**Objective:** This study examines the relationships between marital satisfaction and parenting styles. **Method:** Thirty-eight mothers of children with ADHD (children's mean age: 8 years), who were chosen based on convenience sampling participated in this study. The diagnosis of ADHD was established through clinical interviews with parents according the criteria in DSM IV-TR. They completed the Enrich Marital Satisfaction Scale and the Baumrind's parenting styles scale. Correlational design was used to show the relationship between marital satisfaction and parenting styles. **Findings:** Indicate significant correlation between marital satisfaction and parenting styles. There is a negative relationship between marital satisfaction and applying authoritarian parenting style ( $r = -0.40$ ,  $\sigma = 0.01$ ,  $n = 38$ ), whereas the relationship is positive for the authoritative style ( $r = 0.40$ ,  $\sigma = 0.01$   $n = 38$ ). **Discussion:** Results suggest that higher marital satisfaction is associated with applying authoritative style and lower marital satisfaction associated with applying authoritarian style.

#### **School-aged children's comprehension of coping with pain: Interviews based on quantitative self-reports**

Horn Thomas, Lanfranchi Jean-Baptiste and Lemétayer Fabienne

A technique inspired by the Kelly's Repertory Grid could help school-aged children express the efficacy they perceive for specific coping strategies on different pains. A Correspondence Analysis applied to quantitative self-reports revealed some groupings and oppositions among strategies and pains for each of the five school-aged children. A 'mental map' was drawn to give each child a graphic representation of his/her own results, and to encourage his/her personal argumentation. Through this dialogical interaction, these children could qualify their quantitative results and explain their relation to pain. As an example: a 9 year old boy was able to describe the effects he perceived for certain strategies on certain pains. However, knowing how to explain the perceived effects still seemed uneasy. Analysing the interviews gave directions to assist children's expression of their relation to pain in terms of similarities and oppositions between coping strategies and between pains.

#### **Perceived blood pressure control, illness schema and illness behaviour among hypertensive patients**

Hsiao Chih-Yin, Chang Chueh and Chen Chih-Dao

**Background:** Previous research found that there was a discrepancy between patient's subjective evaluation of blood pressure (BP) control and physician evaluation. This study aimed to

investigate hypertensive patients' perception their BP control status, and its relationship with illness schema and behaviours. **Methods:** There were 132 hypertensive patients enrolled. Illness Perception Questionnaire (IPQ-R), medication adherence, lifestyle modification, BP control status and demographic data were administrated. Chi-Square test, *t*-test and logistic regression were used to examine the relationship among variables. **Findings:** 64.4% participants perceived their BP to be under control, but only 42.4% among them had BP under the clinical standard. Those who evaluated BP control positively had better drug adherence, less lifestyle modification and positive result in most IPQ-R subscales. **Discussion:** Hypertensive patients with over optimistic BP control status need more attention for their illness behaviours and real BP status.

#### **Multiple goals and physical activity in an overweight population**

Huijg Josanne, De Regt Lisanne and Gebhardt Winnie

**Background:** Goal directed health-behaviours, such as physical activity (PA), can be influenced by individuals' other goals. This study explored overweight individuals' personal goals. Furthermore, it examined the perceived conflict/facilitation of these goals with PA, and by means of a prospective study, the influence of perceived intergoal conflict and facilitation on PA. **Methods:** At baseline, perceived intergoal conflict and facilitation were measured using Personal Projects Analysis (Little & Gee, 2007), supplemented with Theory of Planned Behaviour (TPB) measures for PA. Self-reported PA was measured at follow-up 8 weeks later. Hierarchical regression was used to analyse the data. **Findings:** The results provide insight into the content of overweight individuals' personal goals and the influence of perceived intergoal conflict/facilitation on the performance of PA. **Discussion:** The development of PA interventions to prevent chronic diseases is likely to profit from applying a perspective of multiple goal theory when designing interventions.

#### **Factors influencing the dissemination of physical activity interventions in primary health care: A systematic review**

Huijg Josanne, Gebhardt Winnie, Crone Mathilde, Verheijden Marieke, Paulussen Theo, Middelkoop Barend, Van der Zouwe Nicolette and Martens Annette

**Background:** The public health impact of efficacious interventions that aimed to enhance physical activity (PA) in high-risk populations is dependent on their translation into practice, i.e. dissemination. This study explores factors influencing the dissemination of such interventions into primary health care (PHC). **Methods:** A systematic review of studies involving PA promotion in PHC to prevent chronic diseases yielded 40 papers. Data analyses were focused on reported influencing factors and their measurement. **Findings:** Reported factors related to the socio-political context, intervention strategy, organisation or adopting professional, and fitted closely with Michie et al.'s (2005) health professional behaviour change domains. Main themes were: environmental context and resources (e.g. funding), professional role and identity (e.g. prevention tasks/priorities), beliefs about capabilities (e.g. motivating patients) and beliefs about consequences (e.g. patients' changeability). **Discussion:** Most factors fit closely with the theoretical framework, while other factors appear to be unique (e.g. collaboration between organisations and reimbursement for organisation).

## Stakeholders' perspectives on factors influencing the dissemination of physical activity interventions in primary health care

Huijg Josanne, Van der Zouwe Nicolette, Gebhardt Winnie, Crone Mathilde, Verheijden Marieke, Paulussen Theo, Middelkoop Barend and Martens Annette

**Background:** The public health impact of efficacious interventions that aimed to enhance physical activity (PA) in high-risk populations is dependent on their translation into practice, i.e. dissemination. This study explores factors influencing the dissemination of these interventions into primary health care (PHC) from the stakeholders' perspective. **Methods:** 28 semi-structured interviews were held with 10 program coordinators and 18 PHC professionals involved in five PA interventions delivered in PHC. Factors influencing dissemination (i.e. adoption, implementation and maintenance) of these interventions were addressed. Transcripts of the interviews were analysed using grounded theory principles. **Findings:** A multitude of factors related to the socio-political context, intervention strategy, organisation and adopting professional were perceived to influence the dissemination process. Furthermore, factors had substantial overlap with Michie et al.'s (2005) twelve health professional behaviour change domains. **Discussion:** The findings provide new insights with regard to the design of dissemination strategies critical to the interventions' effectiveness.

## Family planning and the counselling needs

Ioana Lepadatu

The purpose of this study was to investigate the level of information on the concept of family planning and how the lack of information leads to urgent social problems, the major objective being to identify the different population groups' degree of knowledge of the contraceptive methods and the effects of the lack of family planning. The research, carried out with the help of interviews, questionnaires and case studies on 100 women aged between 14 and 55, reveals that the superficial knowledge of several contraceptive methods does not necessarily mean that they use them; there is a positive correlation between the level of education and the knowledge of the contraceptive methods; physical violence is usually double with the women not using contraceptives compared with those using a contraceptive. Health, family planning and contraception issues should be placed within the community's social issues, the first step in preventing abandon being birth control.

## Cultural and socioeconomic influences on the behaviour of HIV-infected patients

Iosif Marincu, Lucian Negruțiu, Ioan Iacobiciu, Ioana Todor, Adriana Neghina, Liviu Tirnea and Raul Neghina

**Background:** Authors themselves have proposed to explore the influences of cultural and socioeconomic factors on behavioural patterns in HIV-infected patients. **Methods:** The study group included 62 HIV seropositive adults who answered an anonymous questionnaire with following variables: age, sex, residence, marital status, education, employment, social implication, attitudes towards the therapy, etc. **Results:** 20 patients were residents in urban area and 42 in rural ( $p=0.02$ ); 10 (16.12%) patients are married, 52 (83.87%) unmarried; 4 patients have higher education, 7 patients graduated secondary education, 13 have some grades of secondary education and 38 (61.29%) have primary education. Only 12 patients are employed and 50 (80.64%) without jobs. Only 21 patients complained in therapy and 41 had treatment interruptions ( $p=0.03$ ). **Conclusions:** The knowledge about the cultural and socioeconomic influence on the behaviour of HIV-infected patients allows the development of

educational strategies or interventions that can correct or change certain behavioural attitudes.

**The effect of giving and receiving social support on mental health of cancer and heart disease patients**

Ishikawa Rie and Matsuda Yoriko

**Background:** Cancer and heart disease, respectively, are the first and second causes of death in Japan. Social support is thought to affect the onset and development of these lifestyle diseases. The purpose of this study was to explore the effect of receiving support and giving support on mental health of cancer and heart disease patients. **Methods:** A self-report questionnaire survey – subjects were consisted of three groups; 233 cancer patients group, 514 heart disease patients group and 625 normal control group. **Measures:** (1) Giving and Receiving Emotional/Instrumental support Scale (2) General Health Questionnaire Result and discussion; The scores of patients' mental health were significantly lower than control group. Heart disease group demonstrated significantly lower scores on Receiving and Giving Support than other groups. In patients groups, Receiving Emotional Support showed the largest effect on mental health. We need to explore better methods of providing emotional support to these patients.

**Patient education in correction modified risks factor in comprehensive treatment patient dermatological diseases**

Iskhakov Eduard, Hismatullina Zarema, Shiryaeva Renata and Shiryaeva Amina

**Background:** Modified risk factors such as smoking, non-compliance, low physical activity and other widespread among patients with dermatologic diseases. **Methods:** Comprehensive treatment with patient education was made for 42 dermatologic patients (main group), treatment without patient education was made for 50 dermatologic patients (comparative group). **Findings:** The results were follows: frequency of non-smoking people increased from 16.7% (before patient education) to 35.7% (during 6 months after patient education) in main group, no increase in non-smoking people in comparative group ( $p=0.048$ ); number of non-drinking alcohol people increased from 21.4% to 42.8%, no changing in non-drinking people in comparative group ( $p=0.035$ ). Number of people with low level physical activity decreased from 14.3% to 2.4% ( $p=0.048$ ). No change in healthy dieting was estimated. **Discussion:** Patient education for dermatologic disease has positive impact on modified risk factors as the result of psychological influence on people behaviour. Difficulties with changing unhealthy dieting after patient education intervention can be explained by different reasons – low money income, dieting habits and no possibilities for healthy diet.

**Organisational civility as measured by AWLS: A comparison between social and health organisations**

Iva Šolcová, Zuzana Havrdová and Vladimír Kebza

A mismatch between people and their work environment reduces their work satisfaction, whereas matches in these areas enhance work satisfaction. We worked with six areas of the work environment that are considered the most relevant to the relationships people develop with their work. Areas of Worklife Survey, AWLS, and Maslach's Burnout Inventory-General Survey MBI-GS, were employed in this study. Employees of Czech health ( $N=91$ ) and social

institutions ( $N=44$ ) are presented. The psychometric characteristics of the Czech versions of the AWLS and MBI-GS in this study did not markedly differ from those described in original versions or accessible translations. Interesting differences were found between workers in the social and health sectors: there is higher workload in the social workers, however, they find their organisations fairer, and there is higher consistency between the personal values and the values inherent in their organisation, in comparison with health organisations.

**The relationship between sleep and health-related biomarkers: An analysis from the English Longitudinal Study of Ageing (ELSA)**

Jackowska Marta and Steptoe Andrew

**Background:** Short sleep and disturbed sleep are associated with physical health outcomes, but mechanisms are poorly understood. We assessed relationships with biomarkers in a representative sample of older English people. **Methods:** Participants were 6354 men and women aged 65.4 (SD 9.44) from ELSA. Lung function, high-density lipoprotein (HDL) cholesterol and dehydroepiandrosterone sulphate (DHEAS) were included as biomarkers. Covariates were age, wealth, smoking, body mass and limiting longstanding illness. **Findings:** Sleep problems were inversely associated with HDL cholesterol in women ( $p=0.021$ ), while in men the relationship with DHEAS was significant ( $p=0.049$ ). Women sleeping 6–7 h had higher HDL cholesterol ( $p=0.022$ ), greater peak flow ( $P<0.001$ ) and a greater forced expiratory volume ( $p=0.006$ ) than those sleeping shorter or longer periods. **Discussion:** Both sleep quality and duration are correlated with biological profiles in older people, with different patterns among men and women.

**Coping and quality of life among gynaecologic patients**

Jagla Melanie, Franke Gabriele Helga, Parchmann Olaf, Kumbier Eberhard, Zirkenbach Barbara and Salewski Christel

**Objective:** Aim of this study was to investigate coping mechanisms, quality of life (QoL) and psychological distress in a sample of gynaecologic patients. **Method:** 123 patients with gynaecological diseases were examined before surgery. The patients filled in the Essen Coping Questionnaire, the Short Form Health Survey and the Brief Symptom Inventory. **Results:** Overall, patients scored highest on 'Confidence in doctor's competence' and 'Active problem-solving coping' and lowest on 'Depressive coping'. There were significant differences in coping strategies compared to patients with other somatic diseases ( $N=1434$ ). Gynaecologic patients reported a significant lower QoL than the normative sample but no psychological distress. **Conclusion:** Patients probably did not report psychological distress because there was no emergency treatment, all surgeries were planned. The reduced QoL can be explained by the somatic diseases. Maladaptive coping mechanisms were seldom used; confidence in medical staff was a preferred strategy. Psychological interventions for improving the QoL are necessary.

**Biofeedback relaxation potential for reduction of students with Type A behaviour pattern reaction to stressor**

Jarašiunaite Gabija and Perminas Aidas

This study aimed at assessing the potential of biofeedback relaxation in reducing psychophysiological reaction to an audiovisual stressor in students having Type A behaviour pattern. Subjects of the study were 14 men and 46 women aged between 18 and 30. The participants of this study were randomly assigned to two different groups. One group received four biofeedback relaxation training sessions once a week between two measurements of their

reaction to the audiovisual stressor and the other was a control group. Subjects completed the Students Jenkin's Activity Survey (SJAS) to measure their degree of Type A pattern. Body temperature, skin conductance, heart rate and respiratory rate were recorded while measuring participants' reaction to the audiovisual stressor. The results of this study showed that, after the biofeedback relaxation trainings, psychophysiological reaction to the audiovisual stressor decreased for subjects having Type A behaviour pattern (skin conductance, skin temperature, respiratory rate decreased).

#### **Confidence and motivation on a HOPE: Self-management programme (SMP)**

Jesuthasan Jana, Martin Faith, Dennis Nicola, Bourne Claire, Wallace Louise, McHattie Dave, Davies Nicola and Bateup Lynn

**Background:** In the UK, there are an estimated two million cancer survivors who require support to manage the long-term consequences of cancer and the enduring effects of treatments (National Cancer Support Initiative, 2009). Coventry University and Macmillan Cancer Support have developed a 6-week, group-based, self-management programme (HOPE: SMP) for breast cancer survivors. The aim of this study is to explore the benefits of attending the HOPE: SMP for breast cancer survivors. **Method:** We conducted three Focus Groups with 17 participants. Data were analysed using Framework Analysis. **Findings:** Participants reported improved confidence and motivation to initiate and/or maintain meaningful and purposeful activities. Much of the motivation was generated by the support and encouragement provided by the lay tutor who was also a breast cancer survivor and the clinical tutor. **Conclusion:** Improvements in quality of life, including physical and psychological aspects of well-being, improved after attending the HOPE: SMP.

#### **The role of optimism in total hip replacement surgery patients**

Jeszenszky Csilla, Balck Friedrich, Günther Klaus-Peter, Kirschner Stephan and Lippmann Maike

Being generally relevant in medical interventions, we aimed to assess the role of optimism for patients undergoing total hip replacement (THR) surgery. The data collection of the 319 patients was carried out pre-operatively, 3 and 6 months post-operatively. We measured quality of life (EQ-5D), functionality (WOMAC) and optimism (LOT-R). Results show that patients with high optimism score higher in quality of life ( $F=14.50$ ,  $p<0.01$ ), the effect remaining constant over time (partial-eta-squared = 0.65,  $p<0.01$ ). Patients with high optimism also show better functionality 3 months after surgery ( $F=15.94$ ,  $p<0.01$ ). It can be concluded that more optimistic patients generally have better quality of life and that more optimistic patients achieve high levels of functionality faster. Meanwhile less optimistic patients take longer to reach good outcomes. Our findings indicate that more emphasis should be put on the psychological background of patients undergoing THR surgery. Also, the influence of moderating variables has to be addressed.

#### **Investigating the role of perceptual norms and beliefs in fresher students' drinking behaviour**

John Bev and Alwyn Tina

**Background:** Students are particularly at risk of excessive alcohol consumption. Studies on American campuses consistently demonstrate self-other differences in beliefs about consumption and approval of excessive drinking, leading to a flurry of 'corrective' interventions'. This research will assess the relevance of social norm perceptions in the UK. This is important

for understanding the transmission of student drinking cultures, and the development of appropriate interventions. **Method:** 403 students completed a survey including alcohol consumption, drinking patterns, attitudes to alcohol, normative belief processes in perceptions of drinking cultures, control and efficacy beliefs. **Findings:** 88% were hazardous drinkers. There was clear evidence of self-other differences in appraisal of campus drinking-culture, as predicted by social norm theory, but this was not predictive of individual consumption. **Discussion:** These trends suggest that the interaction of social cognitive processes in student drinking-cultures need to be further investigated if effective interventions are to be developed.

### **Does dance4life reach its goals? A process evaluation of a worldwide HIV and AIDS prevention program**

Julia van Weert, Silvia Hermanns, Annemiek Linn and Barbara Schouten

The aim of this study is to evaluate the implementation of the dance4life school-based HIV and AIDS prevention program, by sending questionnaires to two target groups in Africa and Europe, i.e. the staff members of the local implementing partners ( $n = 36$ ) and participants of the dance4life program ( $n = 485$ ) from 14 countries. As there was no existing framework to evaluate all relevant dimensions, the Pre-Im framework for process evaluation was developed. The results showed that, from a theoretical point of view, dance4life provides a robust HIV and AIDS prevention program. However, the social movement concept needs more attention. A considerable proportion of participants is not well registered, which makes it impossible to remain in contact and reach continuation and maintenance. In conclusion, the continued involvement of participants after the school program has finished challenges dance4life's main goal to establish a social youth movement around HIV and AIDS worldwide.

### **Craving to smoke during cognitive stress in the laboratory: An adaptation of the Paced Auditory Serial Addition Task**

Kapsou Margarita, Pavli Vasos, Gregoriou Irene, Karekla Maria and Panayiotou Georgia

**Background:** The Paced Auditory Serial Addition Test (PASAT) was originally developed to assess information processing capacity in patients with head trauma. PASAT-C, a modified computerised version of this test, was developed as a tool for inducing psychological distress in laboratory studies. The test includes three levels of progressive difficulty, and has been shown to be an effective stressor, as it induces effects on behavioural, cognitive and physiological arousal. **Methods:** This study examined the effects of a Greek version of PASAT-C on distress and craving to smoke, and psychophysiological indices in an initial sample of 17 regular college smokers in Cyprus ( $M_{age} = 21.38$ ). At baseline, and after each phase of increasing difficulty, participants completed the: QSU, PANAS, and provided ratings of subjective distress and experienced emotions. **Results:** Analyses of Variance indicated statistically significant increase between baseline and each level of increasing difficulty, the task in skin conductance levels, smoking cravings as measured by the QSU, as well as reported levels of irritability, frustration and difficulty in concentrating.

### **What affects asthma control? Psychosocial factors in a cross cultural context**

Karekla Maria, Pilipenko Natalie and deVries Hein

Asthma control is the aim of asthma treatment. Research suggests that asthma patients have high prevalence of comorbid panic disorder (PD), which could potentially impact patients' asthma control. Patients' health beliefs play an important role in asthma illness-control and

understanding these may be helpful in improving patient's illness control. The aim of this study is to investigate the health beliefs implicated in asthma control in a cross-cultural sample of asthma patients ( $N=80$ ) who suffer from comorbid PD *versus* those who do not. Difficulties in asthma control are examined cross-culturally by comparing asthma patients in USA to those in Cyprus. The I-Change model is used to systematically examine the psychosocial factors for cross-cultural and asthma-panic disorder comorbidity comparisons. Discussion will focus on the impact of PD comorbidity upon asthma control and to provide culturally-sensitive insights into asthmatics' beliefs, which may be helpful in achieving such illness control.

### **The inner picture about health by children**

Karpenko Olga

The purpose of this report was to investigate the inner picture about health of children different ages. We proposed that knowledge of the inner picture about health of the children could help to teach them the health behaviour. 150 children from 6 to 10 years old were participants. Psychologists asked them some questions from the questionnaire 'The health behaviour concepts' by E. Nikolaeva. We have found that the health behaviour concepts of children do not depend on their real health state and the age. Children can just use the terms 'good' or 'bad' for description of the states 'ill' and 'health'. They do not know the special signs of health behaviour.

### **Self-esteem, coping and quality of life of women with breast cancer receiving chemotherapy**

Kausar Rukhsana

The present research was conducted to examine relationship between self esteem, coping and quality of life of women with breast cancer receiving chemotherapy. It was hypothesised that there is a relationship between self-esteem, coping strategies being used, and quality of life of women with breast cancer. Sample consisted of 63 female breast cancer patients receiving chemotherapy and was recruited from Institute of Nuclear Medicine and Oncology Lahore (INMOL) Hospital. Rosenberg Self-Esteem Scale (1965), Flanagan Quality of Life Scale (1970) and Coping Strategies Questionnaire (Kausar, 2000) were used for assessment. Significant positive relationship was found between self-esteem and quality of life of breast cancer patients. Religious-focused coping was used by most of the patients and there was a significant relationship of coping strategies with quality of life and patients' self-esteem. Findings highlight the significance of female breast cancer patients' coping for their self-esteem and quality of life.

### **Evaluation of effectiveness of mindfulness-based cognitive therapy in reduction of psychological problems among veterans' wives with chronic PTSD due to IRAN-IRAQ war**

Ameneh Sadat Kazemi\*, Maryam Sadat Kazemi and Saeed Marzbanrad; \*Assistant Professor of Islamic Azad University Tehran Medical Branch

**BackGround:** Various studies on the wives of the veterans with PTSD show that these wives, after some time of joint life with these veterans, experience a lot of psychological problems such as depression, anxiety and stress. The objective of this study is the evaluation of effectiveness of mindfulness-based cognitive therapy in reduction of psychological problems among veterans' wives with chronic P.T.S.D due to IRAN-IRAQ war (1980–1988). **Methods:** In this study, semi-experimental design pretest–posttest was done with control groups. The

statistical samples included 28 of veterans' wives with chronic P.T.S.D who had the criteria for entering this study and were selected by an object based on sampling. **Method:** The above-mentioned individuals were randomly put in two groups consisting of 14 individuals including both experimental group and control group. The experimental group was trained in eight sessions of 2 h and 30 min. The participants were evaluated with Depression, Anxiety, Stress Scale (DASS), Dysfunctional Attitude Scale (DAS), and Automatic Thoughts Questionnaire(ATQ). *t*-test has been used as the statistical method to compare the two groups. **Findings:** This study's findings showed that the training techniques of MBCT have been effective in reducing the symptoms of depression, anxiety, stress ( $p < 5\%$ ), dysfunctional attitudes, as well as frequency and belief of negative automatic thoughts ( $p < 5\%$ ). **Discussion:** Results of this study prove that the eight training MBCT sessions have been effective in the reduction of the symptoms of psychological problems of the veterans' wives with chronic PTSD.

### Attention, distraction and the effective control of acute paediatric pain

Keane Jennifer

**Background:** This study aims to develop effective distraction-based interventions for children of different age groups experiencing both one-off and repeated acute pain. To do so, this research will investigate whether developmental differences in executive functioning are associated with children's engagement with different types of distractors in acute pain settings.

**Methods:** Design – cross-sectional randomised control design and a longitudinal study Participants – 3 cohorts based on cognitive developmental literature (Diamond, 2002), 4–5 years, 7–9 years, 11–14 years,  $n = 90$ . Measures – Self-Reported Pain using VAS, Pain tolerance, Performance on an executive function task. Analyses – Analysis to include ANOVAs and Multiple Regressions. **Expected results:** Older children should engage more with distractors involving greater executive demands than younger children, and both age groups should benefit from distraction interventions matched to their executive function levels.

**Current stage of work:** Background literature has been reviewed. **Discussion:** Improved distraction interventions for acute paediatric cohorts.

### Optimal development: A potential of the Czech longitudinal study

Kebza Vladimir, Kodl Miloslav and Kernova Vera

**Background:** The joint project of the Institute of Psychology, Brno, and of the NIPH, Prague aims for exploring the paths to optimal development using empirical data of the longitudinal studies following individuals since 1956 (Prague) and 1961 (Brno). **Methods:** We consider the state of present well-being as the manifestation of optimal development in a current sample of 98 individuals (Prague) and 56 individuals (Brno). **Findings:** The variables expressing different aspects of well-being (feeling good, life satisfaction), as well as selected health and behavioural variables have been monitored over long term, and further constructs (resilience, human strengths) are included within the new project for the 2010–2014 period. We found out, e.g. low level of neuroticism (but higher in women), higher level of self-efficacy in women, but better evaluation of self-rated health in men, etc. **Discussion:** We gain a larger understanding of adaptive functioning of personality during the life course.

### Mood, stop rules and painful task persistence

Ken Ceulemans

**Background:** Pain disorders are either characterised by persistence or avoidance behaviour. The mood-as-input model may explain these behavioural patterns. Mood-as-input considers task persistence as the result of current mood interacting with the so-called 'stop rules'. **Methods:** One hundred and twenty healthy participants (97 women; mean age [SD] = 21.78 [3.07]) took part in this study using a 2 Mood (positive versus negative) by 2 Stop rule (performance versus enjoyment) between-subjects factorial design. Persistence on an impression formation task during which a mechanical pressure pain stimulus was administered, served as outcome measure. **Findings:** Unexpectedly, no mood  $\times$  stop rule interaction was found,  $F(1,116) = 0.41, p = 0.53$ . Participants demonstrated greater persistence when adopting an enjoyment than an achievement stop rule,  $F(1,117) = 5.47, p < 0.05$ . **Discussion:** Understanding the relative effects of mood and stop rules can help in designing therapies for patients whose excessive persistence or avoidance behaviour leads to chronic pain complaints.

### Psychological immunocompetence as coping in psoriasis and thyroidism

Kerekes Zsuzsanna, Kiss Edina, Tiszberger Monika and Gati Agnes

The aim of this pilot study is to find out whether there is any coping strategy, depression level of the patients with psoriasis and thyroidism, which can play important role on coping with the chronic diseases. **Methods:** We used the standardised, self-reporting versions of BDI (Beck Depression Inventory) and PISI (Psychological ImmunSystem Inventory). 37 people were diagnosed with psoriasis, 57 with thyroidism and we have data from 35 control persons. **Results:** There was no significant difference in depression indicators. We found that in the use of self-respect; resilience; empathy; creativity are significantly higher ( $p \geq 0.05$ ) in the patient groups than in control group. Empathy and resilience is significantly ( $p \geq 0.05$ ) higher used as a coping strategy in thyroidism patient group than in psoriasis patient group. **Conclusion:** Considering the results, we can improve coping strategies in these two patient groups, which may have a measurable effect on the quality of life.

### Enhanced sensitivity to fear-related avoidance, agoraphobic experiences and early representation of parental rearing behaviour at healthy young adults

Kerekes Zsuzsanna, Revesz Gyorgy, Kallai Janos and Tiszberger Monika

**Background:** This study examined the sensitivity of agoraphobic fears influenced by perceived parental rearing behaviour, which can play an important role in the emergence of psychosomatic illnesses and health-related behaviour, using a sample of healthy, young students. **Methods:** 305 students (140 women, 165 men,  $22.01 \pm 2.00$ ) participated in this study. Self-reported questionnaires were used: FSS and EMBU. **Results:** Agoraphobic fear for girls are statistically significantly more frequent. In the parent's point of view, the lack of an emotional warm father and the existence of the overprotection is the sensitising factor. In the same case of maternal behaviour, the mother's emotional attitude of acceptance, emotional warmth was positively related to the agoraphobic fears. **Conclusions:** The results suggest that the agoraphobic concerns are not only being discovered in clinical levels of anxiety, but are also a result of unique upbringing conditions, in healthy persons, which has a relevance in prevention of anxiety and in planning of screening processes.

**Coping strategies and social support in low-income Brazilian women with gynaecological cancer: A pilot study**

Kern de Castro Elisa, Kreling Marina, Escariz Ana Cândida, Lawrenz Priscila, Both Luciane and Haas Sílvia

This paper examined the relationship between coping strategies and social support in low-income women with gynaecological cancer. Participants were 25 adult patients in treatment in a public hospital in Brazil. Instruments used were: Coping with Health Injuries and Problems and Medical Outcome Study Questionnaire. Results showed that palliative coping were correlated with patient age ( $r = 0.421, p < 0.05$ ), while instrumental coping were correlated with metastasis time ( $r = 0.436, p < 0.05$ ). Independent *t*-test revealed no significant differences between single and married women in social support and coping strategies. However, women without metastasis demonstrated higher material support ( $t = 2.15, p < 0.05$ ) and women with metastasis presented higher levels of material support and less instrumental coping ( $t = -2.80, p < 0.05$ ). There were no differences between cancer levels and coping strategies or social support. It was concluded that in low-income Brazilian women, some illness characteristics may change women perceptions about social support and the use of instrumental coping strategies.

**Quality of life social disparities and roles of family and unhealthy behaviours among adolescents**

Kérona Chau, Bernard Kabuth, Michèle Baumann and Nearkasen Chau

**Background:** Adolescents' quality of life determinants include socioeconomic characteristics and unhealthy behaviours. This study explored WHOQOL social disparities and the roles of family structure, income and unhealthy behaviours. **Methods:** 1556 middle-school adolescents from north-eastern France completed a self-administered questionnaire measuring WHOQOL domains and other factors. Data were analysed using multiple regression models. **Findings:** Significantly lower WHOQOL was found for clerk (gender-age-adjusted regression coefficient  $r = -5.8$  (SE 1.1)), manual-worker ( $-5.7$  (1.5)), unemployed/inactive ( $-10.3$  (1.5)) and other categories ( $-1.3$  to  $3.2$ ), compared with manager families. Controlling for family structure and income highly reduced the  $r$  to  $-2.45$  (1.1),  $-2.3$  (1.5),  $-5.3$  (1.6) and  $-1.5$  to  $-0.89$  (NS), respectively. The disparities remained after further controlling for last-month tobacco/alcohol/cannabis uses and lack of sports-physical activity. Similar findings were found for all physical, psychological, social relationships and environment WHOQOL domains. **Discussion:** WHOQOL disparities are highly explained by family structure, income and unhealthy behaviours that may be prevention targets.

**Psychological distress in patients with Dhat syndrome in Pakistan**

Khan Nashi and Kausar Rukhsana

Dhat Syndrome also known as semen loss concern is commonly reported in the Indian sub-continent. The present research examined psychological distress in men reporting with dhat syndrome in Pakistan. Patients with Dhat Syndrome ( $N = 318$ ) were recruited from private practice of health professionals. Dhat Syndrome Symptom Checklist (DSSC) and General Health Questionnaire were used for assessment. Majority of the patients were experiencing somatic complaints and anxiety. Positive relationship was found between DSSs, somatic complaints, anxiety, social dysfunctioning and depression. Perceived implications of semen loss for patients' life emerged as significant predictors of somatic complaints in patients. Anxiety in patients was predicted by DSS physical and psychological symptoms, perceived

implications of Dhat Syndrome for patients' life and 'discharge before urine'. Findings have very important implications for the patients, health professionals and researchers and warrant the need for counselling services for men with semen loss concern.

**Does intervening on social images of healthy eating increase vegetable consumption among young men?**

Kinnunen Marja, Hankonen N., Bingham C., Jallinoja P. and Absetz P.

**Background:** Male lay perceptions of healthy diet link it with femininity, seeing it a threat to masculinity. An intervention targeting social images of vegetable eating was launched in two garrisons in Finland. To evaluate intervention effects, fruit and vegetable (F&V) consumption and prototypes of Vegetable Avoider and Vegetable Chooser were measured at the beginning (T1) and at 6 months (T2) of military service ( $N=209$  control,  $N=234$  intervention arm). **Results:** The healthy prototype became less positive and F&V consumption decreased in both study arms. However, interactions showed that the negative changes were more moderate in the intervention arm [ $F_{s} \geq 4.25$ ,  $ps < 0.01$ ], and that F&V consumption decreased least among the higher educated men in the intervention arm [ $F=(1,422)=4.05$ ,  $p=0.045$ ]. **Conclusion:** The intervention was able to decline but not to prevent the negative development in social images, and the effect on eating was only limited to those with higher education.

**Management of stress: A technology-supported mini-intervention concept**

Kinnunen Marja-Liisa, Lappalainen Päivi, Lappalainen Raimo, Hoffren Henna, Kaipainen Kirsikka, Myllymäki Tero, Juuti Tanja, Mattila Elina, Happonen Antti and Korhonen Ilkka

**Background:** Work stress is a common problem which may lead to increased sick leaves and mental disorders. For prevention of these problems, a multidisciplinary team of psychologists, physiologists and engineers developed a concept which combines a group-based psychological mini-intervention with technologies (web portal, personal monitoring devices and mobile applications). Usefulness, acceptance and validity of the concept were then evaluated. **Methods:** The evaluations lasted 3 months and were carried out with three groups of working-aged participants suffering from stress ( $n=68$ ). The participants filled in questionnaires about the concept, stress, recovery, health, burnout and working ability four times (before, during and after the evaluation, and 6 months afterwards). **Findings:** The concept was well-accepted and it had positive effects on burnout, health and working ability, which were maintained over the 6-month follow-up. **Discussion:** The technology-supported mini-intervention concept seems to be a promising, cost-efficient and accessible tool for preventing and managing stress-related problems.

**The effects of career goals creation and trouble management skills training on job search stressors**

Kitami Yuina, Abe Michiyo and Mori Kazuyo

**Background:** The job search stressors of university students increase seriously than before. The purpose of this study was to investigate the effects of a work goals creation and trouble management skills training on job search stressors in Japanese university students. **Methods:** The participants were randomly assigned to either an intervention ( $N=14$ ) or a control group ( $N=15$ ). They responded to demographics, the state of job hunting and a Job Search Stressor

Scale (Kitami et al., 2009) for two waves (pre, post). **Findings:** One-way ANOVA was conducted with each factors of Job Search Stressor Scale as the dependent variables. ANOVA revealed significant interaction between pre and post on the all variables. **Discussion:** The results showed significant favourable intervention effects for job search stressors on post-tests. These results suggest a need to provide more support for university students' mental health and to improve the quality of school life during periods of job hunting.

### **Psychological distress and patient activation is associated with self efficacy in patients with arthritis**

Kjersti Grønning and Aslak Steinsbekk

**Background:** Psychological, physical and demographic factors influence patients self efficacy beliefs. The aim of this study was to investigate which factors that was associated with self efficacy beliefs in patients with chronic inflammatory arthritis. **Methods:** This was a cross-sectional study of 141 patients with rheumatoid arthritis, psoriatic arthritis and poly arthritis. **Findings:** Multivariate linear regression analyses showed that psychological distress ( $p=0.004$ ), patient activation ( $p<0.001$ ), pain ( $p=0.030$ ) and higher level of education ( $p=0.033$ ) was statistical significantly associated with better self efficacy beliefs, while female ( $p=0.204$ ), being married ( $p=0.950$ ), middle level of education (0.543), physical function ( $p=0.942$ ), wellbeing ( $p=0.491$ ), tiredness ( $p=0.515$ ), disease duration ( $p=0.802$ ) and disease activity ( $p=0.460-0.963$ ) was not. **Discussion:** High patient activation and low psychological distress were most strongly associated with better self-efficacy beliefs. This indicates that patient educational programs aimed at improving self-efficacy should address how to deal with psychological distress.

### **Motivational interviewing to promote physical activity: Do characteristics of an interview impact upon outcomes?**

Knittle Keegan, Mejino Arlene, DeGucht Veronique, Hurkmans Emalie, Vliet Vlieland Thea and Maes Stan

Motivational interviewing (MI) is a counselling style which helps people explore and resolve ambivalence to change. It is unclear whether the quality of a MI predicts subsequent changes in physical activity (PA), self-efficacy (SE) or autonomous motivation (AM). 30 sedentary patients with rheumatoid arthritis filled out questionnaires assessing SE, AM and PA both 1 week before and 2 weeks after receiving an MI from a trained physical therapist. Audio from the MI sessions was recorded, and competency of MI delivery was assessed with the MI Treatment Integrity Scale. Overall, MI did not significantly increase SE, AM or PA. Adequately delivered MIs produced greater improvements in AM than inadequately delivered MIs. Asking more open questions predicted increased leisure time PA after MI. Therapist proficiency in MI delivery improved over time. MI is a skill which takes time and effort to develop. Interventions including MI should ensure that MI delivery is adequate.

### **Experience of men who have attended the birth of their child at the maternity centre**

Kojima Rieko

**Objective:** First, to clarify the process of how men change to the one involved in childbearing by describing the experiences from the pregnancy period to birth. The other was to examine the importance of caring for men, which was based on descriptions given by fathers. **Methods**

**qualitative studies:** This study was intended for nine fathers who agreed with the purpose of study and our privacy policy. The research ethics board of the Japanese Red Cross Hokkaido College of Nursing approved this study. **Results:** Men whose partners were expecting a child in the maternity centre had experienced a certain process, which goes from 'the joy and anxiety of their partner's pregnancy' to 'the overcoming of the anxiety and developing a role as a partner and father in both periods of pregnancy and birth. **Conclusion:** Within this process, men finally acquired the idea of being one involved in childbearing.

### Biopsychosocial predictors of adherence to follow-up colposcopy in first-time patients

Kola Susanna and Walsh Jane C.

**Background:** The success of cervical cancer screening is largely dependent on patient adherence with treatment recommendations. The aim of this study was to identify predictors of adherence by examining biopsychosocial variables measured at colposcopy. **Methods:** Baseline data on psychosocial factors (demographic variables, state anxiety, pain) were collected from 141 women before colposcopy. Experiences of colposcopy and adherence to follow-up (within 2 years) were assessed subsequently. **Findings:** Demographic variables were not associated with adherence. Non-attenders reported significantly greater state anxiety and pain following colposcopy than attenders. Multivariate logistic regression revealed that psychological experiences of colposcopy did not predict adherence status. However, the odds of adhering to colposcopy for patients with severe dysplasia were 3.57 times higher than for patients with normal histology, and 4.35 times higher than for patients with moderate dysplasia ( $p = 0.005$ ). **Discussion:** Women with dysplasia grades other than 'severe' should be targeted for follow-up recommendations and advice.

### Social support among Roma and non-Roma adolescents: Does it contribute to risky health behaviours?

Kolarcik Peter, Bobakova Daniela, Rimarova Kvetoslava, Madarasova Geckova Andrea, Reijneveld Sijmen A. and Van Dijk Jitse P.

**Background:** Data about the role of social support related to risky behaviour among Roma adolescents is scarce. The aim of our study was to assess social support among Roma and non-Roma adolescents and its contribution to risky health behaviours. **Method:** Cross-sectional study of Roma ( $N = 330$ ; mean age = 14.50; interview) and non-Roma adolescents ( $N = 722$ ; mean age = 14.86; questionnaire). Ethnic differences in social support from mother, father and significant others were assessed as their influence on health-related behaviours. **Findings:** Roma and non-Roma differed regarding social support, smoking and drug use. Low mother and father support and high friend support were associated with smoking (ORs 0.92–1.11), low mother and high friend support with drinking (OR's 0.92–1.13) and low father support with drug use (OR 0.92). **Conclusion:** Prevention in risky behaviour should focus mostly on adolescents with low mother support, no matter if they are Roma or non-Roma, but low support occurs more among non-Roma.

### Lifestyles and psychosocial profiles in high-risk cardiovascular patients

Koleck Michèle, Philippon Morgann, Gay Bernard and Demeaux Jean Louis

Supporting patients with high risk of cardiovascular disease is essential. The ETHICCAR study assesses impact of therapeutic education programs for these patients. **Objectives:** To

analyse lifestyle and psychosocial profile in ETHICARR study and assess patient perception of risk and quality of life. **Method:** 130 patients completed a questionnaire assessing dietary habits, tobacco and alcohol consumption, physical activity, depression and anger (NEO-PI-R), locus of control (LCS), depressive mood (BDI), self-efficacy (HSSES) and quality of life (SF-12). **Results:** Cluster analyses were performed. Heterogeneity of behaviours yielded five lifestyles. Perception of cardiovascular risk is different in each lifestyle. Four psychosocial profiles were defined: two showed an internal LOC whereas two are more external with high scores of depression. Physical quality of life was not altered unlike psychological component. **Conclusion:** Lifestyles and psychosocial profiles are not linked in this population. Specific actions of therapeutic education may be useful for each of the psychosocial profiles.

#### **The symptoms of burn out syndrome and the examination of dysfunctional attitudes in medical employees**

Kopasz Nora, Kerekes Zsuzsanna, Mangel Laszlo, Tiszberger Monika, Edes Tunde and Palfine Szabo Ilona

The aim of this study is to measure the stage of burn out syndrome and their influencing factors in two oncological departments (63 people), in G.E. practice (13 people) and in maternity ward (18 people). We used self-completed, anonymous questionnaires: BOQ; BOS; DAS concerning sociodemographical questions. There was no significant difference in burn out indicators. According to DAS data, the oncological department with a higher range of medical attendance statistically shows a significant difference from other departments. Maternity ward and G.E. employees present a deviation both in the DAS exterior control and in justifiable expectation subscales. In the point of DAS subscales view, both qualification and the number of children are significantly influential factors. The marital status points out significant influence to the 'claim-to-be-loved' subscale. Our preventative and interventional possibilities were built on the changes of DAS subscales results, which may have significant effect on the therapy of burn out syndrome.

#### **A combined planning and self-efficacy intervention to promote physical activity: Effectiveness and working mechanisms**

Koring Milena, Richert Jana, Parschau Linda, Ernsting Anna and Schwarzer Ralf

**Background:** Many individuals are motivated to improve their physical activity levels, but often fail to act upon their intention. Interventions fostering volitional strategies like action planning, coping planning and self-efficacy beliefs can help to translate intentions into behaviour. **Methods:** This study examines the effectiveness and the mechanisms of a combined planning and self-efficacy intervention to promote physical activity among motivated individuals.  $N=883$  participants were randomly assigned to the intervention or to a waiting list control condition. **Findings:** Multivariate analysis of variance revealed that the intervention resulted in significantly more physical activity, higher levels of action planning, coping planning and volitional self-efficacy beliefs,  $F(4, 878)=28.37, p<0.01$ . Additionally, multiple mediation analysis showed that action planning, coping planning and volitional self-efficacy mediate between the intervention and physical activity. **Discussion:** This study shows that the intervention successfully fostered physical activity and unfolds the underlying mechanisms of the intervention's effectiveness.

**Activity and optimism as predictors of psychological well-being of adult psychology students**

Kozhukhar Galina

The main aim of this pilot study was to investigate activity and optimism as predictors of psychological health. The sample consisted of 54 adult females (aged from 24 to 49), which were having a retraining course as practical psychologists. Students completed questionnaires: Optimism Scale (AOS), Psychological Stress Measure (PSM-25), Subjective feeling (mood-scale) and Izard's differential emotions scale. The main research questions were explored by linear regression analysis. The regression results showed that activity decreased psychological stress and anxiodepressive emotions, increased the positive emotions and subjective comfort, and did not have impact on negative emotions. Optimism was the predictor of the psychological stress, negative and anxiodepressive emotions, subjective comfort, but did not effect positive emotions. Interesting result was that activity in adult students improved positive emotions, but optimism did not have any influence on them. Activity and optimism were discussed as predictors of some characteristics of psychological well-being.

**Depression as moderator of intention-behaviour relations in physical activity**

Kraemer Lena, Wagner Sebastian C., Stadler Gertraud and Bolger Niall

**Objective:** The gap between physical activity intentions and actual physical activity is well documented. This study investigated if depression moderates the intention-behaviour-link such that depression is associated with greater problems in intention implementation.

**Methods:** Forty-seven undergraduate students filled out a baseline questionnaire (measuring depression with the CES-D) as well as evening diaries on 6 consecutive days (measuring behavioural intentions to be physically active). On all days, participants wore accelerometers assessing physical activity. **Results:** A regression of mean physical activity showed no main effect of depression,  $p=0.11$ , but a significant main effect of mean intention,  $F(1;44)=2.04$ ,  $p<0.05$ , as well as a significant interaction effect,  $F(1;44)=-2.21$ ,  $p<0.05$ . The interaction indicates that depressed students were less capable of transforming their behavioural intentions into action. **Conclusions:** Depression moderates between intentions and physical activity on the following day. Studying the interplay of depression and volitional processes is an important task for Clinical and Health Psychology.

**Mindfulness-Based Stress Reduction (MBSR) in chronic pain management: A pilot study**

Kretsch Marina, Spitz Elisabeth and Tarquinio Cyril

**Background:** Mindfulness-Based Stress Reduction (MBSR) is a clinical program, developed to facilitate adaptation to medical illness, which provides training in mindfulness meditation as a self-regulatory approach to stress and emotion management. Many claims have been made regarding its efficacy in medical settings. The aim of this study was to test MBSR efficacy in chronic pain management and psychological associated troubles. **Methods:** We measured quality of life (WHOQOL-26), depression and anxiety (HAD) before and after the 8-weeks training program and analysed qualitative participants experience with semi-structured interviews. Six women with chronic pain were included. **Findings:** Qualitative analyses show an effect of MBSR on the management of mild to moderate pain and daily stressors. Quantitative results did not report improvement (Wilcoxon non-parametric tests were performed).

**Discussion:** Quantitative studies must be conducted to assess the link between MBSR, pain management and daily stressors with a larger sample.

**Physical activity, emotions and cognitive function in older adults**

Kroemeke Aleksandra, Zajac-Gawlak Izabela and Pospiech Dariusz

**Background:** This study was aimed at exploring the relationship between physical activity (type, intensity, amount), positive and negative affect and cognitive function in older adults. **Methods:** 55 healthy older adults (age  $64,75 \pm 6,225$  years) had the ActiGraph GT1M accelerometer attached for 7 days to assess their physical activity. The affect was measured with the Polish version of PANAS. The cognitive function was evaluated based on Trail Making Test (TMT) and Digit Symbol Test (DST). **Findings:** Based on steps/day results 56.4% participants met the recommended 10,000 steps per day. Age was conversely connected with processing speed (DST) and physical activity (number of steps and frequency). Physical activity was associated only with negative emotions: results of ANOVAs proved less negative affect among high-frequency activity subjects. **Discussion:** According to the study medium, intensity physical activity might be more connected with the reduction of negative state rather than create the positive one.

**Boosters, anyone? The effectiveness of adding booster sessions to a self-management intervention for diabetes patients**

Kroese Floor, Adriaanse Marieke and De Ridder Denise

**Background:** In response to frequently reported suggestions in the literature, this study was set up to investigate the effectiveness of adding booster sessions to an existing self-management intervention that focused on increasing proactive coping skills in Diabetes Type 2 patients (i.e. 'Beyond Good Intentions'). **Method:** Three booster sessions were added to the basis intervention program that had previously shown to be effective in improving self-management behaviours and medical outcomes. Patients ( $N=129$ ) were assessed on psychological (i.e. proactive coping skills, self-efficacy) as well as behavioural (i.e. diabetes self-care, diet and exercise) self-management outcomes. **Results:** Results showed that only about 50% of patients in fact attended more than 1 booster sessions. Furthermore, patients who did attend booster sessions did not further improve self-management behaviour, but they did remain stable compared to their outcomes after the basis intervention. The effectiveness of booster sessions will be discussed.

**Relations between personality traits and level of experienced stress impact of prison officers**

Kukanová Markéta and Vašina Lubomír

This report comes as a part of an extensive research project realised by The Centre for Complex Psychological Research of Stress in Brno. Our goal was to analyse the influence of stress on prison officers. Relations between selected personal traits and the level of experienced stress impact were examined. Participants ( $N=188$ ) included both male ( $N=141$ ) and female ( $N=32$ ) prison officers from 10 prison facilities all across the Czech Republic. As for methods, EPQ-R and IVE were used to identify personal traits, Scales of Stress Profile and 8SQ to assess the level of experienced stress impact. Statistically significant correlations between the level of experienced stress impact and extraversion ( $r=-0.21, p<0.05$ ), neuroticism ( $r=0.39, p<0.05$ ), empathy ( $r=0.17, p<0.05$ ) and impulsivity ( $r=0.26, p<0.05$ ) were found. These results support the need for further research of personality of people who work under constant stress.

### Using mindfulness to regulate emotion and enhance the learning effect

Kuo Yu-Ming, Wang Tz-Li and Lien Ya-Hui

Mindfulness maintenance of attention on the present may facilitate a healthy engagement with emotions. This study investigated the relationships among mindfulness, positive emotion, negative emotion, and the learning effect. 122 students responded to a questionnaire measuring each of the former variables after an 8-week intervention period. A significant positive relationship was found between mindfulness and positive emotions, while no statistically significant relationship found between negative emotions and the learning effect. There was also a significant positive relationship between positive emotions and the learning effect. This pattern of results suggests that positive emotion is an important mediator between mindfulness and the learning effect. These results carry two meaningful implications for the role of mindfulness. First, mindfulness is a tool to adjust physical and mental conditions, rather than learning skills. Second, previous studies showed that mindfulness can help reduce stress and anxiety. This study finds that mindfulness can also improve positive emotion.

### Stage congruence and its role in changing multiple health behaviours

Küper Carina, Fleig Lena, Wiedemann Amelie U. and Reuter Tabea

**Background:** The aim of this study was to examine the interrelation of physical activity and fruit and vegetable consumption regarding stages of change and stage transitions. Furthermore, the role of stage congruence (i.e. individuals reside in the same stage for two behaviours) for successful multiple behaviour change was investigated. **Methods:**  $N=784$  participants filled in an online questionnaire assessing physical activity and dietary behaviour and stages of change at baseline and 4 weeks later. **Findings:** Multivariate analyses revealed a significant positive association between the two behaviours, their stages of change and stage transitions across behaviour domains ( $p<0.05$ ). However, an influence of stage congruence on successful multiple behaviour change was not found. **Discussion:** Being in the same stage for two behaviours (e.g. having the intention to change two behaviours) does not seem to interfere with changing multiple behaviours. This finding may have valuable implications for designing multiple health behaviour interventions.

### Religion and optimism: The effect of religiosity on mental health resources in senior citizens

Kvande Marianne Nilsen

The purpose of this study was to explore the effects that five dimensions of religiosity have on an optimistic view on life among senior citizens. Optimism has been showed to be a positive health resource. The results were based on a self-completion questionnaire with responses from 237 Norwegian seniors 60–76 years old. The results show that when controlling for demographics as well as long-term medical illness, the dimension of individual subjective religious experiences had a significant effect on how optimistic the respondents were ( $\beta=0.38$ ,  $p<0.01$ ) ( $R^2=0.18$ ). Especially, since individual subjective religiosity might be detached from institutionalised religiosity, being aware of such individual resources is important for clinicians and social workers who interact with seniors in their daily life as well as in times of age-related crises such as the loss of loved ones, impairment and problems related to the transition from employment to retirement.

**Can media campaigns effectively change behaviour? An examination of the first Irish stroke awareness campaign**

L. Mellon, A. Hickey, M. Bastiansen, R. Murphy, E. Dolan, A. Gleeson, P. Houlihan, P. Gilligan, F. Doyle and D. Williams

**Background:** The impact of awareness campaigns is usually tested by means of population knowledge surveys. A more clinically relevant indicator of campaign efficacy is the impact of the campaign on uptake of the campaign message in terms of public behaviour. The first Irish stroke awareness campaign (Act FAST) was examined for its impact on hospital activity. **Method:** A screening tool was developed to audit all stroke and TIA-related admissions to two teaching hospitals for a 1 year period parallel to the campaign launch. **Results:** Results suggest an observable trend of increased frequency of FAST-related presentations to A&E (64% increase) and decreased time from symptom onset to A&E attendance (63%), however these rates returned to baseline once advertising was withdrawn. **Conclusion:** There is evidence of initial campaign impact. However these observations subsequently decline, indicating that the desired campaign effect in terms of public behaviour is not sustained long-term.

**Exploring the experiences of end-stage renal disease and its treatment in Singaporean incident haemodialysis patients**

Lai Alden Yuanhong, Loh Angela, Pala Krishnan Deby Sarojiuy and Griva Konstadina

**Background:** Dialysis can be very stressful with the initial months onto treatment being very critical, both in terms of adaptation as well as mortality. This qualitative study sets out to explore the lived experiences of new haemodialysis patients in Singapore. **Methods:** A total of 13 incident haemodialysis patients participated in semi-structured interviews. **Results:** Interpretative Phenomenological Analysis revealed three main themes: emotional distress, treatment related concerns and social support. Issues about illness intrusiveness, diabetes, Complementary and Alternative Medicine (CAM) usage and hope for transplant were also identified. **Conclusion:** New haemodialysis patients have emotional and informational needs, highlighting the need for intervention programs particular to this patient group to promote better psychosocial adjustment.

**The role of alexithymia in fibromyalgia syndrome**

Lami M. Jose, Martínez M. Pilar, Miró Elena, Sánchez Ana I. and Ana Medina

**Background:** Fibromyalgia (FM) is characterised by widespread musculoskeletal pain and multiple tender points. Several studies suggest that alexithymia impedes the successful regulation of negative emotions and may contribute to pain experience. We investigated the role of alexithymia in FM. **Methods:** 74 FM patients and 74 healthy volunteers completed the following measures: Toronto Alexithymia Scale (TAS-20), Hospital Anxiety and Depression Scale, Pittsburgh Sleep Quality Index, Fatigue Scale, and Chronic Pain Self-Efficacy Scale. **Findings:** FM group had higher scores than healthy group in difficulty in identifying feelings (TAS-20) ( $t=6.11$ ;  $p<0.001$ ). Significant correlations were observed between difficulty in identifying feelings and fatigue, sleep quality, anxiety and depression ( $r$  between 0.21 and 0.41,  $p<0.05$ ) and self-efficacy for coping with symptoms ( $r=-0.29$ ,  $p<0.05$ ). **Discussion:** Higher level of alexithymia in FM was observed. Alexithymia was associated with more psychological distress and increased fatigue and disturbed sleep. Further therapeutic work with emotions in FM patients is suggested.

**The illness attitudes as mediator between pain and emotional distress**

Lami M. Jose, Martínez M. Pilar, Sánchez Ana I., Miró Elena, Diener Fabian and German Prados

**Background:** There is strong theoretical and empirical relationship between pain and psychological distress. However, there is little information about the cognitive factors that contribute to this relationship. We analysed the mediator role of illness attitudes. **Methods:** 135 healthy women completed: Attitude Illness Scales, McGill Pain Questionnaire, Beck Depression Inventory and Beck Anxiety Inventory. **Findings:** 21.5% of the women reported pain  $\geq 5$  in affective-sensorial dimensions. This group showed higher scores in anxiety, depression and illness attitudes than women without pain ( $p < 0.05$ ). Significant correlations were observed between pain, illness attitudes and psychological distress. Illness attitudes mediated the relationship between pain and anxiety/depression (Sobel test 2.65 and 2.81,  $p < 0.01$ , respectively). **Discussion:** Pain may lead to an increased psychological distress indirectly as a result of dysfunctional beliefs toward illness. It is important to assess these attitudes to early identification of persons who show a higher risk to emotional distress in response to pain.

**Perceived empathy scale of physicians and nurses**

Lancelot Anne, Costantini Tramoni Marie Louise and Tarquinio Cyril

Lung cancer is the first cause of death by cancer in France. An important component of care relationship between nurses/physicians and patients is empathy. To study empathy in this context, we analysed how patients perceive nurses and physicians empathy qualities. To consider this aspect, we constructed a 'Perceived Empathy Scale of Physicians and Nurses'. It is composed by two parts: one for the 'nurse's team' and the other for the 'physician's team' (both evaluated by patients). 112 patients with cancer completed the first scale's part 'nurse's team' and 116 patients the second scale's part 'physician's team'. Many statistic validation factors with Principal Component Analysis showed that the instrument had good psychometrics qualities in terms of validity and reliability. We have found a structure of six dimensions for each scale's part, but items and dimensions are different. These results show that patients are expecting different empathic qualities from nurses and physicians.

**Empathy between patients and nurses/physician's team**

Lancelot Anne, Costantini Tramoni Marie Louise and Tarquinio Cyril

Lung cancer is the first cause of death by cancer in France, that is why an important component of care relationship between nurses/physicians and patients is empathy. Empathy is a multiple facets concept and after a review of literature we have decided to analyse how patients perceive nurses and physicians empathy qualities. So, we have conducted about ten non directive interviews with lung cancer patients revealed that they expected different empathic qualities from nurse and from physician. We have made a thematic contents analysis and a clinical analysis of these interviews. Results are linked to patient's professional (nurse and physician) representations. We noticed a taboo of the patients to criticise the physicians and nurses team but. Our future objective is to provide physicians and nurses an 'empathy training program' based on the results of this study, in order to improve empathic relationship between cancer patients and health professionals.

### The relation between adolescents' steps per day and depressed mood: A 10-day diary study

Langguth Nadine, Gawrilow Caterina, Wagner Sebastian and Stadler Gertraud

**Background:** The prevalence of depressive symptoms increases with transition to adolescence, whereas adolescents' physical activity decreases at the same time. This relationship has not been studied previously among adolescents on a daily basis. This study examined short-term effects of adolescents' physical activity on depressed mood. **Methods:** Forty-six adolescents completed a background questionnaire, wore pedometers and kept mood diaries (POMS) over 10 consecutive days. **Findings:** The mixed-effects model revealed a significant main effect of steps/day on depressed mood,  $F(1, 186) = 3.91$ ,  $p < 0.05$ , suggesting that adolescents who had taken fewer steps during the day reported higher levels of depressed mood in the evening. **Discussion:** Based on these results, we are currently preparing a daily diary study with clinically depressed adolescents and adolescents being at high risk for depression (e.g. adolescents with ADHD) and a randomised controlled-trial evaluating the effectiveness of a physical activity intervention on adolescents' emotional well-being.

### Relationship between marital satisfaction and anxiety in mothers of children with attention deficit hyperactivity disorder (ADHD)

Larijani zarrin sadaat, Baghani Tahereh and Ajhdehfa Leila

**Objective:** This study examines the relationships between marital satisfaction and anxiety to determine if there is any relationship between variables or not. **Method:** Thirty-five mothers of children with ADHD, (children's mean age: 8.1 years) who were chosen based on convenience sampling participated in this study. The diagnosis of child ADHD was established through clinical interviews with parents according the criteria in DSM IV TR. They completed the Enrich marital satisfaction inventory and Beck Anxiety Inventory (BAI). Correlational design was used as statistical method. **Findings:** These results indicate significant correlation between marital satisfaction and anxiety. There is a negative relationship between marital satisfaction and anxiety ( $r = -0.61$ ,  $\sigma = 0.01$ ,  $n = 35$ ). **Conclusion:** Results indicate that the higher marital satisfaction is associated with lower anxiety.

### The efficacy of self-efficacy and implementation intentions interventions to increase fruit and vegetable intake

Laurence Guillaumie, Gaston Godin, Jean-Claude Manderscheid, Elisabeth Spitz and Laurent Muller

**Objectives:** This study tested interventions designed for people who do not eat the recommended daily fruit and vegetable intake (FVI) but have a positive intention to do so. **Methods:** Adults ( $N = 134$ ) were randomised into four groups: implementation intentions (II); self-efficacy (SE); combination of II + SE and control (C). Variables were measured at baseline, post-intervention and 12-month follow-up. Findings. At 12-month follow-up, compared to the C group, FVI increased significantly in the II group (+2.1 servings/day), but not in the SE and II + SE groups. Vegetable intake (VI) increased significantly in all experimental groups, whereas fruit intake (FI) did not. Changes in FVI were mediated by changes in FI action planning and VI self-efficacy whereas changes in VI were mediated by changes in VI intention and VI self-efficacy. **Discussion:** II interventions appear to achieve clinically meaningful increase in FVI. Future studies should favour this approach to bridge the intention-behaviour gap for FVI.

**Improving lifestyles of disadvantaged women: Mixed-method evaluation of change in practitioners' practice following 'healthy conversation skills' training**

Lawrence Wendy

**Background:** The Southampton Initiative for Health has trained community practitioners in 'healthy conversation skills' aimed at improving their reflection on practice, asking 'open discovery questions' (ODQs) and goal-setting, in order to support women in making lifestyle changes. This paper presents evidence of change in practitioners' practice following training. **Methods:** Pre- and post-training self-completed assessments, follow-up phone calls and observations of practice were used to measure healthy conversation skills' use. **Results:** We trained 163 practitioners. They asked more ODQs post-training (from 30 to 363); 67% of trainees went from asking none to asking at least one ( $\chi^2 = 97.6$ ;  $p < 0.0001$ ). In follow-up phone calls to 140 trainees, more competency was demonstrated in asking ODQs than in supporting goal-setting. In Southampton, 69% (37/54) of observed conversations involved practitioners asking ODQs, compared with 39% (14/36) in a comparison area. **Conclusion:** Whilst more training in supporting goal-setting would be beneficial, the intervention is feasible and effective in increasing staff competence in asking ODQs, supporting a more empowering style of communication likely to facilitate behaviour change.

**Improving clinical performance among medical students using a mindfulness intervention**

Lazaridou Asimina

**Background:** Mindfulness is a state of openness to novelty in which an individual actively constructs categories and distinctions. Mindfulness has the potential to improve the performance of doctors and reduce medical mistakes. **Methods:** Participants ( $n = 40$ ) were randomly assigned to one of the two conditions (mindful or mindlessness). The mindfulness group ( $n = 20$ ) received three mindful instructions every day via sms and were asked to notice three new things in their clinical practice. Langer's Mindfulness questionnaire and student-burnout questionnaire were distributed to all participants before and after the intervention period. **Findings:** Greater mindfulness predicted better performance in clinical practice, an increase in mindfulness awareness and a decrease in feelings of burnout. **Discussion:** Mindful learning engages people in what they are learning and increases performance. By just noticing new things in their environment, medical students could improve performance and avoid mistakes in their clinical practice. Oral Paper

**Accuracy of hereditary breast cancer risk perception in probands following genetic counselling for BRCA1/2 testing: Differences between individual and comparative estimates and associated factors**

Leblond Débora, Bredart Anne, Dolbeault Sylvie and Sultan Serge

**Background:** Identification of BRCA1/2 genes allowed the development of genetic testing for breast cancer predisposition. Previous studies have shown an overestimation of mutation risk. Accuracy of individual and comparative risk perception are investigated. Attention has been paid to determinants of risk perception variance. **Methods:** After counselling, 180 probands initiating genetic testing received self-reported questionnaires. Risk perception of predisposition was compared to objective risk estimates. General distress (HADS), test and cancer specific distress (IES) and genetic knowledge (BGKQ) were alternatively introduced in linear regression models. **Results:** Half of the sample had an accurate individual risk perception of predisposition associated with test specific distress. Despite a risk perceived

to be higher than the general population, comparative risk was underestimated and associated with genetic knowledge. **Discussion:** In contrast to the current literature, our results do not show overestimation of genetic risk. Both cognitive and emotional factors affect risk perception accuracy. Understanding those processes is helpful in reducing inaccuracy.

### Life control mediates social gradients in health and well-being among middle-aged Australian women

Lee Christina

There are well-documented gradients across socioeconomic position in health and well-being, at all ages and amongst both women and men. This analysis examines the mediating role of perceived life control (measured with the Life Control Scale – Bobak et al., 1998) on this relationship, in a nationally representative sample of 10,492 Australian women aged 50–55. Using ability to manage on available income as a proxy for socioeconomic position, we found strong gradients for both the physical and the mental component scales of the SF-36. Adjusting for Life Control scores significantly attenuated these effects, supporting arguments that perceived control is one mechanism whereby relative deprivation affects well-being even in affluent societies.

### Relation of exercise to stress and quality of life

Leonidou Chrysanthi, Georgiou Dora, Karekla Maria and Panagiotou Georgia

The positive effects of exercise on health have been documented and continue to draw interest. This study examines the relation between frequency and duration of exercise and measures of quality of life and perceived stress. The sample consists of 324 Cypriot adults (18 to 65 years; Mage 44.87; Females 58.3%) selected through stratified random sampling from general population. Participants completed a packet of questionnaires, including Greek versions of the Perceived Stress Scale, the World Health Organisation's Quality of Life Questionnaire and questions regarding exercise behaviours. Results show that differences occur between groups at the extreme level, with those who exercise 5–7 times a week reporting lower perceived stress levels and higher environmental QOL than all other groups. Duration of daily exercise did not significantly influence **Results:** These results indicate that consistent weekly exercise, regardless of daily duration, plays a role in reducing perceived stress, but does not greatly impact perceived QOL.

### Positive psychology and sexual health: Review and future directions

Lewis Linwood

**Background:** In this oral presentation, I outline the exploration of sex, sexuality and sexual health within the paradigm of positive psychology in order to answer the following questions: Does positive psychology give relatively short shrift to an important aspect of human experience in its study of sexuality? What are the challenges to a deeper focus on sexual health? What might an exploration of sexual health look like in positive psychological theory, methodology and practice? **Findings/discussion:** I suggest that a positive sexual health, focusing on maximising human potential and growth within/through sex and sexuality is possible if one examines the political and ideological values underlying concepts of 'health', 'sexual health' and 'positive sexual health'. I will discuss three different approaches to

maximise sexual health: preventive, hedonic and eudaemonic approaches and relate them to possible explorations in positive (health) psychology.

### **Health and safety on a logistic platform: A collective work situation**

Lién Wieland

The logistic platform plays a strategic role in the management of the flows of goods. Within the framework of the prevention of risks connected to these activities, an empirical study of the organisation and the interactions between operators of various occupations working on the same platform was led. The method consisted of an analysis of the activity of these operators based on interviews, observations, formalisation of the activity in real situation. The results show that coordination and the co-activity of different occupations were not thinking upstream. Each of the occupations has its own organisation and its own rules. The priorities in the scheduling of tasks, rules and information are not systematically shared by all operators and conflicts can occur. The results showed that the accumulation of these incidents led to a disorganisation of the activity and perturbed the operators health and safety. Following our intervention, prevention measures have been proposed.

### **Organisational changes in road transport: A new approach to apprehend prevention of health and safety of the drivers**

Lién Wieland

The haulage companies evolve essentially to a regional activity. The objective is to study these changes and their effects on working conditions and health of drivers. The method consisted of an analysis of their activity and working conditions based on interviews and observations in real situation. The results show that transportation organisations become more complex and lead to increased mental workload and physical burden, in addition to the risks that drivers are already exposed (vibration, noise, musculoskeletal disorders or road accident). On the other hand, they show that working conditions is largely connected to the organisation of the platforms on which they are unloaded or loaded. Thus, in terms of prevention, in addition to prevention solutions typically deployed (organisation, training, equipment), a new line of thinking opens in designing that can 'act otherwise' than work situations observed.

### **Considerations on psychological aspects involved in drug allergy**

Liliana Veronica Diaconescu

The experience of drug allergy (as an existential threat and implications in daily life) marks the patient's psychic. This study's aim was to analyse psychological aspects of patients with drug allergy. **Method:** 152 patients with drug allergy (mean age = 46,8) and 60 healthy subjects (mean age = 44,20) were administered Drug hypersensitivity questionnaire, Psychological anamnesis, Hospital Anxiety and Depression Scale, Toronto Alexithymia Scale, Perceived Stress Scale. **Results:** In patients (comparing with healthy subjects) the scores at anxiety and depression were higher (10,80 vs. 5,58;  $p < 0.001$ , respective 6 vs. 4;  $p < 0.001$ ). Total alexithymia scores were superior in patients (42,5 vs. 38,5;  $p < 0.001$ ). The scores at perceived stress scores were higher in patients (34 vs. 30,  $p < 0.001$ ). **Conclusions:** Somato-psychic recoil of drug allergies (revealed by the existence of high levels of anxiety and depression) may be a

contributing factor in increased reactivity to stress. Inability or limitations of drug allergic patients in the identification and description of their feelings increases their stress vulnerability.

### **Contribution of emotional distress and coping strategies to the onset of physical complaints at youngsters**

Liliana Veronica Diaconescu and Ovidiu Popa-Velea

The aim of this study was to assess correlations between emotional distress, coping strategies and physical complaints at undergraduate medical students. **Method:** 107 students (88 women, 19 men, mean age = 19,67, SD = 1,57) were administered Emotional Distress Profile (Opriș & Macavei, 2005), Anxiety Symptom Questionnaire LWASQ (Lehrer & Woolfolk, 1982), COPE Inventory (Carver et al., 1989) and Giessen Symptom Questionnaire – GBB (Braehler et al., 2008). **Results:** High scores were found for emotional distress (86.9%), total anxiety (28.6%) and physical complaints (26.4%). Emotional distress was significantly correlated to anxiety ( $r = 0.478$ ,  $p < 0.01$ ), and negatively to positive reinterpretation ( $r = -0.708$ ), active coping ( $r = -0.86$ ) and planning ( $r = -0.26$ ). These three coping mechanisms also correlated negatively to cognitive anxiety ( $r = -0.56$ ;  $-0.492$ ;  $-0.64$ ). GBB score correlated positively with emotional distress ( $r = 0.60$ ) and negatively with active coping ( $r = -0.66$ ). **Discussions:** In young individuals, emotional distress can lead to physical symptoms that appear to be reduced by adopting effective coping strategies.

### **The association between sense of coherence and anxiety in chronic pain patients in multidisciplinary rehabilitation**

Lillefjell Monica and Ernstsen Linda

**Background:** This study investigated the association between sense of coherence (SOC) and anxiety in chronic musculoskeletal pain patients during multidisciplinary rehabilitation. **Methods:** SOC (13-item), demographics, personal characteristics, pain experience (VAS) and anxiety (HADS) were collected in 1665 patients ( $N = 1665$ ) previous to treatment (T1) and after a 12-week rehabilitation period (T2). **Findings:** The low SOC ( $<57$ ) group ( $n = 433$ ) reported significant ( $p < 0.001$ ) higher levels of anxiety at both T1 and T2, compared to the high SOC ( $>75$ ) group ( $n = 280$ ). Both groups reported a significant reduction in anxiety at T2. The reduction of anxiety was greatest among the low level SOC group. However, at T2, those with low SOC still reported anxiety level above the validated cutoff value ( $\geq 8$ ). **Discussion:** The data suggest that appropriate interventions should strengthen the level of SOC, as well as target the recourses of SOC, to the most vulnerable.

### **Depression and pain experience predicts addictive drug use among chronic musculoskeletal pain patients in rehabilitation**

Lillefjell Monica, Haugan Tommy and Martinussen Pål

**Background:** Inappropriate use of analgesic and psychotropic drugs for persons with chronic non-malignant pain have several problematic aspects. This study aimed to investigate the association between emotional distress, pain and addictive drugs use among work disabled with chronic musculoskeletal pain. **Methods:** Demographics, personal characteristics, anxiety and depression (HADS), pain intensity and pain experience (VAS), self reported analgesic, as well as psychotropic (hypnotics/sedatives and antidepressants) drug use, were collected in 1679

patients ( $N=1679$ ) previous to treatment and after a 12-week rehabilitation period. **Findings:** Depression measured at baseline when adjusted for pain, predicts analgesic drug use at the end of the rehabilitation program. Furthermore, pain experience measured at baseline, when adjusted for depression, predicts psychotropic drug use at the end of the rehabilitation program. **Discussion:** The results suggest that strategies for coping with emotional distress should be priority areas in rehabilitation settings to influence the consumption of addictive drug use.

#### **Does completing a formal assessment of quality of life improve well-being?**

Llewellyn Alison and Skevington Suzanne

**Background:** Routine use of patient-reported outcome measures (PROMs) in current NHS assessments could plausibly affect wellbeing. Applying self-regulation theory, we conducted a pilot investigation to explore whether structuring methods of self-assessing one's own quality of life (QoL) affects mood, goal orientation and self-reported health status. **Methods:** Preceded by a preliminary qualitative methodological study ( $n=10$ ), 25 participants (mean age 52) were randomly allocated to a condition which prompted them to think about their QoL and record it either by completing the WHOQOL-BREF questionnaire (structured), or by writing an account of their QoL (control). Pre-test and post-test measures were collected. **Findings:** There was no significant difference between conditions ( $p=0.17$ ), or between time periods ( $p=0.63$ ), and this was found for each individual measure ( $p>0.05$ ). **Discussion:** Actively structuring the self-assessment of QoL is insufficient to positively affect mood, goals or health status. Designs of future QoL interventions to promote well-being will be better informed.

#### **Development of a body site specific measure of physical self-concept: A content relevance study**

Loitz Christina and Rodgers Wendy

**Background:** The influence of muscularity to physical self-concept has become increasingly important. We developed questionnaire items operationalising four aspects of physical self-concept: muscle strength, bodyfat, muscle tone and muscle bulk, to better consider muscularity. **Methods:** Semantic differential scales with four response formats assessed seven body sites (e.g. abdominal area). Content relevance of all items was rated on 5-point scales by academic experts ( $N=18$ ) and fitness professionals ( $N=17$ ) who also provided qualitative feedback. **Findings:** Conceptually, academics and later fitness professionals agreed with the constructs, although modifications to the response scales were suggested along with reconsideration of specific body sites (e.g. lower leg). **Discussion:** Drawing on conceptual, psychometric and practical expertise develops critical foundational validity evidence for an instrument and also highlights some important domain specific conceptualisations (academic vs. fitness professional) of physical self-concept and how to describe it.

#### **Predicting medical students' intentions to giving health behaviour advice. A cross-cultural study**

López-Roig Sofía, Pastor M<sup>a</sup> Angeles, Johnston Marie, Hart Joanne, Sánchez Salvador P. and Bencomo Juan R.

**Background:** We investigated the prediction of behavioural intention (BI) of giving health behaviour advice in medical students, using the Theory of Planned Behaviour,

and the prediction changes during medical training. **Methods:** Longitudinal and cross-cultural study. UK and Spanish Students ( $N=376$  and  $149$ ) completed cognitions, before (T1) and after training in behavioural sciences (T2). Regression analyses were conducted with BI as dependent variable. **Findings:** Results were similar in both countries. The model explained 56% and 27% of variance in BI in UK and Spanish students. Explained variances were higher in T2, 62% and 59%, respectively. Attitudes and subjective norm were significant predictors but perceived behavioural control was not in T1 or T2. **Discussion:** Long-term strategies to maintain changes and special strategies to lead to a more realistic view of giving HBA and improve perceived behavioural control needs to be implemented. This work was supported by a Valencian Government grant (BEST/2010/131 and BEST/2010/132).

#### **What are the medical students' and educators' beliefs and attitudes towards family medicine practice?**

López-Roig Sofía, Pastor M<sup>a</sup> Angeles and Rodríguez Charo

**Background:** Despite the importance of primary care for health systems and biopsychosocial interventions, medical students decline interest on Family Medicine (FM) as a career option. What do medical students and educators think about FM? **Methods:** Qualitative case study. Thematic analysis: 6 Focus groups (48 students), 19 individual interviews with educators. **Findings:** Among students, FM appears to be largely devaluated, being viewed as monotonous, non-technological and without intellectual challenge. Such a negative view encourages trainees' lack of identification with this medical practice. Educators hold a double discourse: primary care is undeniable important for continuity of care and best health care system but FM remains less prestigious as medical discipline. **Discussion:** Decisions and actions are proposed in order to construct a better reputation of the profession and to improve identification processes with FM in both institutions, Universities and Health Care System. This work was supported by a Valencian Government grant (BEST/2009/061 and BEST/2009/062).

#### **Predictors of risk for eating disorders among university students**

Loutsiou-Ladd Anthi, Koushiou Maria, Kyranides Melina Nicole, Loizidou Kalia and Neocleous Evel

Predictors of eating disorder risk were examined in a sample of 510 Greek-speaking university students ( $N=401$  females,  $N=109$  males). Multiple regression analysis was used to test whether specific demographic, historical, behavioural and situational variables significantly predict symptoms of eating disorders, as measured by the Greek version of the Eating Attitudes Test (EAT-26). The regression model was significant explaining 14.4% of the total EAT variance ( $R^2=0.14$ ,  $F(9,500)=9.38$ ,  $p<0.001$ ). The deviation between current and ideal weight was the most significant predictor, followed by BMI. Other significant predictors included prior professional help concerning food/weight issues, eating fast food *versus* home-cooked meals, being a freshman or being a graduate student, the student's age and gender to a lesser extent. Findings have clinical implications for early detection of young adults at an increased risk for eating disorders. Further, they can guide clinical interventions to address malleable variables that are identified as 'red flags'.

**Detection of disordered eating in high-risk samples using the Greek version of EAT-26**

Loutsiou-Ladd Anthi, Koushiou Maria, Kyranides Melina Nicole, Neocleous Evel and Loizidou Kalia

This study examined the psychometric features of the Greek version of one of the most widely used screening tools for eating disorders, the Eating Attitudes Test (EAT-26) (Gardner, 1993, 1997), in a high-risk sample ( $N = 659$  Greek speaking university students, Ages = 17–30 years). Cronbach's alpha for the 24 retained items of the Greek EAT was good (0.87). A confirmatory factor analysis, with principal components extraction and an oblique rotation confirmed three factors with reliability coefficients ranging from acceptable (0.71) to excellent (0.91). The three-factor model (dieting and food preoccupation, pressure by others, Bulimia) accounted for 47.14% of the variance and showed partial overlap with the original EAT factors. Results indicated that 14% of the participants were classified as high risk. The Greek version of the EAT has good psychometric properties and is a useful tool in the early detection of disordered eating in high risk populations.

**Burnout syndrome in health professions: Is personality a significant predictor?**

Lubica Banovcinova, Zuzana Skodova, Andrea Banovcinova and Juraj Holdos

**Background:** Empathy is considered a highly desirable personality characteristic for health professionals; distressed personality-Type D on the other hand is not only a predictor of heart diseases, but it also negatively affects the social interactions. Burnout syndrome is significantly threatening the effective practice in health professions; we were interested whether mentioned personality factors predict burnout levels. **Methods:** 245 nurses and nursing students participated in study (mean age 27.14; SD = 9.03; 97.1% females. Toronto Empathy Questionnaire, DS14 for Type D personality, and Burnout Measure were used. Linear regression models were employed. **Findings:** After controlling for the effect of age, gender and employment status; high burnout syndrome levels were positively predicted by Negative Affectivity dimension of DS14 ( $R^2$  change 28.3%), and negatively by empathy ( $R^2$  change 4.2%), total explained variance = 33.9%. **Discussion:** While empathy seemed to be important preventive factor regarding burnout syndrome, Type D personality was found to be a significant risk factor.

**Differences between fulfil aging and successful aging**

Lucacel Raluca, Craciun Catrinel and Baban Adriana

Most of us are aware that the societies worldwide are aging. The aim of this study was to investigate de differences between old adults form urban and rural areas in fulfil aging and successful aging. Semi-structured interviews were conducted with 20 participants consisting of 10 people living in the rural area, aged 55–68, and 11 people living in the urban area, aged 55–74 years. Data were analysed using Interpretative Phenomenological Analysis. Results revealed that the majority of older adults live fulfilling lives, with only a few of them living successful lives. These differences can be explained by connections between religion and successful aging. This study reveals that it is important to focus more on the type of the coping mechanism that helps older people age successfully. By finding the right mechanism, people can age successfully.

**Quality of care – A Romanian health professionals' perspective**

Lucia Ratiu, Florina Spanu, Mara Bria and Adriana Baban

In the last 20 years, the Romanian medical system has been exposed to several legislative and structural changes. During this period, the healthcare expenditure has been one of the lowest in the European Region. In the light of these events, the quality of care (QoC) has been a constant concern. Our research investigates health professionals' (HPs) perception of the factors influencing QoC. Doctors, residents and nurses ( $n=16$ ) participated in group and individual interviews. In order to gain an in-depth understanding of HPs perspectives on QoC, the interviews were analysed using the method of thematic analysis. Four factors influencing QoC emerged from the data: hospital resources, HPs' competencies, patients' education and management's competencies. Our research contributes to developing a deeper understanding of HPs perspective on QoC and the way they cope with barriers to providing high-quality medical services in an underfinanced health system.

**Psychological distress in breast cancer patients**

Lucidi Fabio, Chirico Andrea, Mallia Luca and D'aiuto Giuseppe

This study evaluates the age role in psychological maladjustment in breast cancer patients, considering the mediation effects of different social cognitive mechanisms upon this relationship. A sample of 125 breast cancer patients 20–74 years old were interviewed in hospital during the day before breast-cancer surgical treatment assessing: patient's psychological maladjustment, knowledge about cancer and its treatment, social support, attitudes towards cancer treatment, social norms and Self efficacy for behaviours related to coping with cancer. SEM analysis confirmed that age influences negatively the patient's knowledge, which in turn, positively affects Attitudes, Subjective Norms and Self-efficacy. Self-efficacy resulted the only socio-cognitive variable influencing, in turn, patients' psychological maladjustment, lowering their level of depression and anxiety. Both the result clarify the controversial data on relationship between age and patient's psychological maladjustment, and suggest practically to work on patient's self confidence in order to reduce their distress.

**The configuration of a therapeutic failure with children of marginalised Roma families: For effective transcultural approaches**

Lurbe i Puerto Katia and Baumann Michèle

**Background:** Alin (born in 1993, Timisoara, Rumania) is the elder son of a Roma family settled for ten years in France, having heavy psychomotor and cognitive deficiencies. **Method:** Case study of Alin's psychotherapeutic trajectory. Findings. Socio-cultural representations of mental handicaps, intrafamilial relationships and personal history are interactive determinants of psychological accompaniment and healthcare provision. Mental healthcare team in charge of Alin misconceived in the relations of care: the central role played by the particular status family network attributes to the person with mental handicap and the articulation between diversity, difference and inequality in the family's experience of mental handicap and its care.

**Discussion:** In socio-culturally diverse contexts, the quality of relations of care depends on professionals' capability to develop socio-culturally sensitive and responsive to beneficiaries' needs psychotherapeutics. Transcultural approach is not effective unless it is integrated to conventional psychological practice, and a collaborative work is settled with the concerned professionals of social work and associative sectors.

**Regulation of goals and quality of life: The case of the disabled**

Lydia Peter and Barbara Houbre

The goals, which are internal representations of desired states, may be oriented differently. Thus the individual can achieve a performance by a goal approach (positive valence), heading towards the intended result ('Feeling relaxed'), or avoidance goals (negative valence), avoiding the consequence undesired ('Avoid being stressed') (Emmons, 1996, 1999). The objective of this study is to observe how the valence of goals is linked to the quality of life and mental health of people with disabilities. The sample consists of 83 individuals in which nearly 63% are men. The mean age was 43.95 years ( $SD = 13.35$ ) and half of them are active. Individuals could be carriers of a motor disability ( $n = 42$ , 50.6%), visual ( $n = 26$ , 31.3%) or auditory ( $n = 15$ , 18.1%). The award consisted of three separate questionnaires: the scale of personal life goals GIFS (Goal Importance and Facilitation Scale, Maes, Ter doest, & Gebhardt, 2002), the scale of quality of life (WHOQUOL-26, Leplege et al., 2000), the scale of anxiety-depression HAD (Zigmond and Snaith, 1983). The observed results are contrary to expectations. Indeed, it appears that the use of goals approach is connected to deterioration in the quality of life, anxiety and depression.

**Social cognition variables linked to the intention not to drive after drinking among offenders**

Lydia Peter, Christelle Ziebel and Elisabeth Spitz

In France, in 2008, 28% of all fatalities occurred in accidents with a driver or a pedestrian with a blood alcohol concentration of at least  $0.5\text{ g dL}^{-1}$ . This research aims to understand social cognition variables linked to the intention not to drive after drinking among drivers participating in awareness training about the causes and consequences of road traffic accidents. We refer to the theory of planned behaviour by Ajzen (1991). We include descriptive norms about family and anticipated regrets. 152 offenders aged from 18 to 77 years (mean 34.81) have participated. The results show that age, control beliefs (thinking of the accident risk, not to plan the trip and the obligation not to drink), anticipated regrets and descriptive norms explain 43% of the intention not to drive after drinking, in the next 3 months. Finally, an efficient prevention requires implementing action plans which take family into account.

**The effectiveness of a self regulation intervention in improving healthy diet at work**

Maas Josje, de Ridder Denise, de Vet Emely and de Wit John

**Background:** Overweight is associated with increased health risk, absence from work and decreased work performance, suggesting that prevention of overweight is an important topic in the organisational context. This study investigated the effectiveness of an intervention at improving self regulatory skills, such as goal setting and planning, to improve diet at work.

**Methods:** Employees ( $N = 80$ ) were randomly allocated to one of the two conditions (intervention/control) before completing measures at baseline and follow-ups at 10 weeks and 9 months. Measures tapped psychological, behavioural and physiological indicators of diet and health. **Results:** Compared to the control group, participants in the intervention group showed favourable outcomes on psychological (e.g. higher self-efficacy in changing diet) and behavioural measures (e.g. reduced snacking habit). No short-term physiological effects were found. **Discussion:** The results indicate that the self-regulation intervention is effective in improving healthy eating at work.

**Characteristics of sources of exercise self-efficacy among the Japanese elderly people**

Maeba Kosuke and Takenaka Koji

**Background:** The purpose of this study was to classify the patterns sources of exercise self-efficacy among the Japanese elderly people using cluster analysis. **Methods:** 858 subjects (men: 449, women: 409) aged 60 years and above responded to a set of measurements, including descriptive variables, exercise self-efficacy and its sources and the stages of change. **Results:** The patterns of sources of self-efficacy can be classified into four clusters: (1) 'Having access to all sources', (2) 'Lacking all sources', (3) 'Lacking other-related sources', and (4) 'Lacking self-related sources'. Subjects classified as 'Having access to all sources' had higher exercise self-efficacy and were high percentages of people in maintenance stage. Subjects classified as 'Lacking all sources' showed a contrasting tendency. Subjects classified as 'Lacking other-related sources' or 'Lacking self-related sources' showed a similar tendency with each other. **Discussion:** Future intervention studies should consider the characteristics of sources of self-efficacy in individual subjects.

**Bad habits in oral hygiene on campus: To change or not to change: That's the question!**

Maia Ângela, Azevedo Vanessa, Ferreira Ana Sara and Samorinha Catarina

Oral health behaviours are fundamental for health, but few studies have been focused on them, particularly on university students. This study aims to describe students' oral hygiene behaviours, perceptions about campus facilities concerning oral hygiene, and readiness to change oral behaviours. Participants were 403 college students from University of Minho, attending different courses; 70.5% were female. The mean age was 22.74 (SD = 4.74). The percentage of students that self-report absence of daily oral care was 61.5. The majority of students (88.6%) have meals on campus, however only 20.7% practiced oral health behaviours. Only 10.4% evaluated campus' conditions to promote oral hygiene as 'good' or 'very good'. If conditions improved, 40.4% would think about changing their behaviours and 29% would effectively change them. These results reveal the urgency to improve oral hygiene habits on campus and encourage the development of health promotion programmes.

**A comparison study between official records and self-reports: Implications to health research on childhood adversity**

Maia Ângela and Pinto Ricardo

**Background:** Evidence of a relationship between experiences of maltreatment and later health outcomes has been based on cross-sectional studies using retrospective self-reports. However, many researchers view retrospective self-reports skeptically. This study compared experiences of maltreatment and other childhood adversities, identified in children through official records with self-reports obtained in late adolescence. **Method:** Participants included 131 youths who had been confirmed as victims of maltreatment prior to age 13 by Child Protective Services. **Results:** Emotional and physical neglect were the most prevalent experiences found in the official records: 80% and 86%, respectively. However, when were assessed through self-report, only 51% of participants reported emotional neglect and 36% reported physical neglect. Only a small number of self-reports were consistent with official records (17%). **Conclusions:** The results of the relationship between self-report of maltreatment and later health outcomes should be approached with caution when retrospective reports or official data are used alone.

**Patients' expectations of total hip arthroplasty in a German sample**

Maike Lippmann, Csilla Jeszenszky, Stephan Kirschner, Klaus-Peter Günther and Friedrich Balck

Measuring outcome expectations and their fulfilment of total hip arthroplasty (THA) patients is gaining more international importance lately. Our purpose was to provide a German survey and to find out the significance of fulfilment of expectations in a German sample. We translated the Hospital for Special Surgery Total Hip Replacement Expectations Survey (THR Survey, Mancuso, 2008) and used it pre-operatively and 6 months post-operatively. Simultaneously we measured functionality with the WOMAC arthritis index at both points of time. We collected data of 193 THA patients (mean age 59.7, SD = 12.2). Our results show that patients with a higher number of pre-operative expectations turned out to have better functioning 6 months after surgery. Similarly, the patients with better post-operative functioning had their expectations almost completely (>91%) fulfilled. We conclude that expectations might also be a good indicator of outcome in the German sample with a strong link to functionality.

**Sense of integrity, the current anxiety and fastidiousness after taking exam of candidates for university study**

Malá Dana

The goal of research was to determine the level of anxiety and fastidiousness and their relationship to the coherence of candidates for university studies immediately after completing the written entrance exam. We used the STAI and SOC – Sense of Cohesion (Antonovsky, 1987). The sample consisted of 303 candidates, including 264 women and 39 men. Age range of applicants was from 17.5 to 23.6 years. We observed a negative significant relationship between current anxiety and sense of integrity ( $r = -0.37, p < 0.01$ ). Strong negative significant relationship was found between anxiety as personality characteristics and a sense of integrity ( $r = -0.56, p < 0.01$ ). Presented results prove that the more increased degree of personal integrity was, the lower was the current level of anxiety and fastidiousness as personality characteristics in applicants for university study (like in Daniel, Bratská, & Sarmany Schuller, 2000).

**The effectiveness of financial incentives for smoking cessation during pregnancy: Is it in being paid or the extra aid?**

Mantzari Eleni, Vogt Florian and Marteau Theresa

**Background:** Financial incentives appear to be effective in promoting smoking cessation in pregnancy. The mechanisms by which they operate are however poorly understood. This study examines how such financial incentives work, by exploring pregnant women's experiences of trying to stop smoking. **Methods:** Pregnant smokers ( $n = 36$ ), 20 ( $n = 20$ ) of whom were participating in an incentive scheme for smoking cessation and 16 ( $n = 16$ ) were not, were interviewed about their (i) motivation for quitting smoking and (ii) the factors that influenced their quitting efforts. All women were offered NHS Stop-Smoking treatment. Framework analysis was used to analyse the interviews. **Findings:** Women in the two groups reported similar reasons for wanting to quit smoking. However, they described dissimilar experiences of the Stop-Smoking Services, which they perceived to have differentially influenced their quit attempts. Incentivised women reported using the services more than non-incentivised women and described the motivating experience of being monitored and receiving feedback on their

progress. Non-incentivised women reported problems receiving the appropriate Nicotine-Replacement Therapy, which they described as having inhibited their cessation efforts. **Conclusion:** Women who were paid to stop smoking reported greater engagement with the Stop-Smoking Services, from whom they described receiving more help in quitting than non-incentivised women. This suggests the importance of robust evaluations that disentangle the provision of support from financial incentives.

### **Sport motivation and eating disorders: Longitudinal study among teenage girls**

Marjorie Maugendre and Elisabeth Spitz

**Background:** Sport is often close to well-being but it can be associated with behaviour disorders. Indeed, eating disorders are often described in the sport and among girls. **Objective:** showing how sport motivation (Vallerand, 1999) and achievement goals (Elliot, 1997) influence eating disorders. **Method:** Thirty-seven girls aged on average 17 years old. They do sport more than 8 h per week. They have responded a questionnaire 20 months apart. A modelling under PLS has been realised. **Finding:** Performance goals at T1 ( $\beta = -0.51$ ) and T2 ( $\beta = 0.50$ ) time, mastery goals at T2 time ( $\beta = 0.48$ ) and a-motivation at T1 ( $\beta = 0.33$ ) and T2 ( $\beta = 0.38$ ) time play directly role in development of eating disorders. **Discussion:** Teenage girls who persist 20 months later in the desire to be better than others in their sport have more probability to develop eating disorders. Moreover, those who want improve their competence have more eating disorders.

### **Validation of the Acceptance and Action Questionnaire in a clinical and non-clinical population in Cyprus**

The first study investigates the validation and factor structure of the adapted Greek AAQ-II among a clinical ( $N = 75$ ) and a non-clinical sample ( $N = 177$ ) in Cyprus. Cronbach alphas were at 0.84, suggesting internal consistency of the measure. Confirmatory factor analysis tested for the dimensionality of AAQ. Acceptable fit statistics were obtained for a unidimensional structure with items loading onto a single factor and intercorrelations between errors that account for positive versus negative wording of the items. Furthermore, AAQ-II was found to be significantly correlated with the Beck Depression Inventory-II ( $r = 0.75$ ), White Bear Suppression Inventory ( $r = 0.54$ ) and the Mindful Attention Awareness Scale ( $r = 0.43$ ). Overall, the AAQ-II appears to be a valid measure to be used with Greek-speaking populations. Issues regarding translation, cultural adaptation and reception of measures by different cultures to the ones the measure was originally created will be discussed.

Presenter: Karekla, Maria, University of Cyprus

Author: Michaelides, Michalis, University of Cyprus

### **Coping and experiential avoidance: Unique or overlapping constructs?**

The third study examined associations between coping as measured by the Brief COPE and experiential avoidance, as measured by the AAQ-II and the role of both constructs in predicting psychological distress and well-being. Specifically, associations between experiential avoidance and other types of coping were examined, and factor analysis addressed the question of whether experiential avoidance is part of coping or a related but independent construct. Results showed that experiential avoidance loads on the same factor as other emotion-focused and avoidant types of coping. The higher people are in experiential avoidance, the more they tend to utilise these types of coping strategies. Both experiential

avoidance and coping predicted psychological distress and well-being, with most variance explained by coping but some additional variance explained by experiential avoidance. ANOVAS also showed gender differences in experiential avoidance and coping approaches. Results are discussed in light of previous relevant findings and future treatment relevant implications.

Presenter: Karekla, Maria, University of Cyprus  
 Author: Panayiotou, Georgia, University of Cyprus

**Perceived stress, support, coping and health among university personnel: The role of experiential avoidance**

The fourth study investigated the relationship between experiential avoidance as measured by the AAQ-II, perceived stress as measured by the PSS-10, social support as measured by the SSQ and coping as measured by the Brief COPE as related to physical and health problems measured by the PHQ-15 in a university sample ( $N=112$ ). Analyses indicated significant correlations between perceived stress and overall health ( $r=0.46$ ), and experiential avoidance and perceived stress ( $r=-0.65$ ). Further analyses showed there are significant correlations between experiential avoidance and perceived social support received, reported recent health problems, coping (e.g. positive reframing, denial, behavioural disengagement, etc). Regression analyses, however, failed to result in significant interactions between these factors and other factors such as gender, marital status and age. Results are discussed in terms of previous research findings, the role of psychological flexibility within the workplace and occupational intervention design.

Presenter: Karayianni, Eleni, University of Cyprus  
 Author: Panayiotou, Georgia, University of Cyprus

**Measuring the treatment effectiveness of CBT and ACT in work related stress: A comparison study**

Workplace stress has been associated with various problems such as fatigue, lowered motivation and poor peer relations. Unless effectively targeted, these issues might lead to longer term costs such as lowered productivity and absenteeism. This study aimed to compare program effectiveness in a university sample. Program development and evaluation was planned following a needs assessment. A self-selected sample of university staff were randomly assigned to either an ACT-based psychoeducational group or a CBT control group. The groups were held on a weekly basis for a period of 6 weeks. It was anticipated that both interventions would show improvement on generalised measures such as work performance, emotional and physical well-being. However, we expected ACT to be more effective in enhancing psychological flexibility. Participants were assessed pre-intervention, post-intervention and at 3 month follow-up. Implications for health psychology include effective prevention and intervention programs to better manage stress in the workforce.

Presenter: Charalambous, Elena, University of Cyprus  
 Author: Stavrinaki, Maria, University of Cyprus  
 Author: Koumi, Elena, University of Cyprus  
 Author: Miltiadou, Elena, University of Cyprus  
 Author: Karayianni, Eleni, University of Cyprus  
 Author: Karekla, Maria, University of Cyprus

**Working with the oncology patient: Impact of psychotherapy on therapist**

Marques, Maia &amp; Ribeiro Helena and Angela &amp; Eugéni

This poster presents a study aiming to shed light on the impact that working with cancer patients has on therapists. The focus is both on the benefits of therapy and on the potentially disturbing effects of this work, including Post-Traumatic Stress Disorder symptoms. Therapists with at least 2 years of experience participate in this study. Prevalence of Post-Traumatic Stress Disorder symptoms and Posttraumatic Growth are evaluated. Moreover, we are using a semi-structured interview focused on the therapist's experience that will be analysed by grounded analysis. We expect that therapist's narratives highlighted both the positive psychological change of working with cancer patients and the disruptions on self-safety and other-esteem. At the moment interviews to the therapists are being done, this study pretends to provide a richer understanding of the impacts of working in this field and therefore be able to empower therapist's practice with the development of guidelines.

**Is less really more? Involving or not involving tumour patients in medical decisions: A patients' perspective**

Martine Hoffmann, Sophie Recchia and Dieter Ferring

Throughout the western industrialised countries, shared decision-making is gaining increasing attention in the area of health policy as well as in the field of oncology. However, little is known about the current practice in Siberia and its impact on patient outcomes so far. This study thus aimed at (a) exploring patients' level of satisfaction with information giving and treatment involvement and (b) identifying key psychosocial and disease-related determinants interrelated with the decision-making process. The sample comprised 172 in-patients treated for different types of cancer. Cross-tab analyses showed that in 70% of the reported cases, medical decision-making was in line with patients' wishes: thereof 40% of the respondents preferred a paternalistic style and 30% opted for a shared-decision-making approach. Of those patients who were dissatisfied with medical decision-making, 80% wished a higher degree of involvement. Implications of these findings for the development and use of decision support tools are discussed.

**FSS\_PAIN: A measure of perceived formal social support for autonomy in pain**

Matos Marta, Bernardes Sónia and Pereira Sabina

**Background:** The effects of perceived social support (PSS) on pain-related functional autonomy are inconsistent, suggesting the moderating role of an often neglected function of PSS – the promotion of autonomy/dependence. Therefore, we aimed to develop a measure of older adults' PSS for autonomy in pain, in formal settings. **Methods:** 151 participants (Mage = 75.4) attending different settings (e.g. nursing homes, day-care centres) completed the FSS\_PAIN, along with other measures of PSS (SSS-MOS; Sherbourne & Stewart, 1991) and pain experiences (BPI; Cleeland, 1989). **Findings:** The FSS\_PAIN shows a two-fold structure: (1) Promoting autonomy ( $\alpha = 0.84$ ); (2) Promoting dependence ( $\alpha = 0.88$ ). It has good validity, discriminating the PSS of adults attending different settings or having different pain experiences ( $p < 0.03$ ), e.g. pain severity predicts perceived promotion of dependence ( $R^2 = 0.14$ ), but only for adults with chronic (vs. acute) pain. **Discussion:** FSS\_PAIN is a sound tool, highlighting the role of autonomy promotion on pain-related functional autonomy

**Health in the context of women in prison: Old problems and new concerns**

Matos Raquel, Barbosa Mariana, Salgueiro Gabriela and Campos Luísa

Several studies were developed in order to understand life trajectories and prison experiences of women inmates (e.g. Fonseca & Matos, 2009; Matos, 2008; Matos et al., 2010). As health has been pointed out as a traditional problem of female imprisonment, in this paper we make a specific analysis of health issues that emerged in the mentioned investigations. First, research data were collected through the analysis of the case files of 49 young and 175 foreign women detained in Portuguese prisons and were submitted to statistical treatment. Then, qualitative data were collected through in-depth interviewing with women inmates and the qualitative material that emerged from the interviews was analysed under grounded theory principles. Results show that although at a first glance health seems no longer to be a problem, for its significance in the context of female imprisonment some health-related issues must be of major concern: drugs, victimisation and medication.

**Developing a computer delivered, theory-based intervention for guideline implementation in general practice**

McDermott Lisa

**Background:** This study aimed to develop theory-informed, computer-delivered interventions to promote the implementation of guidelines in general practice. The interventions aimed to promote guideline adherence for antibiotic prescribing in respiratory tract infections, and recommendations for secondary stroke prevention. **Methods:** Face-to-face interviews with 33 general practitioners (GPs) were conducted. Computer prompts were developed using aspects of social cognitive theory and clinical guidelines. Prompts were presented to GPs and modified based on interview feedback. Inductive thematic analysis identified factors involved in the decision to use the prompts. **Findings:** GPs reported being more likely to use the prompts if they were perceived as offering support and choice, but less likely to use them if perceived as a method of enforcement. **Discussion:** Acceptability and satisfaction with computer-delivered prompts to follow guidelines may be increased by working with practitioners to ensure that the prompts will be perceived as valuable tools that can support GPs' practice.

**Identifying belief-based targets for the promotion of testicular self-examination**

McGilligan Caroline and O'Neill Siobhan

Testicular cancer (TC) is the most common form of cancer among young males (17–35 year old). Testicular self examination (TSE) is the only independent way of detecting the disease earlier. With the exception of Brubaker and Wickersham (1990), no further studies have identified the underlying beliefs associated with TSE behaviour using the theory of planned behaviour (TPB). This study elicits salient beliefs about TSE behaviour. A random sample of 50 adult males from the University of Ulster, Northern Ireland, participated in the elicitation study. Seven attitudinal, five normative and nine control beliefs were found. Findings revealed that the current beliefs among university males were comparable to the beliefs elicited from college males in Brubaker and Wickersham's (1990) study. Public health efforts to promote TSE should focus on the attitudinal, normative and control beliefs underlying the TPB.

### Chronic pain in Ireland: Prevalence, impact, economic cost and predictors

McGuire Brian, Raftery Miriam, Murphy Andrew, Sarma Kiran, Normand Charles, Ryan Padhraig and De la Harpe Davida

**Aims:** To determine the prevalence of chronic pain in Ireland; the 1-year persistence of pain; incidence of new pain; the economic cost of chronic pain; predictors of pain onset, pain chronicity and pain-related disability. **Method:** 3136 people were surveyed about socio-demographic variables, physical and psychological well being, depressive symptoms, the presence of pain, pain severity, pain-related disability and illness perceptions. **Results:** Responses ( $n=1204$ ) indicated prevalence of chronic pain was 35.5% ( $n=428$ ) and 59.9% still had pain at 1 year. Illness cognitions predicted persistence of pain. New chronic pain was reported by 12.7% at follow-up, new pain at follow-up was predicted by poor self-reported physical QoL at baseline. The economic cost of chronic pain was estimated at €4.76 billion per year, or 2.55% of Irish GDP in 2008. **Conclusion:** Chronic pain is a prevalent and expensive health problem in Ireland and psychological factors appear to influence the course of chronic pain.

### The association between receipt of informal care and health in older people

McKee Kevin and Dahlberg Lena

**Background:** Older people as care-receivers are under-researched. We examined the health and well-being of older people with differing levels of care need and receipt. **Methods:** Community resident older people ( $N=1250$ ) from a single UK metropolitan area were randomly recruited, and completed a questionnaire on social exclusion via interview. Participants were categorised into one of the four groups: receiving informal care; receiving informal support; no receipt of informal care/support despite need and no receipt of informal care/support, no need. **Findings:** Associations ( $p<0.001$ ) between group membership and health status ( $F=75.7$ ), functional status ( $F=159.1$ ), well-being ( $F=29.5$ ) and loneliness ( $F=28.9$ ) indicated the 'receiving care' and 'no receipt of care/support despite need' groups had the poorest health profiles. Logistic regression determined primary predictors of group membership. **Discussion:** A significant group of older people receives no informal care/support despite frailty. Research is needed to determine why some older people do not receive informal care appropriate to their needs.

### Intrinsic motivation explains older adults' active participation in a television exercise program

Meis Jessie, Kremers Stef and Bouman Martine

**Background:** The goal of this study was to explore which underlying motivations were associated with actively participating in a television exercise program called 'The Netherlands on the Move!-television' (NOM-tv). **Methods:** The current cross-sectional study was carried out among 1349 viewers of NOM-tv. The respondents completed the Intrinsic Motivation Inventory (IMI), assessing their levels of intrinsic motivation towards participating in the NOM-tv exercises. **Findings:** The results show that three factors were highly relevant for frequent participation (compared to occasional participation): enjoying the NOM-tv exercises ( $OR=1.38$ , CI: 1.11–1.70), feeling competent to perform this activity ( $OR=1.55$ , CI: 1.29–1.86) and willingness to put effort into the exercises ( $OR=1.65$ , CI: 1.32–2.07). In addition, frequent participants had a lower BMI, a higher educational level, viewed NOM-tv more often and were more active in their daily lives, in comparison to occasional participants. **Discussion:** We recommend future physical activity interventions to aim at encouraging people's intrinsic motivation towards exercise.

**Understanding non-compliance with smoke-free policies in public places in Albania: A case of weak social deterrents?**

Melonashi Erika, Eiser J. Richard, Rodafinos Angelos and Lazuras Lambros

**Background:** The implementation of smoking bans in Albania has been quite difficult, especially because of the high smoking rates. The aim of this study was to utilise the general theory of deterrence (GTD) to understand non-compliance with smoke-free policies in public places. Participants were 333 university student smokers ( $M_{age} = 21.2$  years). **Measures:** A self-report questionnaire was administered to assess variables from the GTD, attitudes and norms. **Results:** Smokers reported high noncompliance rates, strong social norms but weak attitude towards non-compliance with smoke-free policies. Furthermore, non-compliance was predicted by weak legal, moral and social deterrents. **Discussion:** The findings suggest that although Albanian smokers were negative towards noncompliance, they still violate smoke-free policies in public settings, mainly as a result of weak legal and social deterrents. From a practical perspective, strengthening the barriers to noncompliance is particularly important (e.g. campaigns, frequent controls, fines, etc.).

**Environmental stress, place identification related to the urban setting as antecedents of pro-environmental behaviours: An experimental study**

Meloni Antonella, Fornara Ferdinando and Carrus Giuseppe

Models and constructs referring to the domain of health psychology may be highly useful as theoretical frameworks for predicting pro-environmental behaviours, nonetheless, such references have been substantially overlooked in the domain of environmental psychology. This study investigates the specific role of environmental stress and place identification at the level of urban setting on the intention to pursue pro-environmental behaviours in that setting. For this purpose, an experiment was carried out in a controlled setting ( $N = 80$ ) where local identity (made salient by means of a scenario) and environmental stress (induced by the exposition to urban traffic) were manipulated (a 2-by-2 factorial design, i.e. 20 Ss for each condition) and self-reported pro-environmental intentions and self-efficacy were measured. Results show that the salience of local identity affects pro-environmental intentions, whereas the exposition to urban stress can activate such intentions when individuals perceive their self-efficacy as adequate.

**Body dissatisfaction as a risk factor of eating disturbances**

Meshkova Tatiana, Kelina Marina and Nikolaeva Nataliya

Body dissatisfaction is an important risk factor of eating disturbances (ED). Researches on this topic in Russia were not carried out. 181 school girls and students (mean age = 18.4) from Moscow nonclinical population were tested by Eating Attitude Test (EAT-26) and Body Appreciation Scale (BAS). EAT-26 focuses on eating behaviour problems (dieting, bulimic behaviour, weight preoccupation). BAS reflects aspects of positive body image. The occurrence of eating behaviour problems (EAT-26 scores above 20) is equal to 7.2%. Among girls from magnet school with profound study of German language, there was 21.4% risk of ED. Spearman rank correlations have shown negative relationship between EAT-26 and BAS ( $R = -0.41$ ,  $p < 0.0001$ ). Body dissatisfaction is associated mostly with dieting behaviour. Body dissatisfaction is the risk factor of developing ED among girls and college women, especially in the prestige schools.

**Attitudes and needs of kidney patients and health care professionals regarding self-management: A qualitative analysis**

Meuleman Yvette and Van Dijk Sandra

**Background:** Little is known about self-management in kidney patients. This study examined needs and attitudes of kidney patients and health care professionals regarding self-management. **Method:** A purposive sample of 48 patients and professionals from four hospitals attended eight semi-structured focus group interviews. Transcripts were independently analysed by two researchers according to the Grounded Theory and afterwards compared to the Self-regulation Theory. **Findings:** The identified main themes corresponded with the Self-regulation Theory. For example, patients and professionals reported the importance of concrete and intrinsic goals to reduce salt intake, the burden of managing multiple lifestyle restrictions and the desire for control by self-monitoring blood pressure and dietary intake. Furthermore, almost all patients, but very few professionals, reported the need for additional practical information and for involving partners. **Discussion:** Self-regulation Theory provides a useful framework for building self-management interventions to improve health care, based on the needs of kidney patients and professionals.

**Antecedents of sexual prejudice among adolescents**

Mevissen Fraukje E.F., Bos Arjan E.R., Pryor John B., Haas de Katie, Empelen Van Pepijn and Kok Gerjo

**Background:** Sexual prejudice is widespread among adolescents and can have detrimental consequences for (mental) health of homosexual youngsters. Previous studies described the influence of several demographic and personality factors on stigmatisation of homosexuals. However, the relative importance of these antecedents is unknown. **Methods:** Pupils from different educational levels ( $N=737$ ;  $M=15.8$  years,  $SD=1.43$ ) filled out a questionnaire, containing validated measures of relevant antecedents of sexual prejudice (e.g. gender, masculinity) and other antecedents that so far received limited research attention (affective responses, normative beliefs). **Results:** Hierarchical regression analysis showed that negative behavioural responses towards homosexuals were predicted by gender, religion, masculinity, social norms, cognitive and affective attitudes towards homosexuals and contact with homosexuals. This model explained 64% of the variance. **Conclusion:** An integrated model of sexual prejudice will be presented and implications for a school-based curriculum to reduce sexual prejudice among adolescents will be discussed.

**Psychosocial determinants of utilisation of professional supportive care services by cancer patients**

Michel Morin, Stephanie Blois, Magali Mahieufe and Florence Duffaud

**Objective:** This study aims at examining utilisation of supportive care services and its correlates among French cancer patients. **Methods:** 222 patients have completed a questionnaire about utilisation of supportive care, social support, coping and mood states. Analyses were conducted to test the association between utilisation of supportive services, clinical, socio-demographic and psychosocial characteristics. **Results:** 67% of respondents reported accessing one or more of the support services. Support services users were significantly more likely to be female, younger, to have breast cancer and to have undergone a surgery than the non-users. Perceived availability of material support and support-seeking coping were significantly tied to social workers services utilisation. Support-seeking coping,

negative coping, anxiety, confusion and fatigue were also associated to psychological support utilisation. **Conclusions:** This research can give a better understanding of psychosocial processes which determine the use of supportive care services. It should also contribute to improve information with reluctant patients.

### Norm activation and organ donation

Mohs Anja and Hübner Mohs

Activation of descriptive and injunctive norms is a successful concept to positively influence behaviour, e.g. eco-friendly behaviour. However, its impact on organ donation behaviour remains unclear while there is evidence for a positive impact of persuasive family-egoistic messages as well as fear-reducing information material. The present experimental study ( $N=239$ ) combined persuasive communication, information and norm activation resulting in a  $2 \times 2 \times 2$  design for descriptive, injunctive and family-egoistic norm. Against expectation, with one exception the intervention failed to show any significant impact of the experimental conditions on organ donation attitude and behaviour. Only for the attitude variable a significant three-way interaction between the different conditions was observed. Interestingly, the control group receiving only the information material and answering the questionnaire showed highest positive attitude towards organ donation. Results are discussed against the background of limitations in applying the theory of norm activation.

### Awareness of sexually transmitted diseases and condom use in university students in Hawaii

Mori Kazuyo

**Background:** The patients of STDs are at high risk to get HIV, but these infections are often asymptomatic and that is why we need to educate young people in order to decrease the STD disease rate of a high risk age group. The purpose of this project is to learn what university students think about STDs and condom use. **Methods:** A total of 234 University students agreed to participate the survey in Jan. 2008. The Questionnaire on Awareness of Sexually Transmitted Diseases (Amazaki, Shimizu 2007), questions about demographics and two open end questions asking about the impressions of STDs and sexual behaviour were used. **Findings:** It was found that the use of birth control pills by female and protective sexual intention factor influenced on recent condom use. **Discussion:** Results from this study will be useful information to compose effective health education program for young adults about STDs and safe and healthy sexual behaviour

### What makes Internet-based health behaviour interventions effective? Evaluation of 'gut instincts'

Morrison Leanne, Yardley Lucy, Michie Susan and Moss-Morris Rona

**Background:** This research aims to identify the effects of two design features, self-management and tailoring, on the impact of an Internet intervention, 'gut instincts'. This abstract presents preliminary analyses of a cohort forming part of an ongoing randomised study (completion date: April 2011). **Methods:** 353 participants were randomised to one of the three content-matched versions of an intervention providing advice for managing mild bowel problems (information only, self-management or self-management with tailoring). Personal control, illness coherence and emotional representations (IPQ-R subscales) were measured at baseline and intervention completion. **Findings:** Findings based on 118 completers indicate that participants showed improved emotional representations over time ( $p < 0.001$ ), but showed

less personal understanding of their bowel problems ( $p < 0.01$ ) and believed that they were less controllable ( $p < 0.001$ ). There were no significant differences between conditions. **Discussion:** Early findings suggest that providing tailored or self-management components may not increase intervention impact.

**Physical activity engagement for type 2 diabetes control – Can we predict who is at risk of non-performance?**

Murray Nikki and Chater Angel

**Background:** Physical activity is vital to diabetes management as it can improve glycaemic control. Can we predict those participants who decide to not engage in physical activity for their diabetes control? **Method:** This diabetes outpatient study ( $n = 345$ ) measured Diabetes Self-Care Activities, Theory of Planned Behaviour, Self-Efficacy, Health Value, Happiness, Positive and Negative Affect, Behavioural Importance and 6 Diabetes Status items, on physical activity engagement. **Findings:** The TPB was a significant model ( $p < 0.001$ ), with intention ( $p < 0.001$ ) and subjective norm ( $p < 0.05$ ) being significant predictors. Good diabetes self care, happiness and behavioural importance were all also significant predictors of physical activity. Diabetes Status variables were not found to be significant ( $p > 0.05$ ). **Discussion:** Future research should investigate the indirect effects of these variables in increasing physical activity engagement in diabetes cohorts and suggestions are made for the creation of a 'Diabetes Status Checklist'.

**Primary prevention in health in adolescence: Evaluation of a life skills Program**

Murta Sheila Giardini, Borges Francimara Azevedo, Ribeiro Danilo Cruvinel, Rocha Eliana Porto, Menezes Jordana Calil Lopes and Prado Mariana de Moraes

This paper describes the process and results reached in a life skills program for 18 Brazilian adolescents, from a non-clinical sample, with 12–14 years old. Sixteen group sessions were done, based on a psycho-educational approach and group techniques. The process evaluation included diary measures of consumer satisfaction, practice of skills trained in the course of the intervention and support provided by the group. The process evaluation demonstrated that the participants felt satisfied with the program; practiced social skills, cognitive skills and stress management skills learned during the intervention; and demonstrated a sense of confidence in the group intervention. Follow-up interviews one year after the intervention conducted with the adolescents and their parents shown that the behavioural changes were maintained. The results suggest positive results from the intervention, but experimental studies will be necessary for robust conclusions on the effectiveness of this program.

**Life skills promotion in a dating violence preventive program for Brazilian adolescents**

Murta Sheila Giardini, Santos Bruna Roberta Pereira, Rodrigues Ísis de Oliveira, Nobre Larissa de Almeira, Miranda Ana Aparecida Vilela, Araújo Ivy Fonseca de and Franco Claudio Teodoro Peixoto

The practice of life skills reported by adolescents participants from a dating violence preventive program at school will be described in this paper. Twenty-seven female and male adolescents, between 14 and 19 years old, participated from a group intervention, composed by seven psychoeducational sessions, cognitive behavioural oriented, which approached the themes: dating violence, decision taking, assertiveness, emotions management, problems resolution and sexual and reproductive rights. Strategies to increase adherence and motivation

were adopted in each session. The participants were instructed to write, in the beginning of each session, what they have practiced during the week about the skills discussed in the former sessions. These reports were categorised by content analysis and pointed the following categories of practice: decision taking, communication, self knowledge, empathy, critical thinking, problem solution, emotion management and dissemination for friends and family. It is concluded that the intervention promoted the practice of life skills in social and affective relationships.

### **Psychosocial technologies for mental health prevention: A review**

Murta Sheila and Abreu Samia

**Objective:** To describe the Brazilian literature related to the use of psychosocial technologies for mental health prevention. **Method:** Systematic review of the literature, with papers related to (a) the use of psychosocial technologies, (b) for primary prevention and mental health promotion, (c) in Psychology journals, (d) on the Scielo database and (e) that the focus on prevention was assumed by the author. Data were analysed by frequency counting. **Results:** It was identified in 16 papers in 13 journals. The programs were implemented in schools (29.4%), hospitals (17.6%) and primary care programs (17.6%), promoting social skills (35%) and life skills (20%), mostly with children and adolescents (46%). The studies designs were pre-experimental (63.6%), experimental (27.3%) and quasi-experimental (9.1%), with qualitative measures, without follow-up in 81.3%. **Discussion:** The Brazilian production on the subject is still incipient, hindering the programs dissemination and implementation of preventive politics in psychology.

### **Cognitive styles of 16–18-year-old students with academic difficulties enrolled in adult education**

Nadia Rousseau, Michelle Dumont, France Beaumier, Danielle Leclerc, Line Massé, Suzie McKinnon and Karen Tétreault

Earning a high school diploma is a challenge for most students with special needs (Rousseau, 2009). To do so, many 16–18-year-old adolescents turn to adult education. What is known about their learning needs? To answer this question, 100 students completed a questionnaire identifying their cognitive style (EVAC, Flessas & Lussier, 2007) and participated in a focus group on learning conditions that improve their academic achievement. The results show that students once enrolled in special education classes have significantly lower scores than their peers from regular classes for the following subscales: simultaneous style, linguistic competencies, receptive competencies and expressive competencies. These results lead us to believe that enrolment in special education classes could contribute in the development of a dominant cognitive style that could disadvantage academic and psychosocial adaptation as well as integration into the workplace. The results will be discussed from a psychopedagogical standpoint.

### **Design and progress of a study on two intensive smoking cessation methods in cardiac patients**

Nadine Berndt, Lilian Lechner, Mudde Aart, De Vries Hein and Bolman Catherine

**Background and Study Goal:** Smoking cessation in cardiac patients improves prognosis more than any other treatment. This study aims at testing the (cost-) effectiveness of two intensive smoking cessation counselling methods combined with nicotine replacement therapy. The two intervention groups are compared against each other and a control group receiving usual care.

**Methods:** In eight hospital cardiac wards, 681 cardiac patients who smoked prior to admission will be recruited (227 per group). An experimental cross-over design with a baseline and two follow-up measurements is used. The primary outcome measure (continued abstinence) is self-reported and biochemically validated. The feasibility of the interventions in practice is also studied to detect conditions for large-scale dissemination. **Preliminary findings:** Since the start of the study, 532 cardiac patients have been recruited. Patients are predominantly male with a mean age of 56 years. **Discussion:** Inclusion rate is lower than planned. The interventions have the potential to reduce smoking rates and co-morbidity among cardiac patients.

#### **Quality of life enjoyment and satisfaction among HIV positive and individuals with AIDS in South Africa**

Naidoo Pamela

The study sought to ascertain the quality of life enjoyment/satisfaction (QLES) (defined by physical health, feelings, work, household duties, schoolwork, leisure, social relations and overall satisfaction of life) of individuals with HIV/AIDS. The results from this quantitative study are from baseline measures. This predominantly female sample (76%) comprised 119 HIV infected adult participants with a mean age of 31.6 years ( $SD = 7.9$ ). The results obtained using the QLESQ were: overall satisfaction and social relations: above average (62% and 63% respectively) and physical functioning and leisure activities: average (52% and 54% respectively). Despite the fact that the majority of the sample was diagnosed with the clinical syndrome AIDS (63%), the overall satisfaction was high. This may be explained by access to ARVs. This study supports the hypothesis that good social support and access to health resources may serve as buffers or may moderate adverse conditions during the HIV/AIDS disease course.

#### **Perceived stress and coping strategies in headache (migraine and tension-type headache) patients**

Najam Najma

The investigation aimed to identify perceived stress and coping strategies in headache (migraine and tension) patients. Gender differences were also explored. The sample consisted of 40 headache patients (20 Migraine, 20 Tension), taken from two hospitals of Rawalpindi, Pakistan. Perceived stress was measured using the Perceived Stress Scale, Perception of Pain using culturally adapted McGill Pain Questionnaire, and Coping Strategies using the Brief Cope Scale. Results indicate a highly significant correlation between the perceived stress and coping (active and avoidant) strategies. Significant gender differences were also seen with females reporting higher stress as compared to males. Implications for treatment are discussed in the light of findings

#### **The relation between appearance teasing and body image dissatisfaction in preadolescence**

Nanu Eugenia and Baban Adriana

The aim of this study is to identify relevant factors that contribute to body image dissatisfaction in preadolescence, by exploring the relation between peer teasing, the centrality of appearance in one's sense of self and body image dissatisfaction. Participants (81 girls and 73 boys, between 10 and 12 years old, completed 'POTS' (Thompson, Cattarin, Fowler & Fisher, 1995), 'CMAS' (Clark & Tiggemann, 2007) and PASPPC (Harter, 1985). Results showed that factors examined varied in importance depending on gender and BMI. Teasing

contributed to the association between increasing BMI and body image dissatisfaction, in the context of high scores in appearance cognitive schema. The impact but not the frequency of teasing was related to body image dissatisfaction. Gender differences revealed that, the impact of teasing was higher for girls compared to boys. The present research findings give us further perspective in exploring peer influence in the development of body image dissatisfaction.

**Is the amniocentesis decision different when couples perceive it to be shared with the geneticist?**

Nazaré Bárbara, Fonseca Ana and Canavarro Maria Cristina

**Background:** The influence of geneticists in the amniocentesis decision is seen as significant by numerous couples. This study compared couples who perceived this decision to be shared with the geneticist to those who did not. **Methods:** 210 couples answered analogical scales regarding the amniocentesis decision. The groups were compared using student's *t* and chi-square tests. **Findings:** Women perceiving the decision as shared with the geneticist assessed the risk of foetal anomaly as higher ( $p=0.05$ ) and felt less informed on amniocentesis ( $p=0.031$ ). No differences were found regarding amniocentesis uptake, difficulty of the decision, confidence on the decision, perceived usefulness and reliability of amniocentesis, and men's perceptions of information level and risk of foetal anomaly. **Discussion:** The role of geneticists seems to be especially relevant when women have less information on amniocentesis and think their baby is at risk. These perceptions should be assessed in prenatal appointments.

**Beyond medical risk: Individual perceptions as predictors of amniocentesis uptake in couples sharing the decision**

Nazaré Bárbara, Fonseca Ana and Canavarro Maria Cristina

**Background:** Studies show that medical risk not to be the best predictor of amniocentesis uptake. The present investigation explored the influence of individual perceptions in couples sharing the amniocentesis decision. **Methods:** 210 couples provided sociodemographic and clinical data, and answered analogical scales regarding the amniocentesis decision. A logistic regression was performed in order to assess their association with amniocentesis uptake. Maternal age and indication for testing were controlled for. **Findings:** Significant predictors found included men's perception of amniocentesis reliability ( $\beta=0.040$ ), women's perception of amniocentesis usefulness ( $\beta=0.048$ ) and women's willingness to terminate the pregnancy in case of foetal anomaly ( $\beta=0.043$ ), but not men's or women's risk perception. Neither maternal age nor indication for testing predicted amniocentesis uptake. **Discussion:** The amniocentesis decision is considered to be difficult by some couples. In order to support this decision-making process, health professionals should acknowledge the main influences in amniocentesis uptake.

**Grief following termination of pregnancy for foetal anomaly: Who is at risk for maladaptive reactions?**

Nazaré Bárbara, Fonseca Ana and Canavarro Maria Cristina

**Background:** Research on grief following termination of pregnancy for foetal anomaly (TOPFA) is scarce. This study aimed to identify individual and clinical influences on adaptation to this event. **Methods:** 23 men and 27 women (data collection ongoing) with the history of TOPFA provided sociodemographic and clinical data, and answered the Perinatal Grief Scale. Multiple regressions were run in order to identify predictors for the three grief

dimensions (Despair, Active Grief and Difficulty Coping). Gender and time since TOFTA were controlled for. **Findings:** Previous pregnancy loss was a significant predictor of Despair ( $\beta=0.378$ ), Active Grief ( $\beta=0.398$ ) and Difficulty Coping ( $\beta=0.377$ ). Grief was independent of having children both before and after TOPFA, time since loss and gender. **Discussion:** Pregnancy loss previous to TOPFA is a risk factor for maladaptive reactions following this event. Special clinical attention should be given to couples dealing with recurrent pregnancy losses.

### **A study of job burnout among university teachers**

Necsoi Daniela, Beldianu Iolanda and Porumbu Daniela

Burnout has been identified as a significant issue among those professionals involved in high levels of personal interaction, such as nurses and teachers. The purpose of this research was to identify the level of job burnout among 70 Romanian university teachers. Maslach Burnout Inventory – Educator's Survey was used to collect data from respondents. Data analysis revealed that university teachers possessed an average score on the three sub-scales: emotional exhaustion, depersonalisation and personal accomplishment. The results indicated that women have a high level of emotional exhaustion and a low level of personal accomplishment and are found to be significantly different on these two scales from their male counters. Variables like age, academic title or job tenure do not produce significant differences among subgroups of teachers.

### **Burnout and personality**

Necsoi Daniela, Porumbu Daniela, Beldianu Iolanda, Lepadatu Ioana and Raulea Ciprian

This study investigated the relationship between burnout and personality. Burnout is measured with the Maslach Burnout Inventory (emotional exhaustion, depersonalisation and personal accomplishments), and personality is captured with the Eysenck Personality Inventory (neuroticism, extroversion), Type A Personality Inventory (type A personality), Multidimensional Locus of Control Inventory (locus of control). Regression analysis controlling for demographic and job-related characteristics, based on 70 Romanian university teachers, indicated that emotional exhaustion is positively related to neuroticism and negatively related to extroversion. Personal accomplishments are negatively related to neuroticism. Type A personality and locus of control does not influence significantly the burnout level. Implications of the results are discussed. Ways to cope with stress were also suggested to help alleviate teacher burnout.

### **The Theory of Planned Behaviour applied in physical exercise: Differences between people who do regular physical exercise and those who do not do regular physical exercise**

Neipp Marie-Carmen, Leon Eva, Quiles Yolanda and Rodriguez-Marin Jesus

The purpose of this study was to explore the differences in the prediction capacity of the Theory of Planned Behaviour (TPB) between people who practise physical exercise and people who do not practise. In this study two structural equation modelling were used to test a traditional model of TPB in two groups of people. The first group was formed by 554 people who practised physical exercise and the second group was formed by 332 who did not practise. Results confirmed differences between two groups of people in the prediction capacity of TPB model. In the first group, subjective norm and perceived behavioural control had a significant impact on intention and explained 63.6% of the variance in intention. In the second group all

variables had a significant impact on intention and explained 51.4% of the variance in intention. **Conclusions:** Perceived behavioural control was the strongest predictor of intention to practise physical exercise.

**Development and validation of a questionnaire of Theory of Planned Behaviour in physical exercise**

Neipp Marie-Carmen, Tirado Sonia, Quiles Yolanda and Rodriguez-Marín Jesús

The Theory of Planned Behaviour (TPB) is one of the main theoretical models in the study of the different variables, which influence in the practise of physical activity. The aim of this study was to develop a questionnaire based on TPB in physical activity context providing evidence for the validity of the obtained measures. The instrumental project included three independent studies. The first study entailed the construction and qualitative assessment of the items. In the second study, the analysis of factorial structure was performed by means of exploratory measures, and it showed that the reliability of measures was adequate. The third study provided evidence on the dimensionality of the scale. The confirmatory factorial analysis guaranteed the stability of factorial structure proposed by the TPB and provided evidence for the internal validity of the inventory. Moreover, this study provided evidence of its external validity.

**The relation between school resources and their management to adolescents' physical activity (PA)**

Neter Efrat, Sophi Zvili and Sharon Cohen

**Objectives:** Examine association between school resources and management, the latter a novel concept, and adolescents' PA inside and outside school. **Methods:** Cross-sectional self-administered survey of 100 boys and girls, aged 12–15. Dependent variables included PA on school grounds and outside school. Independent variables included school resources (active recess, sports courts and elective sport activities) and the management of the resources (competitive activities and sports courts' managements). **Results:** PCA of after-school activities yielded three factors: boys ( $\alpha=0.76$ ), girls ( $\alpha=0.63$ ) and gender-neutral ( $\alpha=0.77$ ). A significant correlation was found between boys' PA and school resources ( $r=0.20$ ,  $p<0.05$ ) and the management of the resources ( $r=0.35$ ,  $p<0.05$ ). Non-significant correlation was found between girls' and neutral PA to school resources, and a negative significant correlation was found between girls' and neutral physical activities to resources' management. Both resources and their management contribute in predicting PA. **Discussion:** School predicts PA and can be a promising avenue for intervention. School is associated differentially with PA among girls and boys. Limitations are discussed (cross sectional design,  $N$ , gender bias in resources).

**'Just having the craic'? A qualitative exploration of Irish student problematic and binge drinking culture**

Ni Chaolain Sinead and Moane Dr. Geraldine

Irish student problematic and binge drinking patterns and behaviours represent a pervasive issue of increasing concern in Ireland. This study, part of a larger research project, aims to provide a more in-depth understanding of students' own reasoning as to their drinking and phenomenology of these patterns. More specifically, this study aims to examine why problematic levels and patterns of consumption are maintained despite experience of negative

consequences. Semi-structured interviews were conducted with 12 Irish undergraduate students. Thematic analysis of data revealed several key themes including the role of self-esteem and beliefs about the self, participants' belief and expectation that they would change (however, with little awareness of how this would be achieved) and the lack of credibility of public discourse and policy relating to binge drinking in Ireland. This highlights the lack of understanding of the issue and the need, therefore, for a more in-depth understanding of the factors involved.

### Coping with hard educational load by young and elder students

Nikolaeva Elena and Kotova Svetlana

The purpose of this report was to compare the psychophysiological mechanisms of adaptation to the hard educational load of different ages' students. We have used reaction time tasks (simple and complex variants), variability of cardio rhythm record, Strelau Temperament Inventory (STI), coping-strategies test and Ego defences test (Plutchik et al., 1979). 593 students were participants (from 20 till 50 years old, just women). All of them were studying at the pedagogical faculty of the university. We showed that young students adapt to the hard educational load with changing their vegetative system regulation (sympathetic system activation). But elder students adapt to the hard educational loads changing their coping strategies and Ego defences mechanisms. We propose that student's different ages need different educational program.

### Negative emotion and illness perception predict low CD4 counts and high viral load

Norcini Pala Andrea and Steca Patrizia

**Background:** Recent studies have found that negative emotions promote a faster progression of HIV. Illness perception influences emotions, compliance and consequently illness progression. **Method:** Cross-sectional data were gathered via Internet. Participants were 146 people with HIV (gender: 84.2% M, 15.1% F; mean age = 40.22, DS = 9.27). Self-report questionnaires were administered: Illness Perception Questionnaire and Positive and Negative Affects Scale. **Results:** High viral load was predicted by negative emotions ( $\beta = 0.31$ ,  $p < 0.001$ ), worry about the illness ( $\beta = 0.22$ ,  $p = 0.016$ ), and the perceived influence of illness on emotions ( $\beta = 0.36$ ,  $p < 0.001$ ). Low CD4 counts were predicted by negative emotions ( $\beta = -0.20$ ,  $p = 0.024$ ) and perceived illness's duration ( $\beta = -0.18$ ,  $p = 0.042$ ). **Conclusion:** Negative emotions predict HIV progression, suggesting that psychological interventions focused on emotions may help HIV-positive persons' illness management and health.

### Diabetes-specific quality of life in Finland

Nuutinen Helena, Ilanne-Parikka Pirjo, Aalto Anna-Mari and Tuomisto Martti

**Background:** Quality of life of persons with diabetes in Finland was explored by using the diabetes-specific ADDQoL19-measure. **Methods:** The data was collected from the medication reimbursement register of the Social Insurance Institution (284 persons with diabetes type one, 196 persons with diabetes type two). **Findings:** In many countries, the ADDQoL has shown the most negative weighted impact of diabetes on the domain freedom to eat as you wish. In Finland, the most negative weighted impact was assessed on the domain feelings about the future (among women and men with T1D and women with T2D). Among men with T2D, the most negative weighted impact was assessed on sex life. **Discussion:** The ADDQoL19 shows individual, culturally different impacts of diabetes on quality of life. Together with

improving the medical care, it is important to notice the need for psychosocial support in coping with self-care and feelings including worries about the progressing illness.

### **Universal prevention (SFP10-14) for high risk adolescents and their parents. Does it work?**

Okulicz-Kozaryn Katarzyna and Borucka Anna

**Background:** This study's aim was to analyse usefulness of the universal prevention program (SFP10-14) for families with an adolescent child at high risk for mental/ behavioural problems development. **Methods:** The functioning, during SFP10-14 sessions, of families ( $n=261$ ) without any particular risk factors (35%) was compared with the functioning of high risk families (65%). **Findings:** The SFP10-14 reception (in general – very positive) was similar for high and low risk families. Parents and youth appreciated especially family sessions. For parents, the big advantage was the opportunity to meet with other parents. The presence of more deprived peers, diminished youth satisfaction. Trainers reported significant problems in work with high-risk youth but, at the same time, they observed significant positive changes in their families. **Discussion:** Not only Polish experiences with SFP10-14 indicate the usefulness of universal prevention programs for high risk families, but also they are not stigmatised but provided with adequate support.

### **Changes in fatigue and functioning among cancer patients following an inpatient rehabilitation program**

Oldervoll Line, Bertheussen Gro, Reidunsdatter Randi, Sandmæl Jon Arne and Kaasa Stein

**Background:** Reduced functioning are common among cancer patients (CP). The aims were to assess short and long-term changes in fatigue, emotional- (EF), physical functioning (PF) following an inpatient rehabilitation program (IPR). **Methods:** CP aged 18–67 years were eligible for inclusion. A pre-post test design was used. The IPR consisted of physical exercise and education using a cognitive approach. Endpoints were assessed by a cancer specific questionnaire (EORTC QLQ-C30). Assessment took place at the primary stay (T1), at follow-up stay (T2) and 7 months after the follow-up stay (T3). Mixed linear models were used to analyse the changes between T1, T2 and T3. **Findings:** 164 patients were admitted and completed the assessments. Fatigue decreased ( $p \leq 0.001$ ) and PF and EF increased ( $p \leq 0.001$ ) significantly from T1 to T2, and all levels were maintained at T3. **Discussion:** Future randomised trials are needed to confirm the positive results.

### **Comparative optimism and its impacts on health-promoting behaviours**

Omori Mika

Comparative optimism has been known as bias with which individuals are more likely to perceive chances of misfortune of their own are smaller than those of others (Weinstein, 1982, 1987). This study was designed to examine comparative optimism and its relations to health-related behaviours. An on-line survey was conducted with 1500 adults in Japan. Comparative optimism was assessed for 22 health problems such as infectious disease and daily health problems. Health-promoting behaviours were evaluated for six domains. Average scores of comparative optimism ranged from 1.91( $SD = 1.53$ ) for substance abuse to 4.03 ( $SD = 1.32$ ) for tooth decay, implied that individuals tended to estimate that they are less vulnerable to less prevalent problems. Significant negative correlations were found between health-promoting behaviours and the overall comparative optimism ( $r = -0.05$  through  $r = -0.19$ ). The results

suggested the need to include comparative optimism in the model of health-promoting behaviours.

**Gender, sense of coherence, social skills and problem alcoholic drinking among Slovak university students**

Orosova Olga, Sebena Rene, Benka Jozef, Macikova Sleskova Maria and Gajdosova Beata

**Background:** The associations between gender, sense of coherence, social skills and problem alcohol drinking among university students were explored. This study is a part of the Cross-National Student Health Survey. **Methods:** Data collection was carried out among 813 university students (mean age 21.1, SD  $\pm$  1.8; 63.8% females). The Sense of Coherence Scale (SOC-13) and The Social Skills Subscale (TSIS) were used. The problem drinking was assessed by the CAGE test and dichotomised for the purposes of binary logistic regression. **Findings:** Male gender (OR = 0.32; 95%CI 0.22–0.45), lower level of SOC (OR = 0.93; 95%CI 0.90–0.95) and higher level of social skills (OR = 1.05; 95%CI 1.02–1.09) were associated with problem alcohol drinking. **Discussion:** Significant associations were found between gender, SOC, social skills and problem alcohol drinking. Whether intervention aimed at improving SOC and life skills among university students can effectively reduce problem alcohol drinking constitutes an important topic for further research.

**Breaking bad news: Analysing the impact of simulations in teaching medical staff how to deliver bad news to patients and family**

Otoiu George

This paper describes a gaming simulation exercise used in a training session on breaking bad news. In building this game we focused on three learning objectives: the legal procedures and demands the medical staff has to follow in the case of a patient's death, delivering the best practices in breaking bad news and the importance of taking into account and being aware of your own feelings when being faced with the task of breaking bad news. The first two learning objectives were included because the gaming simulation was used as a support for better understanding the theoretical aspects presented in the training session, and it gave the participants an opportunity to apply the knew knowledge and the information they received. The third learning objective was included because having to perform such a task always involves great exposure to such strong emotions, and this has a wearying effect on the person involved.

**Stressful life events at patients suffering from Graves disease**

Ovidiu Popa – Velea, Ioana Paunescu, Alexandra Tambu and Liliana Diaconescu

This study aimed to assess at patients at the beginning of clinical evolution of Graves' disease, the distribution of negative life events, global stress load and their ability to cope with stressful situations. **Method:** 49 participants with emerging Graves disease (11 men, 38 women, mean age 48,2) were administered Holmes–Rahe Stress Scale (1967) and Stress Self-Analysis Test (Columbia). **Results:** 45% of the subjects presented a major life crisis (over 300p. at Holmes–Rahe Stress Scale), with 'change in financial state' being the most frequent negative life event. 93% of the subjects had a high vulnerability to frustration and 83% had traits compatible with A-personality type. Only 14% obtained a good coping scorer, whereas 45% were under the critical coping threshold. **Conclusions:** Positive symptoms correlated to a combination of

negative life events, low efficiency of coping resources and predisposing personality traits, arguing in favour of a mixed causal model of this disease.

**Impact of care satisfaction and perceived empathy on psychiatric morbidity and adherence at cancer patients**

Ovidiu Popa-Velea and Simona Teodora Cercel

The objective of this study was to assess the strength of associations between care satisfaction and perceived empathy with psychiatric morbidity and adherence at cancer patients. **Method:** 60 patients with digestive cancers (stage 2 or 3) (34 women and 26 men, mean age = 46,12) were tested for depression (CES-D), anxiety (Cattell), latent aggressiveness (Anger-In Scale) and adherence (MARS), in relation to care satisfaction (VSQ) and perceived empathy (Jefferson). Analysis of variance (ANOVA) was used to measure the amplitude of associations between abovementioned variables. **Findings:** Satisfaction with care was inversely associated with scores of anxiety (all components) ( $F = 13.09, p < 0.001$ ), depression ( $F = 13.96, p < 0.0001$ ), latent aggressiveness ( $F = 7.95, p < 0.007$ ) and positively with adherence, especially at women. Empathy had comparatively a lower importance, being associated only to ergic tension at men ( $F = 4.32, p < 0.04$ ) **Discussion:** This study highlights the importance of care satisfaction for diminishing incidence of psychiatric morbidity and increasing adherence at cancer patients.

**Positive impact of appropriate doctor–patient nonverbal communication in chronic somatic diseases**

Ovidiu Popa-Velea and Tudor Borjog

**Background:** The aim of this study was to evaluate the impact of doctor–patient nonverbal communication on anxiety, perceived empathy, satisfaction with care and adherence. **Method:** 76 chronic patients (43 men, 33 women, mean age = 49.59) were tested for anxiety (Cattell), satisfaction with care (VSQ), perception of empathy (Jefferson) and intention to adhere (MARS), following repeated contacts (1–3 months) with their caring physician. Appropriateness of physician's nonverbal communication was assessed using a scale compiled of nonverbal elements reportedly correlated with patient's satisfaction. **Findings:** Data collected were interpreted using analysis of variance (ANOVA). Results showed a significant association, for older patients (above 50), between appropriate nonverbal communication and satisfaction ( $F = 7.58, p < 0.01$ ) and intention to adhere ( $F = 4.47, p < 0.04$ ). Women associated low perceived empathy with latent anxiety ( $F = 5.68, p < 0.03$ ) and insecurity ( $F = 4.48, p < 0.05$ ). **Discussion:** This study complements other literature data showing that nonverbal communication is important for increasing patient satisfaction and adherence.

**Peer social comparison, social support and family pressure for losing weight and eating disorders**

Pamies Lidia, Quiles Yolanda and Quiles Maria Jose

The aim of this study was to assess the relation between social support, peer social comparison and family pressure for losing weight and eating disorders. The sample size was 2142 adolescents which were randomly selected from secondary schools in Alicante (Spain) (52.8% girls and 47.2% boys), between 12 and 18 years old. Participants completed the following questionnaires: Eating Attitudes Test-40 (Garner & Garfinkel, 1989), Social Support Scale for

Children (Harter, 1985), *ad-hoc* questionnaire for Satisfaction with Social Support; *ad-hoc* questionnaire about the influence of relatives for losing weight and The Dieting Competitiveness Scale (Huon, Piira, Hayne, & Strong, 2002). **Results:** In boys, the 18% of the variance of the risk for developing an eating disorder was explained by the influence of the relatives for losing weight in positive, and the affective peer comparison and social support from classmates in negative. In girls, the 29% of the variance of the risk for developing an eating disorder was explained of the relatives for losing weight and neutral peer comparison in positive. And the social support from father and mother in negative. **Discussion:** These results highlight these psycho-social factors in development of eating disorders separately in males and females.

### Attitudes of residents, patients and caregivers to house calls: better than sliced bread!

Panda Mukta and Cunningham Christopher J.L.

**Background:** Housecalls help residents' knowledge of patients and their environments and develop physician/patient relationship. To achieve above and foster patient connectedness and humanism training we instituted a housecall program. We explored the reaction of patients and caregivers to the program. **Methods:** One halfday weekly 1 faculty, 2 residents, and nurse do 2 housecalls. Qualitative and quantitative data are gathered from patients, caregivers and residents regarding reactions to visit, knowledge of medical conditions, medical care, safety guidelines and general comments. **Findings:** 47 patients and 22 caregivers participated. Quantitative and qualitative responses indicated improved physician communication. Specific care optimisation outcomes identified. Residents indicated positive reactions and receptivity to continuation. 51% patients indicated housecall led to positive learning experience and none suggested need to change any aspect of care. **Conclusions:** Patients, caregivers and physicians have positive housecall experiences. Housecalls enhance physician role in patient and caregiver education, physician/patient relationship and improve communication.

### Examining physician reflections and reactions to housecalls

Panda Mukta and Cunningham Christopher J.L.

**Background:** Housecalls provide trainees with vital knowledge of patients in their home environments and offer mechanisms to develop and maintain physician/patient relationship. Little is known about physician reactions to housecalls. We followed residents through a housecall program. Each resident dictated reflections guided by structured questions following each visit. **Methods:** One halfday weekly, 1 faculty, 2 medicine residents and a nurse made two visits. This study examines the qualitative reflections of residents. **Findings:** Qualitative data from 27 residents following 35 separate visits was analysed using content analysis process facilitated by QDADeMiner/WordStat software. Responses addressed perceptions of patient deficit, sources for improving function, of support, observed strengths/weaknesses of patient/caregiver relationship, coping strategies, personal concerns, general lessons and other reflections. **Discussions:** The qualitative responses provide vital information regarding physician reactions to housecall experience and support incorporating housecalls in training to enhance the physician role in patient/caregiver education, relationship and improved communication.

**Are stage transitions associated with changes in psychological variables? Stage-specific findings from physical activity**

Parschau Linda, Richert Jana, Koring Milena, Lippke Sonia and Schwarzer Ralf

This study examines the associations between changes in psychological variables and transitions between the stages of the Health Action Process Approach. In a web-based study on physical activity, a sample of 660 adults completed two questionnaires (baseline and on average 20 days later). Standardised residual change scores were calculated to assess change in psychological variables. Discriminant function analyses revealed that progression from preintention was predicted by increases in motivational ( $F(1,284)=7.09; p<0.01$ ) and volitional self-efficacy ( $F(1,284)=4.52; p<0.05$ ); regression from intention was predicted by decreases in planning ( $F(1,187)=3.63; p<0.10$ ); progression from intention was predicted by increases in volitional self-efficacy ( $F(1,193)=3.67; p<0.10$ ) and planning ( $F(1,193)=3.16; p<0.10$ ); regression from action was predicted by decreases in motivational self-efficacy ( $F=1,103=2.94; p<0.10$ ). Results demonstrate that changes in psychological constructs are associated with stage transitions. Stage-matched interventions promoting physical activity should focus on improving the specific variables to enable successful stage progression and stage maintenance.

**The impact of exposure to suffering of distant people on health perceptions: The role of empathy, evaluations of threat and emotions**

Paschali Antonia, Karademas Evangelos, Mitsopoulou Efi and Tsaggarakis Valentinos

In this experimental study we examined the relation of changes in perceptions about personal health to the exposure to distant persons' suffering, as well as the role of emotions, threat and empathy in this relationship. Participants exposed to images of human affliction ( $N=47$ ) differed post-experiment in the ways they perceived personal health aspects from participants exposed to relaxing images ( $N=47$ ). Changes in health-perceptions were associated with empathy and emotions. Certain emotions mediated the relation between empathy or threat and changes in health perceptions. These findings imply that health perceptions are shaped in a constant dialogue with the broader world representations. In this rather complicated process several factors appear to be involved, including empathy and emotions.

**Neuropsychological assessment and rehabilitation in adults with normal pressure hydrocephalus**

Passos Maria Margarida, Vasconcelos Maria de Lourdes and Hipólito João

Normal pressure hydrocephalus (NPH) in adults is a less known clinical entity, which is manifested by a framework of progressive dementia, alterations of the march and incontinence of sphincters – the so-called triad of Hakim (Cambier et al., 2003). This symptom there is usually from 65 years of age (Vázquez-Baquero et al., 2001). Surgical treatment involves the placement of a shunt cerebrospinal fluid, which can reverse the symptoms. The purpose of this study is to understand the damage caused by NPH in brain structures that lead to the onset of symptoms and reversal of symptoms by neuropsychological assessment. The sample consists of 40 subjects hospitalised at the Hospital Center of Lisbon. They use the battery of Luria's Neuropsychological Investigation (Luria, 1973). This study, qualitative and experimental nature, intended to demonstrate the relevance of neuropsychological assessment in accordance with the theoretical model of Luria and the adequacy of the object of study.

## Do general practitioners' cognitions about Fibromyalgia predict their clinical patient management?

Pastor M<sup>a</sup> Angeles, López-Roig Sofía, Johnston Marie, Gracia Rafael and Daza Pablo

**Background:** Fibromyalgia (FM) is a prevalent chronic pain condition in primary care with high ambiguity. We explored the predictive power of the general practitioners' (GPs) perceived clinical self-efficacy (CSE) and FM mental representation (MR) about their clinical patient management. **Methods:** Cross-sectional study with 208 GPs (women: 64.4%). **Measures:** Cognitions: An 'ad-hoc' CSE scale and the IPQ-Revised. Patient management: an 'ad-hoc' questionnaire about clinical behaviour and satisfaction: Sociodemographic and Professional variables. Analysis: Multiple regression. **Findings:** MR, together with professional experience, explained from 6% (for 'Patients Referrals' and 'Total Prescriptions') to 12% of variance for 'Referral for Comorbidity' and 'Referral for Treatment'. The proportion of variance explained for CSE ranged from 46% for the satisfaction with the FM patients interpersonal management to 62% for the total satisfaction. **Discussion:** MR was connected to GPs' clinical behaviour and CSE to satisfaction with their management. This work was supported by a Valencian Government grant (BEST/2010/132 and BEST/2010/131).

## Short- and long-term prediction of health status in primary care fibromyalgia patients

Pastor M<sup>a</sup> Angeles, Pons Nieves, Lledó Ana, Lopez-Roig Sofía and Tomás Olga

**Background:** Our aim is to determine predictors of health status impact in Fibromyalgia patients attended primary care. **Methods:** Longitudinal measurements (first visit, after 6 and 12 months). Participants: 118 Fibromyalgia women. Variables and Instruments: Health Status Impact (Badia y Alonso, 1994); Symptoms: Pain Intensity (Numerical Rating Scale); Secondary Symptoms (*ad hoc*); Locus of Control (Pastor et al., 1990); Self-Efficacy (Martín-Aragón et al., 1998); Perceived Health Competence (Pastor et al., 2009) and Coping (Pastor et al., 2004). **Results:** Self-efficacy and active and passive coping were significant predictors of Health Status at T2 (range:  $R^2=21\%$  for 'Sleep and Rest';  $R^2=44\%$  for 'Household Management'). However, Locus of Control and passive coping were the main predictors in T3 (range:  $R^2=19\%$  for 'Mobility';  $R^2=51\%$  for 'Intellectual Activity') **Conclusion:** Beliefs and coping were longitudinal predictors for the majority of health status factors, changing from competence at T2 to loss of control and passive coping at T3.

## Measuring women's experience of a dance aerobics class: A pilot study

Patel Cynthia

Given that much of the research on women and physical exercise has used experimental methods we constructed a measure using Semantic Differential scaling to examine women's experience of an aerobics dance class. We piloted the instrument on a group of 27 women after a dance class. They indicated levels of agreement with bipolar adjectives relating to four dimensions of this exercise modality: 'General Atmosphere', 'Instructor', 'Music' and 'Choreography'. They also rated a list of perceived benefits and answered an open-ended question about additional benefits. The most affirming responses related to the role of the Instructor in their positive experience of the class. The women rated mental and physical benefits as much more important than the social benefits. The results highlight the key role of the instructor in dance aerobics and apart from two problematic items the semantic differential shows promise in measuring women's exercise experience.

### Psychometric characteristics of the Barriers Against Safer Sex Behaviour Scale in Mozambican women with HIV-risk

Patrão Ana Luísa, McIntyre Teresa and Veiga-Costa Eleonora

**Background:** This study examined the psychometric characteristics of the Portuguese version of the Barriers Against Safer Sex Behaviour Scale (BASSB) (Veiga-Costa, McIntyre, & Hobfoll, 2002), in Mozambican context. The BASSB is a 9-item scale with four scales. **Method:** 173 women ( $M_{age} = 24.7$ ;  $D_p = 5.55$ ) were recruited from a gynaecological service of a Mozambican Hospital based on predefined sexual risk criteria. **Findings:** The BASSB scale scores presented good internal consistency reliability for the scales Risk Perception (0.80), Negative Attitudes towards Safe Sex (0.71), and Negative Perception of Partner's Attitude (0.98). Lower reliability was found for Communication Self-efficacy (0.51) due to lower variance in these items. The exploratory principal components factor analysis yielded four factors, explaining 81% of the variance. **Discussion:** The BASSB shows good psychometric characteristics in this sample and results supported its multidimensionality. These results suggest that the BASSB can be a useful tool in HIV research among Mozambican women.

### Psychometric characteristics of the HIV Knowledge Questionnaire (HIV-KQ) in Mozambican women at risk for HIV/AIDS

Patrão Ana Luísa, McIntyre Teresa, Veiga-Costa Eleonora and Matediana Eduardo

**Background:** This study examined the psychometric characteristics of the Portuguese version of the HIV Knowledge Questionnaire -HIV-KQ (Veiga-Costa, McIntyre, & Hobfoll, 2002), in Mozambican context. The 14-item HIV-KQ assesses knowledge about HIV transmission and prevention. The scores are computed by adding the correct responses. **Method:** As part of a larger study on HIV prevention, 173 women ( $M_{age} = 24.7$ ;  $D_p = 5.55$ ) were recruited from a gynaecological unit of a Mozambican Hospital based on predefined sexual risk criteria. The HIV-KQ was administered in the baseline evaluation. **Results:** The HIV-KQ scores presented good internal consistency reliability (Cronbach  $\alpha = 0.82$ ). The exploratory principal components factor analysis yielded two factors, explaining 43.5% of the variance: HIV transmission (Cronbach  $\alpha = 0.80$ ) and HIV prevention (Cronbach  $\alpha = 0.62$ ). **Discussion:** The results show good psychometric characteristics in this sample and suggest that the HIV-KQ can serve as a useful tool for HIV prevention research among Mozambican women.

### Satisfaction with social support in adolescents: Analysis after formative intervention

Paula Nelas, Carlos Silva, Manuela Ferreira, João Duarte and Cláudia Chaves

**Background:** Both social networks and perceived social support have a major role in the development of adolescents. The purpose of this study was to test the effectiveness of a formative intervention about social support in perceived of the same in adolescents. **Methods:** A quantitative, descriptive and correlational study in a sample of 840 adolescents (441 males and 399 females, average age of 14.44 years). The questionnaire includes a survey for sample characterisation and ESSS (Ribeiro, 1999). **Findings:** There are the girls, younger adolescents, those living in urban areas and that do not practice the religion are most satisfied. The training intervention have an effect on satisfaction with friendships ( $p = 0.004$ ) and satisfaction with family ( $p = 0.000$ ). **Discussion:** The results suggest that it is important to get teenagers to reflect on the importance of support networks.

**Knowledge of adolescents on family planning: The impact of training intervention**

Paula Nelas, Carlos Silva, Manuela Ferreira, João Duarte and Cláudia Chaves

**Background:** The teenager's knowledge about contraceptive methods would promote their sexual and reproductive health, since the precocity of sexual relations is a reality. The purpose of this study was to test the effectiveness of a training intervention on family planning among adolescents. **Methods:** A quantitative, experimental field, a sample of 90 adolescents (48 in the control group and 42 experimental, average age 14.2 years). The questionnaire included sample characterisation and scale CPF (Nelas, Silva, Ferreira, Duarte, & Chaves, 2010). **Findings:** The found results reveal the importance of training intervention on the acquisition of knowledge about family planning when compared with the experimental control group ( $t = -6,564, p = 0.000$ ). **Discussion:** Approaching the sexuality theme within family planning requires the use of active methodologies using competency training in pedagogical model.

**Sensation seeking behaviour and cigarette smoking among Chilean youth: Examining three models of influence**

Paula Repetto, Eliana Guic, Lilian Ferrer, Yerko Molina and Sebastian Sanhueza

**Background:** In this study we examined three models that have been proposed to explain the relationship between sensation seeking and cigarette use. These models are, youth higher on sensation seeking may: underestimate the risks of cigarette use, affiliate with peer who smoke cigarettes or have a positive attitude towards smoking. **Methods:** Participants included 687 Chilean youth (mean age: 16,47) part of a longitudinal study of cigarette smoking. The self-administered questionnaire measured: current smoking, Short Impulsive Sensation Seeking Scale, risks and benefits associated with smoking and affiliation to peers who smoke. We used SEM and regression analyses. **Results:** Sensation seeking predicted current smoking, and was mediated by affiliation with peers who smoke and perceived benefits of smoking on mood. There was no influence through perceived risks. Further analyses focus on gender differences and levels of sensation seeking. **Discussion:** Our findings suggest that sensation seeking directly and indirectly associated with cigarette smoking.

**Predictions of changes in QoL of women's with somatic disorders and major depression**

Pauliukeviciute Klaudija and Gostautas Antanas

Outpatient treatment of depression is related to positive changes of quality of life (QoL). The aim of this study was to assess the importance of condition of clinical depression and health status, in line of socio-demographic factors, for prediction of plausible changes in the individual's QoL. 64 women out of 155 initially screened in outpatient mental health department were investigated twice by using WHOQOL-100 questionnaire. Results of this study showed that recovery after one year of treatment of depression is more significant predictive factor both for short-term and long-term positive changes in the QoL than socio-demographic factors or other indicators of clinical and health conditions. Our results confirm that indicators of QoL reflect the recovery process of women with depression during the three years of outpatient treatment of depression. The question that remains is how positive changes in mental health are related to acceptance of somatic conditions.

**Promoting physical activity among the over fifties using tailored advices**

Peels Denise, Bolman Catherine, van Stralen Maartjes, de Vries Hein, Golsteijn Rianne, Mudde Aart and Lechner Lilian

**Background:** The proven effective Active Plus interventions to stimulate physical activity (PA) among persons aged over 50 are adjusted and translated into web-based versions. The aim of this project is to study the (cost-) effectiveness of the delivery channel (web-based or print delivered) and the influence of adding environmental information to a tailored PA intervention. **Methods:** Different intervention conditions will be evaluated in a clustered RCT ( $N=250$  for each of the four conditions with an additional control group) using linear and logistic regression analyses. Main outcome measures are changes in (social-cognitive determinants of) PA, measured at baseline, 3, 6 and 12 months). **Expected results:** The alterations are expected to increase the intervention effects. **Current stage of work:** Data collection has started in 2010 and will endure to 2012. Short-term results will be presented. **Discussion:** Different intervention conditions are expected to have different cost-effectiveness ratios depending on the population (age, SES).

**Cancer patients' experience of fatigue and its management: A qualitative study**

Perlt Maria, Hevey David, Collier Sonya and Donohoe Gary

Cancer-related fatigue (CRF) is the most common and distressing side-effect of cancer treatment. This study explored patients' experiences of CRF and its treatment. Participants in a quantitative study on the impact and management of CRF were given the opportunity to leave free-text comments after completing a structured questionnaire. Of 153 fatigued cancer patients and survivors who took part in this study, 70 left additional comments which were analysed using thematic analysis. Distress in response to fatigue, its medical management, and the lack of understanding from others were common themes. Participants felt unprepared for fatigue and felt it was dismissed or overlooked by doctors. Frustration regarding the 'expectation to be well' post-treatment was common. Doctors should be encouraged to monitor CRF post-treatment and to advise about specific management strategies on an ongoing basis. Research should investigate how CRF is discussed in clinical practice and assess doctors' knowledge of fatigue management guidelines.

**Internal resources in spinal cord injury: A systematic literature review**

Peter Claudio, Müller Rachel, Cieza Alarcos and Geyh Szilvia

**Background:** The purpose of this study was to gain a systematic overview of the role that internal resources play in the adjustment process of persons with spinal cord injury (SCI). **Methods:** A systematic literature review was performed. The literature search was conducted in the databases Pubmed, PsycINFO, SSCI, ERIC, Embase and CINAHL. The assessed variables, measurement instruments and study results were extracted and summarised. The methodological quality of the identified papers was evaluated. **Findings:** 83 mainly cross-sectional studies were identified. Internal resources were categorised into seven groups: self-efficacy, self-esteem, sense of coherence, spirituality, optimism, intellect and other personality characteristics. Self-efficacy and self-esteem were most frequently examined and associated with indicators of positive adjustment, e.g. high well-being, no depression. **Discussion:** The consideration of internal resources in empirical studies of SCI with a higher level of evidence could contribute to enhance optimal interdisciplinary rehabilitation care for the affected persons.

**Medical trainees' beliefs and attitudes about medically unexplained symptoms (MUS):  
A qualitative study**

Peters Sarah, Shattock Lucy, Anderson Kate, Caldwell Kimberley and Williamson Holly

**Background:** Doctors often find patients with MUS frustrating to manage and some hold negative attitudes towards these patients. It is unknown when these negative attitudes arise, hence this study aimed to examine the beliefs that medical trainees hold about MUS. **Methods:** Semi-structured audiotaped interviews were conducted with a purposive sample of 40 medical undergraduates. An iterative approach was used to develop conceptual categories and data generation continued until thematic saturation was achieved. **Findings:** Trainees' limited understanding of MUS was gained through personal experience, the media and clinical observation. They particularly struggled with the concept of 'diagnosis by exclusion'. Many welcomed formal training but some already held negative views towards MUS patients which could be a barrier to further learning. **Discussion:** Current medical training fails to equip doctors to manage MUS. An opportunity exists for health psychologists to be involved in developing training to help medical trainees engage with MUS patients.

**Characteristics of teenage alcohol consumption in Croatia**

Petrak Olivera, Rukavina Melita, Pukljak Iricanin Zrinka, Kostovic Srzentic Mirna, Perkovic Lada and Orešcanin Verica

**Background:** Alcohol consumption is widely represented in Croatian culture and is also a growing phenomenon among teenagers. **Objectives:** to determine the characteristics of alcohol consumption by college students. **Methods:** 100 Nursing school students were examined about alcohol adversity and various aspects of its consumption. **Results:** 90% of students had repeatedly consumed alcoholic beverages. Time of the first intake was from 11 years (17.2%), to 15 (28.3%), boys beginning significantly earlier. 42% of students were drunk once or more times in the last month. 55% of students think it is OK to get drunk on weekends, and they began drinking earlier than those who think this is not right ( $t=3.55, p=0.001$ ). Correlation between knowledge and consumption is positive, low and significant ( $r=0.204, p=0.041$ ). **Discussion:** Anti-alcohol campaigns should try to change attitudes towards alcohol consumption, not only give information about alcohol adversity.

**Women's experience of physical disability – Self-knowledge, disability identity and philosophy of life**

Pilecka Wladyslawa Stachel Małgorzata

**Background:** Persistent negative stereotypes about disability have a serious effect on psychosocial situation of women who are born with or acquire functional limitations. The study of disability experiences, personal and self-focused, is a new area in health and rehabilitation psychology. **Methods:** 40 women, who experienced disability after 17 years of age and have lived with it for ever 2 years participated in the study. The qualitative (narrative interviews) and quantitative methods (scales to measure: self-concept, attitudes towards the disease, system of values) were used. **Findings:** The cluster analysis allows to distinguish 3 groups of women: with a positive disability identity, with an unformed and unstable disability identity and with a negative disability identity. The process of identity formation is determined by: a degree of impairment, age of onset, age of women and their SES. **Discussion:** Implications for promoting human resilience and posttraumatic growth will be discussed.

**An interview study on surgeons' experiences of serious patient complications and medical errors**

Pinto Anna

**Background:** This study aims to explore how serious patient complications (including medical errors) may affect surgeons, how they cope with their impact and how they wish to be supported. **Methods:** 20 semi-structured individual interviews have been conducted with consultant and trainee surgeons on their experiences of serious patient complications. The interviews have been recorded and analysed using grounded theory. **Findings:** Arising themes have been organised under the following overarching dimensions: the emotional burden of complications, the weight of attributions, personality, experience and institutional culture in surgeons' reactions, coping mechanisms, challenges in communicating with patients/families about complications and preferences for support. **Conclusions:** Our findings suggest that surgeons are affected by serious complications personally and professionally, more so when these are attributed to an error, and they employ specific coping strategies to deal with the associated stress. Findings are discussed in the light of stress and coping theory and directions for future research are suggested.

**Motivations and expectations for aesthetic plastic surgery**

Pires Paula, Pestana Cruz José, Hipólito João and Pires Monica

The motivations and expectations for aesthetic plastic surgery can have an important role in the postoperative level of satisfaction. The absence of instruments specifically designed to measure this motivations and expectations has driven to the necessity to elaborate a Questionnaire of Motivations and Expectations for Plastic and Aesthetic Surgery. This Questionnaire intends to help doctors and patients to clarify their choices and increase the level of satisfaction. There were made semi-structured interviews to plastic surgery patients followed by a classic contents analysis (qualitative and quantitative). It stands out two categories for the category motivation: physical and psychological motivations, and for expectations, the expectations regarding the physical effects of surgery, expectations regarding the psychological effects of surgery and the aspirations. The results reveal that psychological motivations are significantly higher (56%) and concerning to expectations, the aspirations with 41%. Subsequent research is likely provide important information on postoperative levels of satisfaction.

**Emotional adjustment during pregnancy: Predictive factors for depression in a Portuguese sample of pregnant adolescents**

Pires Raquel, Araújo-Pedrosa Anabela, Carvalho Paula and Canavarro Maria Cristina

**Background:** Research suggests that the adjustment of pregnant adolescents depends largely on their life contexts and on the available support. This study aimed to identify predictors of depressive symptoms in a Portuguese sample of pregnant adolescents. **Methods:** In this cross-sectional study ( $N=489$ ), regression models were built to understand the contribution of individual, relational and social variables (Semi-structured interview; EMBU) to predict depressive symptoms (Edinburgh Postnatal Depression Scale) during pregnancy. **Findings:** On average, pregnant adolescents were not clinically depressed. However, 35% showed clinically relevant symptoms. In the final model ( $F(3) = 16.677, p < 0.001$ ), these symptoms were predicted by obstetric complications ( $\beta = 0.137$ ), quality of relationship with friends ( $\beta = -0.136$ ) and father's rejection ( $\beta = 0.291$ ). **Discussion:** Adolescent pregnancy should not be regarded as a universally adverse event. However, the proportion of depressed adolescents underlines the

importance of interventions aiming relational aspects, beyond medical ones. Multidisciplinary and multilevel efforts should foster the quality of adolescents' interactions with family and friends.

### **Preventing adolescent pregnancy: Ecological contexts of sexual behaviours in Portuguese adolescents**

Pires Raquel, Araújo-Pedrosa Anabela, Carvalho Paula and Canavarro Maria Cristina

**Background:** As Portugal has one of the highest European adolescent pregnancy rates, this study aimed to identify predictors of adolescents' sexual behaviours consensually associated with its occurrence. **Methods:** In this cross-sectional study ( $N=694$ ), multiple and logistic regression models were built to understand the contribution of individual, relational and social variables (Semi-structured interview; EMBU) to predict age at first sexual intercourse and contraceptive use. **Findings:** Earlier first sexual intercourse was predicted by lower education and lower menarcheal and mother's age ( $F(3)=32.529, p<0.001$ ). In turn, earlier first sexual intercourse, less contraceptive information, school dropout and lower mother rejection increased the risk for non-contraceptive use ( $\chi^2(9)=167.906, p<0.001$ ). Relationship's length and boyfriend's educational status also emerged as predictors ( $\chi^2(11)=135.066, p<0.001$ ). **Discussion:** Multidisciplinary efforts at individual, family and community levels should not only provide information on contraception and sexuality, but also comprehensive interventions on school attendance, relationships and affection, given its importance predicting sexual behaviours associated with adolescent pregnancy.

### **Applying the demand-control model to informal caregiving of multiple sclerosis patients**

Pisanti Renato and Crispo Caterina

**Background:** Research has consistently shown that providing informal care for a multiple sclerosis patient can have an important impact on the emotional well-being of informal caregivers. **Aims:** We applied Karasek's demand-control model of job strain to extend previous work examining the psychological impact of informal caregiving in Multiple Sclerosis. **Methods:** The study population consisted of 231 Italian caregivers of multiple sclerosis patients recruited by convenience sampling. The predictor variables were caregiver demand and control. The dependent variables were the caregiver's distress variables (anxiety, depression and somatic complaints) measured by SCL90. **Findings:** The JDC model dimensions explained important parts of the variance in each of the outcome measures (19% to 23%), beyond that accounted for by demographic variable. Demands resulted as the most important predictor. **Discussion:** The study shows the importance of evaluating the burden in caregivers of multiple sclerosis patients with implications for their quality of life and provision of care.

### **Measuring health-related quality of life in onychomycosis: the development of the Nail Disease Quality of Life (NDQoL)**

Pisanti Renato, Filograna Stefania and Cantoresi Franca

**Background:** The impact of onychomycosis on an individual is significant. It affects quality of life including physical and social functioning and emotional health. Given the burden of disease in some patients, instruments which can measure the burden of onychomycosis would be valuable for both clinical care and research purposes. The main goal of this research is to develop a questionnaire-disease specific to

assess the impact of onychomycosis on patient's quality of life. **Methods:** A literature review was conducted to generate the initial item pool. An expert panel, made up by dermatologists and psychologists, examined the content validity. Three focus group with patients and 7 individual patient interview were conducted to refine the questionnaire. **Results:** The final 53-item scale covered four areas of health-related quality of life: symptoms, social functioning, emotional well-being and treatment. **Conclusion:** The application value of this scale remains to be investigated by a large quantitative research, including patients coming from different regions and cultural backgrounds.

**Assessing psychological distress in patients with skin diseases: A confirmatory factor analysis of the Italian version of Hospital Anxiety Depression Scale**

Pisanti Renato, Filograna Stefania, Cantoresi Franca and Sorgi Paola

**Background:** The Hospital Anxiety and Depression Scale (HADS) is a widely used screening instrument for detecting anxiety or depression in the medical out-patient clinic for non-psychiatric patients. There is evidence in the literature supporting unidimensional, two-factor and three-factor conceptualisations of the HADS. **Methods:** We assess the adequacy of the factor structure of the HADS for one-factor, two-factor and three-factor solutions using structural equations modelling, in a sample of 321 dermatological patients (Female = 55%; Mean age = 43; ds = 17,2). **Findings:** The original two-factor solution was the best explanation of the sample data ( $\chi^2/d.f. = 2,82$ ; CFI = 0.91; RMSEA = 0.075). However, as in previous studies, item 7 loaded better on depression component than anxiety. **Discussion:** The results are discussed from both clinical and theoretical points of view.

**Socio-economic gradient shifts in health-related behaviour among Slovak adolescents between 1998 and 2006**

Pitel Lukas, Madarasova Geckova Andrea, van Dijk Jitse P. and Reijneveld Sijmen A.

**Background:** We aimed to assess whether a shift in socio-economic gradients of health-related behaviours has occurred in Slovak adolescents in recent years. **Methods:** Data were collected in 1998 ( $N = 2616$ ;  $14.9 \pm 0.6$  years) and in 2006 ( $N = 1081$ ;  $14.3 \pm 0.6$  years). Odds ratios of socio-economic differences in smoking, alcohol consumption and physical inactivity in each cohort and their interactions were calculated for each gender separately. **Findings:** Higher odds of smoking in the low socio-economic group compared to the high socio-economic group in 1998 diminished among boys (odds ratio for interaction time  $\times$  group 0.54) in 2006 but became apparent among girls (interaction odds ratio 1.96). Physical inactivity decreased among both genders and in all socio-economic groups. **Conclusion:** During the same period, socio-economic differences in health-related behaviour have developed in a different way among boys and among girls. Girls from low socio-economic group should be targeted by specific prevention programs because of the increase in substance use among them.

**'Express nothing' as a tendency of emotion regulation in a group of diseased adults**

Polackova Solcova Iva, Solcova Iva, Stuchlikova Iva, Mazehoova Yvona, Vinokhodova Alla and Sery Michal

Emotions are cardinal psychics and psychological phenomena closely connected with health. According to the recent research, expression of emotions is connected with health while its suppression is often viewed as an unhealthy strategy of emotion regulation. Our study deals

with the frequency of experienced emotions and with the emotion regulation. The sample ( $N=394$ ) comprised three groups: pupils and students, healthy adults and diseased adults; the inventory covered 79 emotions (32 with positive valence). Respondents reported retrospectively how often they felt given emotions and in which way they regulated these emotions. Results show that participants tend to express their emotions most often adequately – in a way they really feel them. However, analyses revealed significant differences in the emotion inhibition. Diseased adults neutralise emotions distinctively more often than healthy adults and suppress almost one quarter of the emotions listed (e.g. self-pity, desolateness, desperation, uneasiness, etc.).

**Emotion frequency and emotion regulation under conditions of isolation and confinement**

Polackova Solcova Iva, Solcova Iva, Stuchlikova Iva, Mazehoova Yvona,  
Vinokhodova Alla and Sery Michal

Under conditions a small group is isolated for a long period of time it is important to keep the emotional level of social relations 'healthy' in order to maintain a cooperative and productive atmosphere. Even people with otherwise an optimal affective disposition may demonstrate changes when meeting the stressful challenges of living 'cut off' from the world. Adequate expressions of positive as well as negative emotions can be functional. In our study the changes and the stabilities in the personal emotional frequency and the emotion regulation strategy during the first 7 months of simulated flight to Mars (project Mars500) were investigated. Self-reported affective experience (Matthews, Jones, & Chamberlain, 1990) and emotion regulation strategy were recorded and analysed. Our findings indicate that the positive affectivity outweighs the negative one. Although crewmembers experienced strong emotions with negative valence (fear, anger), quite often their emotion regulation strategy was usually other than the suppression.

**Energy intake and expenditure practices among overweight Romanian adolescents**

Popescu Ana Maria and Baban Adriana

As the prevalence of obesity has rapidly increased worldwide, being overweight is now a major public health concern. Weight gain occurs when energy intake is larger than energy expenditure; however the implied psycho-social factors and the underlying personal mechanisms are not fully understood yet. To address this, we used the national representative data from the 'HBSC' where overweight/obesity was operationalised by self-reported body mass index (HBSC 2006  $N=4600$ ; HBSC 2010  $N=4800$ ). The aim of this study was to determine the change in specific patterns of eating behaviours and physical activity practices of overweight Romanian adolescents in 2006 and 2010. As results are discussed in the context of the socio-economic changes of the country, our findings have a significant importance when considering the development of educational programs that target lifestyle optimisation through health-related attitude and behaviour change and the prevention of overweight and obesity in children and adolescents

**Family environment and peer relations among Romanian adolescents engaged in risk behaviours**

Popescu Ana Maria, Baban Adriana and Cosma Alina

Experimentation with smoking and drinking increases dramatically during adolescence, 15% of girls and 25% of boys report initiating smoking before the age of 13 (HBSC 2006); and 8%

of girls and 21 % of boys report alcohol consumption before the age of 13 (HBSC 2006). A variety of factors have been found to be associated with adolescent smoking and drinking. The aim of this study was to assess the parent and peer influences on Romanian adolescent substance use. Participants aged 11–15 years took part in the national HBSC 2010 survey ( $N=4800$ ). Family structure, family communication, peer relations and self-reported frequency and quantity of substance use were examined. Separate analyses were conducted for smoking and drinking controlling for sex and age. Our findings impact prevention programmes for adolescent smoking and alcohol consumption and interventions aimed at reducing substance use by delineating subpopulations and influencing factors.

**Gender differences and associated factors of weight control practices among Romanian adolescents**

Popescu Ana Maria, Cosma Alina and Baban Adriana

The prevalence of obesity has rapidly increased worldwide and adolescents' weight control strategies strongly predict future obesity and eating disorders and pose major health risks. According to media influences and the specific culture, females are more at risk of engaging in extreme and unhealthy weight modification strategies. The aim of this study was to examine the effect of gender, age and BMI on the weight control practices of Romanian children and adolescents. The participants aged 11–15 took part in the HBSC 2010 survey ( $N=4800$ ). Sex, age, BMI, perceived body image, body satisfaction and engaged dietary practices (skipping meals, smoking, taking dieting medication, fasting and induced vomiting) were examined. As results delineate vulnerable subpopulations, our findings have an increased importance for adolescent health interventions regarding weight issues and state how educational programmes should target particular subgroups according to the identified predictors of unhealthy and extreme weight control practices.

**Gratitude towards God, physical and mental health in late life**

Pourjali Fariba and Zarnaghhash Maryam

The main purpose of this study was identifying relationship between Gratitude towards God and physical and mental health in late life. In addition, an effort was made to test for gender differences in this process. In this regard, 125 (65 female, 60 male) aged 65–78 years old completed the Gratitude towards God scale (Emmons et al., 2003) and mental health check list (MHC) which assesses physical and mental health. By using Pearson correlation analysis, it was found that the older people who feel more grateful to God have better physical and mental health and also the analyses indicated that the potentially positive properties of Gratitude towards God is different between older women and older men. The findings were discussed in the light of literature.

**Keywords:** Gratitude towards God; physical health; mental health; gender differences

**Emotional intelligence and self-efficacy as predictors of occupational stress among nurses in Iranian hospitals**

Pourjali Fariba, Zarnaghhash Maryam and Forghany Noshin

The main purpose of this study was to identify the interactive and relative effects of emotional intelligence and self-efficacy on occupational stress of hospital nurses.

In this regard, 150 nurses were selected by using random cluster sampling. The measurement tools were Emotional intelligence Scale (EIS), General perceived self-efficacy scale (GSE) and The Nursing Stress Scale (NSS). Analysis of the data by using of Pearson correlation and multiple regression procedure indicated that the two independent variables, when taken together, were effective in predicting occupational stress. The findings were discussed in the light of literature.

**Relations between social support at work, health and engagement in a group of university professors**

Pozo-Muñoz Carmen, Alonso-Morillejo Enrique, Bretones-Nieto Blanca and Martos-Mendez Maria Jose

In the organisational context, the previous research confirms that social support promotes health of workers. This study, which involved 146 teaching staff from a Spanish University, completing a questionnaire on-line, aims to identify the relationship between health, job satisfaction, engagement and social support and to illuminate the impact of social support on the health. Generally, teaching staff rate their health positively ( $X = 3.89$ ), are satisfied with their occupation ( $X = 3.17$ ), and are developing an 'engaged' attitude ( $X = 3.90$ ), according to the results obtained. There are significant positive correlations between health and job satisfaction ( $r = 0.38, p \leq 0.01$ ) and engagement ( $r = 0.52; p \leq 0.01$ ) and social support from peers ( $r = 0.28, p \leq 0.01$ ) and superiors ( $r = 0.21; p \leq 0.05$ ). The engagement, job satisfaction and professional level, represent the variables that best predicted (40.1%) the perceived health. From the Occupational Health Psychology, it is important to identify the contextual factors that minimise the psychosocial impact of work in unhealthy organisational environments

**Psychosocial factors involved in the adherence to treatment in patients with epilepsy**

Pozo-Muñoz Carmen, Alonso-Morillejo Enrique, Martos-Mendez Maria Jose, Bretones-Nieto Blanca and Serrano-Castro Pedro

The purpose of this work is based on determining the degree of adherence to treatment in a group of patients with epilepsy and to examining clinical factors (type of epilepsy: refractory vs. controlled) and psychosocial factors involved in the behaviour of compliance, health and wellbeing. This study consists of a sample of 112 epileptic patients. It was used a questionnaire composed of various scales in which are collected demographic and clinical variables, treatment characteristics, level of adherence, reasons for non-compliance, social support, health and wellbeing. Analysis shows differences between the patients with refractory epilepsy and those with controlled epilepsy in several variables. The best predictors of treatment failure are forgotten ( $t = 3.74, p = 0.000$ ), the cost ( $t = 3.25, p = 0.002$ ) and side effects ( $t = 2.93, p = 0.005$ ). Knowledge of factors related to therapeutic failure and its relationship to health and well-being may encourage action plan to improve the quality of life of these patients.

**Psychosocial consequences of childhood cancer, social support and health in parents of affected children**

Pozo-Muñoz Carmen, Bretones-Nieto Blanca, Martos-Mendez Maria Jose and Alonso-Morillejo Enrique

Previous research confirms the modulator role of social support on health. Regarding the psychosocial impact of childhood cancer, the aim of this study is to examine the effect of social support on the health of parents of affected children. Thus, 51 parents, linked to an

association of parents of children with cancer, completed a semi structured interview. Generally, the parents exhibit symptoms ( $X=2.41$ ), but parents who perceive less support from their partner show less wellness ( $p<0.05$ ), and this also holds for the help received from the grandparents ( $p<0.01$ ) and siblings ( $p<0.01$ ). Those who receive support from their parents rate their health more positively ( $p<0.05$ ). The influence of the partner ( $p<0.01$ ) and siblings ( $p<0.01$ ) minimises the stress. Parents who are more satisfied with social support show more wellness ( $p<0.01$ ). From the Health Psychology, it is relevant to investigate social support as a strategy for coping with the psychosocial effects of childhood cancer on parents.

### **Relationship between daily spiritual experience and wellness in adulthood**

Pranckeviciene Aiste, Žardekaite-Matulaitiene Kristina and Gustainiene Loreta

**Background:** There is substantial literature that relates spirituality to a better mental and physical health. Lithuania is a post-Soviet country, where several generations grew up within the context of suppressed religiousness. So a question arises: Is the spirituality-health (wellness) relationship valid in Lithuanian context? **Methods:** 400 Lithuanian adults, 168 (42%) males and 232 (58%) females, mean age 40.6, participated in this study and completed Five Factor Wellness Inventory (5F-WEL, Myers, Sweeney, 2005) and The Daily Spiritual Experience Scale (DSES, Underwood, Teresi, 2002). **Results:** Spirituality was significantly related to a healthy lifestyle both in males and females. Even when with age some decrease in wellness was observed, adults with higher spirituality scores till reported higher scores of wellness. However, multiple regression analysis revealed that age and spirituality explained for only about 13% of variance. **Conclusion:** Spirituality has a significant positive but weak impact on health-oriented lifestyle during adulthood.

### **Pros and cons of condom use and stage of change, according to the transtheoretical model**

Prat Francesc, Planes Montserrat, Gras M. Eugènia, Sullman Mark and Gómez Ana Belén

**Objectives:** This paper examines the relationship between two constructs from the transtheoretical model, decisional balance and stage of change and consistent condom use with a heterosexual partner. **Method:** Participants were 619 sexually active undergraduate Spanish students (35.1% males; mean age = 20.31). Data were collected through a voluntary and anonymous self-report survey. **Results:** The pros and cons of using condoms and the combined decisional balance were significantly related to the stages of change for condom use, as the transtheoretical theory predicts. Moreover, the pros were more strongly related to the stages of change than the cons. **Conclusions:** Campaigns for the prevention of HIV infection, and other STDs should maximise people's perceptions of the advantages of condom use rather than highlighting the cons of not using a condom.

### **Modelling cognitive parameters in cost-effectiveness analyses of behavioural interventions**

Prenger Rilana, Pieterse Marcel, Braakman-Jansen Louise, van der Palen Job and Seydel Erwin

**Background:** Cost-effectiveness-analyses of behavioural interventions typically use objective behavioural data. However, delayed effects may occur after follow-up, which can bias the results. The aim of this study is to model cognitive parameters into a cost-effectiveness-model of a behavioural intervention to include future behavioural change. **Methods:** The cost-effectiveness-analysis of the SMOKE-study was replicated and included future behavioural change by modelling the stage-of-change-algorithm (Transtheoretical Model), adjusted for

relapse. **Findings:** In the first 12 months, the more intensive intervention (SST) dominated the less intensive intervention (LMIS) in 54% of the cases. By modelling cognitive parameters to a future second year of follow-up, the SST dominated in 74.3%. **Discussion:** This study showed that modelling of future behavioural change led to a favourable shift in results. Future studies should explore whether other theoretical constructs may be used to model delayed intervention effects as well, and whether this procedure can be applied to other health behaviours.

### Predictive factors of family meal frequency in adolescents

Prior Amie-Louise, Limbert Caroline and Smith Alyson

Benefits of family meals include improved diet quality, family interaction and well-being; however factors predicting frequency of family meals have not been identified. This research aimed to explore adolescent perceptions and experiences of family meals and identify factors that relate to and predict frequency of family meals. A focus group involving seven adolescents aged 13–14 years was analysed thematically. Key themes identified aided development of a Family Meals Questionnaire (FMQ), which was completed by 76 adolescents aged 13–14 years. Factor analysis identified three factors from the FMQ; Factor 1: 'Family interaction and routine', Factor 2: 'Enjoyment of Mealtimes', Factor 3: 'Food type and meal content'. Factor 1:  $F(1,46) = 21.865, p < 0.05$  and Factor 3:  $F(1,46) = 9.534, p < 0.05$  were significantly predictive of family meal frequency in females but not males. These findings may contribute to interventions aimed at increasing frequency of family meals.

### Condom use predictors in South African undergraduates: an application of the Theory of Planned Behaviour

Protogerou Cleo, Flisher Alan and Wild Lauren

Given the limited data and ongoing debate, this study aimed to determine the applicability of the Theory of Planned Behaviour (TPB: Ajzen, 1991) in the study of condom use in South African university undergraduates, whilst taking into consideration the impact of past behaviour and relationship status (RS). We measured predictor variables at Time 1 ( $N = 389$ ) and actual condom use at Time 2, a month later ( $N = 343$ ). Confirming our expectations, we found the TPB to be able to predict up to 35% of intended condom use variance, with attitudes being the strongest predictors ( $\beta = 0.42, p < 0.001$ ). The model was able to correlate with Time 2 behaviour. Additionally, past condom use and RS independently predicted intended and actual Time 2 condom use. With data consonant to that found in the West, we argue in favour of using the TPB in South-African contexts, whilst accounting for habit and RS.

### Coping with pain in patients with osteoarthritis

Pukljak Iricanin Zrinka, Perkovic Lada, Petrak Olivera, Rukavina Melita and Kostovic Srzentic Mirna

**Background:** Strategies used to cope with chronic pain are very important for the adjustment to the illness and its effects. **Objectives:** To measure pain coping strategies in patients with osteoarthritis (OA); to investigate relations between their coping strategies, pain intensity, depression and anxiety. **Methods:** 50 OA patients completed The Coping Strategies Questionnaire, Visual Analogue Scale, Becks Depression Inventory and Spielberger State

Anxiety Inventory. **Findings:** The most frequently used strategy is increasing activity level while reinterpreting is most rarely used. Patients with higher pain intensity are more anxious and depressed, and they use catastrophising, increasing pain behaviour and praying/hoping more frequently. Catastrophising is significant predictor for anxiety, explaining 38% of variance. Catastrophising, increasing activity level and reinterpreting are significant predictors for depression, explaining 66% of variance. **Discussion:** The results contribute to understanding of coping with pain and to the explaining of development of anxiety and depression in OA patients.

#### **The inventory of dentistry fears: Development and psychometrical properties**

Quiles Maria Jose, Méndez Javier, Hidalgo Maria Dolores, Pamies Lidia and Quiles Yolanda

The purpose of this work was to design and develop a new inventory, suitable for children from 7 to 11 years-old, to assess the main children's fears related with dental stressors and procedures: The Inventory of Dentistry Fears (IDF). Children rated the event presented in each item using a 3-point Likert-scale according to the fear that generated each situation. **Results:** We assessed 2559 children, from 7 to 11 years old. Factor solution was conformed by two factors which explained the 40% of the variance. The internal consistency was 0.93. Finally, the IDF showed a good temporal stability, 0.85, and an adequate concurrent and divergent validity. **Conclusions:** The IDF is a new instrument, with adequate psychometrical properties, which can be useful in the assessment of children's fears related to dental treatments. It can be applied in a short time and can be appropriate to identify children that would require a psychological preparation to cope with these events

#### **The blood inventory fears: A new instrument to access children's fears in medical settings**

Quiles Maria Jose, Mendez Javier, Hidalgo Maria Dolores, Quiles Yolanda and Pamies Lidia

The purpose of this work was to design and develop a new inventory, suitable for children from 7 to 11 years old, to assess the main children's fears related to blood: The Inventory of Blood Fears (IBF). The IBF was designed to identify children who exhibit the most intense fears, which can receive psychological preparation for medical procedures. Children rated the event presented in each item using a 3-point Likert scale according to the fear that generates each situation. **Results:** Factor solution was formed by an only one factor which grouped the 16 items. The internal consistency, evaluated with the Cronbach's alpha was 0.88. Finally, the IBF showed a good test-retest reliability, 0.80, and an adequate concurrent and divergent validity. **Conclusions:** The IBF is a new instrument, with adequate psychometrical properties, which can be applied in a short time and can be appropriate in medical settings.

#### **Meaningfulness of work in Chilean teachers: Analysis from the Job Demands-Resources model**

Quiñones Marcela, De Witte Hans and Van den Broeck Anja

This paper aims to test the role of meaningfulness of work from the perspective of the Job Demands-Resources model. Specifically, we test whether meaningfulness can act as a personal resource, moderating the energetic relationship between job demands (i.e. time pressure, role ambiguity and student aggression) and burnout. Hierarchical regression analyses in a sample

of Chilean teachers ( $N=519$ ) show that meaningfulness was the most important predictor of emotional exhaustion ( $\beta=-0.240$ ,  $p>0.05$ ), depersonalisation ( $\beta=-0.295$ ,  $p>0.05$ ) and personal accomplishment ( $\beta=0.504$ ,  $p>0.05$ ). However, interactions effects between job demands and meaningfulness were not supported. Although the buffer hypothesis was not confirmed, this study highlights the relevance of finding meaning at work for well-being and optimal functioning.

### **The role of social support for self-efficacy and exercise behaviour**

Rackow Pamela, Scholz Urte and Hornung Rainer

Drawing on the enabling-hypothesis (Benight & Bandura, 2004) this study set out to test whether social support promoted self-efficacy, which in turn promoted exercise behaviour in a group exercising with a companion compared to a group exercising alone. Participants were randomly assigned to an experimental ( $n=99$ ; female = 66.7%, age:  $M=34.09$ ,  $SD=10.89$ ) and control group ( $n=75$ ; female = 69.3%, age:  $M=34.37$ ,  $SD=11.29$ ). The experimental intervention comprised regularly exercising together with an exercise-companion for 2 months. Exercise behaviour, social support and self-efficacy were assessed three times. A comparison between the experimental and control group showed that the positive effect of social support on self-efficacy and in turn on physical exercise was confirmed only for the experimental group. Results provide evidence that for people exercising with an exercise companion social support is associated with self-efficacy and hence enables exercising indirectly.

### **Socioeconomic conditions are associated with number of pain sites in women**

Rannestad Toril and Skjeldestad Finn Egil

**Background:** Women in deprived socioeconomic situations run a high pain risk. Although number of pain sites (NPS) is considered a better parameter in pain assessment, little is known regarding the relationship between socioeconomic conditions and NPS in women. **Methods:** Cross-sectional study comprising long-term gynaecological cancer survivors ( $n=160$ ) and women selected at random from the general population ( $n=493$ ). Socioeconomic conditions were measured by Socioeconomic Condition Index (SCI). NPS was recorded using a body outline diagram indicating where the respondents experienced pain. Co-morbidity was also assessed. Findings. There were only minor differences in SCI scores between women with 0, 1-2 or 3 NPS, but women with the lowest SCI scores reported more often 4-7 NPS ( $p<0.001$ ). The result remained significant after adjusting for co-morbidity. **Discussion:** Women with the lowest SCI have the highest NPS. Improving the socioeconomic conditions for unprivileged women may have a greater impact on their health than medical intervention.

### **Using the Cry of Pain model to understand the motives given for adolescent self-harm**

Rasmussen Susan and O'Connor Rory

The present study investigated (1) whether the reasons given for adolescent self-harm differed according to how long ago the self-harming behaviour occurred, and (2) whether motives (Cry of pain vs. cry for help) given at baseline were able to predict repetition of self-harm over a 6 month period. 988 pupils aged 15-16 years completed a questionnaire at two time-points 6 months apart. Regression analysis highlighted that adolescents who had most recently self-harmed (less than a month) were significantly more likely to endorse cry of pain reasons than

adolescents who had last self-harmed more than a month ago. Regression analysis also revealed that pupils who had endorsed cry for help reasons at T1 were significantly less likely to repeat self-harm at T2, whilst pupils who endorsed cry of pain reasons at T1 were significantly more likely to repeat self-harm at T2.

**Development of a health education campaign for healthcare professionals of patients with anorexia nervosa**

Rees-Davies Laura, John Bev and Faulkner Susan

**Background:** In an earlier stage of this study, anorexia nervosa patients' accounts of treatment confirm that health professionals' lack of knowledge and ability to diagnose their disorder impacts negatively on therapeutic relationships and treatment outcomes. **Aim:** To develop a health education campaign to increase awareness in health professionals of patients who may have anorexia nervosa. **Method:** Interviews, 2 focussed tasks, and 6 focus groups (informed by theoretical frameworks for attitude change (Azjen, 1991; Petty & Cacioppo, 1986) were conducted with 36 health professionals (practising or in-training). Data were analysed using Thematic Framework Analysis and Grounded Theory. **Results:** Eight categories emerged including: 'effective education medium'; 'effective slogans'; 'referral advice' and 'communicating with the patient with anorexia nervosa'. A series of six posters were developed. **Discussion:** Consultation with health professionals is an appropriate way of designing health education campaigns for health professionals; effectiveness will be tested in the next stage of research.

**Giving a voice to service users with anorexia in Wales: Recommendations for policy and practice**

Rees-Davies Laura, Limbert Caroline and John Bev

**Background:** This study was commissioned by the All Wales Eating Disorder Special Interest Group to explore Service Users' treatment expectations and satisfaction prior to the implementation of a new tiered service, in relation to factors such as therapeutic alliance, treatment self efficacy, engaging in treatment and motivation to change. **Method:** Interviews with seven female adult Service Users with Anorexia Nervosa regarding their experience of one NHS Healthcare System analysed using Framework Analysis. **Results:** Analysis revealed fourteen themes; this presentation focussing on four themes: 'Expectations of the Welsh Healthcare Service'; 'Satisfaction with the Welsh Healthcare Service'; 'What could improve the Welsh Healthcare Service?' and 'Dissatisfaction with the Welsh Healthcare Service for Anorexia Nervosa?'. **Discussion:** The service user perspective on the previous Welsh Eating Disorder Service is discussed. This can be applied to other services in order to enhance service delivery and inform future research of service users with anorexia nervosa.

**Online and real life victimisation and adolescents' psychosocial problems: What is the cause and what is the consequence?**

Regina van den Eijnden, Ad Vermulst, Antonius van Rooij, Ron Scholte and Dike van de Mheen

**Background:** The aim of this study was to examine the reciprocal relationship between adolescents' psychosocial problems and both online and real life victimisation and to test the moderating role of online aggression. **Methods:** A longitudinal design with three annual

measurements among a sample of 831 Dutch adolescents aged 11–15 years. **Results:** The longitudinal findings suggest that loneliness and social anxiety predict an increase in online and real-life victimisation. Moreover, real-life victimisation predicted an increase in social anxiety, whereas no evidence was found for a pathway from online victimisation to psychosocial problems. Engagement in online aggression increased the risk of online victimisation among adolescents who experience psychosocial problems. Finally, online and real-life victimisation are mutually reinforcing phenomena. **Discussion:** Prevention programs should take into account that adolescents with psychosocial problems constitute an important risk group for online and real life victimisation, and that they should be advised to abstain from online aggression.

#### **Participation in leisure time physical activities as a health promoting factor in rheumatoid arthritis**

Reinseth Lillian, Uhlig Till, Kjeken Ingvild, Skomsvoll Johan, Koksvik Hege and Espnes Geir Arild

**Background:** The purpose of this study was to examine leisure time physical activities (LTPA) and the association with self-efficacy in females with rheumatoid arthritis (RA) ( $N=238$ ). **Methods:** Their participation in LTPA was measured by the Interest Checklist and efficacy-beliefs by the Arthritis self-efficacy scales (ASES). LTPA were classified as active and less active according to how many LTPA they performed. **Findings:** The participants had reduced their participation in LTPA by almost one-third during the last year. Multivariate analyses demonstrated that a high level of LTPA were independently related to less fatigue (OR 0.98,  $p=0.004$ ), positive self-efficacy in coping with RA functions (OR 1.03,  $p=0.015$ ) and higher employment level (OR 0.42,  $p=0.039$ ). **Discussion:** Health psychologists and other health professionals should encourage people with RA to participate in LTPA as participation in a high amount of LTPA is related to less fatigue, higher efficacy beliefs and higher employment level.

#### **Anxiety and coping strategies in infertile women undergoing ART treatments**

Reis Salomé, Xavier Maria Raul, Rodrigues Nina, Coelho Rui and Montenegro Nuno

Infertility has been defined by The World Health Organisation (WHO) as the inability to conceive despite regular intercourse, sustained for a period exceeding 12 months without any contraceptive methods. The lifetime prevalence of infertility in representative population-based studies from industrialised countries is 17–28%, and on average, 56% of individuals affected seek medical advice. Infertility and its treatment are low-control, chronic stressors with severe long-lasting negative social and psychological consequences. The main objective of this study is to analyse the psychological impact, on levels of state-trait anxiety and coping strategies, in women who, once confronted with the diagnosis of infertility, propose to carry out ART, for the first time or repeatedly. Study participants comprised of 89 women divided into two groups (women who are to start ART for the first time, and women who are pursuing ART repeatedly). Participants completed the Ways of Coping Questionnaire (WOC) and the State-Trait Anxiety Inventory – Form Y (STAI-Y). Results showed that women who are pursuing ART for the first time show higher levels of state anxiety, compared to the group of women who repeatedly carry out ART. The use of coping strategies is higher in the group of women who repeatedly carry out ART. Psychological intervention implications based on these findings and future research directions are discussed.

### Alexithymia, sensation seeking and substance use in young people with different substance use

Remaschi Laura, Tinti Barbara, Petrini Fausto and Meringolo Patrizia

**Aim:** Our contribution, coming from studies about youth lifestyles and substance use, analyses the relation among substance use, alexithymia and sensation seeking. **Methods:** Participants were 215, subdivided in three groups: substance users in treatment in Public Services for Addiction, substance users not in touch with PSA and non-users. Instruments. Questionnaire about lifestyles, leisure time and substance use, 20-item Toronto Alexithymia Scale, Sensation Seeking Scale-V. **Results:** Users' group in touch with PSA shows significant differences in alexithymia and sensation seeking (particularly in subscales Dis, TAS and ES compared with other groups and in EOT and BS compared with non-users). Users' group not in touch with PSA shows significant differences with non-users in sensation seeking, and in subscales ES, TAS and Dis. A weak but significant correlation between DIF and Dis and between alexithymia and BS emerges. **Conclusion:** Knowledge of young users' personality features can help to plan better interventions for prevention.

### In-depth study of a complex intervention targeting loneliness among elderly Dutch people

Rianne de Vlaming, Annemien Haveman-Nies, Canan Ziyylan and Reint Jan Renes

**Background:** Healthy Ageing is a complex intervention aimed at reducing the prevalence of loneliness among elderly Dutch people by improving social engagement and network quality. This qualitative study aims to assess how the intervention has been received by the priority group. **Methods:** In-depth semi-structured interviews were held in the priority group ( $n=17$ ). The ability of the communication materials to attract attention and to motivate the priority group was discussed. **Results:** Most interviewees were not familiar either with the total program or with the individual intervention components. Content acceptability depended on individual construal of the language used, agreement with the written text and personal relevance of the content. Personal traits and intrinsic motivation determined interest in the theme 'healthy ageing' and attention to communication materials. **Discussion:** This study contributes to understanding the effectiveness of complex multi-component interventions. Furthermore, it delivers valuable information to improve the applicability and effectiveness of such interventions.

### Health literacy scale of loneliness: An early indicator in loneliness prevention

Rianne de Vlaming, Annemien Haveman-Nies, Inge Oude Groeniger, Eveline Hooft van Huysduynen, Lisette de Groot and Pieter van 't Veer

**Background:** To assess short-term outcomes of interventions directing loneliness prevention among elderly people, a health literacy indicator is developed, consisting of behavioural determinants. **Methods:** Scale development consisted of four steps: defining concepts, developing items, evaluating constructs and reducing items. The scale was pre-tested among 303 elderly people. Principle component analysis and reliability analysis were used to affirm the underlying scale structure and to test the internal consistency of the constructs. Linear regression analyses were done to test the relationship between loneliness and health literacy. **Results:** The four-factor solution accounted for 56% of the total variance. The scale included 22-items. Factors were labelled: motivation, self-efficacy, perceived social support and subjective norm. Cronbach's  $\alpha$  was  $>0.7$  for each construct. The adjusted regression model explained 41% of the variance of loneliness. **Discussion:** A health literacy indicator for loneliness can contribute to the development of theory-based intervention activities and to evaluate short-term outcomes.

**Cognitive-behavioural strategies to promote physical activity and dietary changes – A critical appraisal of recent clinical recommendations**

Rieckmann Nina, Davidson Karina W. and Mueller-Nordhorn Jacqueline

**Background:** Interventions utilising cognitive-behavioural strategies to promote health behaviours are heterogeneous, and often combine multiple strategies with other interventions. Nevertheless, the 2010 American Heart Association scientific statement 'Interventions to Promote Physical Activity and Dietary Lifestyle Changes for Cardiovascular Risk Factor Reduction in Adults' (Artinian Circulation 2010) features 'Class 1/Grade A'-recommendations for several isolated cognitive-behavioural strategies. We re-appraised the evidence for these recommendations. **Methods:** All cited references for four recommended strategies (goal setting, goal-progress feedback, self-monitoring, self-efficacy enhancement) were reviewed. **Findings:** Out of 41 cited RCTs, none tested an isolated cognitive-behavioural strategy against an adequate control or other intervention group; all were multi-component. Four RCTs were cited for *post-hoc* correlation analyses. No meta-analysis or systematic review established the efficacy of one of the four strategies. **Discussion:** Disseminating clinical recommendations on health-behaviour-promoting strategies to clinical professionals is desirable. Yet, the evidence for recommending isolated cognitive-behavioural strategies appears insufficient.

**Correlates of human papillomavirus vaccination uptake among female vocational school students in Berlin, Germany**

Rieckmann Nina, Holmberg Christine, Mueller-Nordhorn Jacqueline and Blödt Susanne

**Background:** Vaccination against human papillomavirus (HPV) for the prevention of cervical cancer remains controversial. Vaccine uptake rates are low in most countries. We analysed correlates of HPV vaccination uptake in 18–20-year-old women in Berlin, who had been eligible for reimbursed vaccination since 2007. **Methods:** A survey was conducted among vocational school students assessing HPV vaccination, socioeconomic status, sexual history, and HPV knowledge (transmission, risk, health consequences). **Findings:** Of 129 18–20-year-old female participants, 86 (66.7%) reported having received vaccination, 78 (60.5%) had received all three shots. Those with no/incomplete vaccination were more likely to have a migration background ( $p=0.05$ ), and no past and present sexual partners ( $p=0.01$ ). Knowledge scores were poor among both vaccinated and unvaccinated women ( $M_{vacc}=2.4$ ,  $SD=1.9$ ;  $M_{unvacc}=2.7$ ,  $SD=2.0$ ,  $p=0.34$ ; possible range 0–11). **Discussion:** Education about HPV should be improved; migrant teenagers should be especially targeted.

**Changes in war-related distress in Croatia 1996–2004**

Ringdal Gerd Inger and Ringdal Kristen

**Objectives:** To compare war experiences and war-related distress in Croatia in 1996 with results from 2004 by means of representative sample surveys. **Methods:** 2202 face-to-face interviews were completed in 1996 and 1250 in 2004. We developed summated scales to measure war experiences and war-related distress. A multilevel analysis distinguished between effect of individual war experiences and contextual effects related to the communities' exposure to the war. **Results:** We found stability in reported symptoms between 1996 and 2004. The effect of the war experiences scale on war-related distress showed no statistical significant change over time, while we expected a weakening of the relationship. We found no contextual effect of community war exposures on war-related distress, contrary to our hypothesis. In conclusion war related symptoms do not seem to decay over time and contextual effects of community war exposures on war-related distress seem to be marginal.

### The effect of different learning methods on medical students' attitudes

Rita Joana, Grilo Ana, Santos Margarida and Ferreira Catarina

**Background:** This study seeks to present an evaluation of role orientations in different medical schools in Portugal. **Methods:** The sample comprised medical students from the first and fifth year from three different Medical Schools in Portugal. The students filled out the Patient-Practitioner Orientation Scale (PPOS), an instrument that measures the role orientations of the doctor-patient relationship. **Findings:** The results confirm previous research (French, 2008) who found that, in first years total PPOS scores and sub-scales (Sharing and Caring) scores were lower in Portuguese students than the scores found among medical students in the United States and Brazil. The differences between first and fifth years in the PPOS mean scores are analysed. Total PPOS scores and sub-scales are compared between three medical schools. **Conclusion:** These results point that different medical schools curricula should influence attitudes of the future physicians. This calls for changes in medical education methods.

### Depressive symptomatology explained by affective, social and family resources

Rivera-Heredia Maria Elena, Martínez-Servín Lizeth Guadalupe, Martínez-Ruiz Diana Tamara, Obregón-Velasco Nydia, Cervantes-Pacheco Ericka Ivonne and Escutia-Valdez Diana Paulina

In order to understand what is happening with adolescent's emotional life, this research explains depressive symptomatology taking into account their personal and family resources, and the experience of migration in their family. The sample included 360 adolescents (50.6% women and 49.4% men; mean age=13.5, SD=0.68) from 10 different regions of Michoacan, Mexico. The instruments were CES-D-R ( $\alpha=0.93$ ), Affective resources scale ( $\alpha=0.82$ ), Social resources scale ( $\alpha=0.77$ ) and Family Resources Scale (0.81), they were applied in the classroom, with the agreement of the participants. A linear regression analysis was used. The main result was that 42% of variance of Depressive Symptomatology is explained by Gender, Self-control, Difficulties to deal with sadness, Difficulties to deal with anger, Inability to ask for help to the social support network, Expression in the family, and Migration of the mother. The affective, social and family resources should be straightened to promote well-being in adolescents.

### Change in self-efficacy during and following pulmonary rehabilitation and relationship to exercise intentions

Rodgers Wendy, Holm Siri, Vogan Norah, Selzler Anne-Marie, Haennel Robert, Wong Eric and Stickland Michael

**Background:** Adherence to exercise-based rehabilitation is notoriously poor. Exercise self-efficacy has been demonstrated to predict adherence to rehabilitation. Little research has examined its influence on post-rehabilitation exercise adherence. **Methods:** Using a repeated measures design, task, coping and scheduling self-efficacy for exercise were assessed at baseline, end of rehabilitation and 6 months post-rehabilitation in 57 pulmonary patients. **Findings:** Exercise self-efficacy changed little over the course of rehabilitation and only scheduling self-efficacy weakly predicted intentions for exercise either in or outside the rehabilitation program. Exercise self-efficacy dropped significantly ( $p<0.0001$ ) from program end to the 6-month follow-up. Furthermore,

post-rehabilitation exercise was predicted only by task self-efficacy. **Discussion:** Pulmonary rehabilitation patients show good self-efficacy immediately following rehabilitation, but within 6 months levels drop below baseline and adherence is related to perceptions of basic exercise capability. This finding suggests that after rehabilitation, patients require additional support to sustain exercise confidence.

### Women experiences of induced legal abortion in Portugal – An exploratory study

Rodrigues Nina, Xavier Maria and Reis Salome

Taking into consideration the recent liberalisation of abortion in Portugal, and in spite of its incidence rates, research is still limited. The aim of this qualitative study was to explore women's experiences of induced legal abortion: dimensions of the decision process, evaluation of the abortion process and previous contraceptive habits. Seven women aged 21–30 years were interviewed immediately after follow-up visit (approximately 15 days after first visit). Content analysis was used. The following themes were identified: Contraception, reaction to pregnancy, decision-making process, partner involvement, 'the abortion', opinion related to decision. Professional and financial problems, being too young and insecure partnership influenced the women's decision to have an abortion. All women had used contraception in the past but had stopped because of side effects or misconceptions. One conclusion drawn from our study is that health professionals need to be aware of women's complex and varied experiences with abortion and abortion decision.

### Prenatal screening: Are the pregnant women well informed?

Rodrigues Nuno, Veiga Elisa, Rosmaninho Adosinda and Lopes Emanuela

**Prenatal Screening:** Are the pregnant women well informed? Nuno Rodrigues.\* Elisa Veiga\* Adosinda Rosmaninho\*\* Emanuela Lopes\*\* \* Catholic University of Porto – Faculty of Education and Psychology Human Development Centre \*\* Responsible for Prenatal Diagnosis Centre of Hospital Centre of Alto Ave \*\*\* Department of Psychiatry.

**Background:** This study is important for the future investigations 'so that we can give to the couple information and knowledge to enable them to make informed decisions and to allow an intervention if desired' (Marteau, 1995, p. 1226). Objectives and **Methods:** In order to explore the women's experience who did prenatal screening and understanding the impact resulting from the phenomenon called 'false positive', we have conducted structured interviews with seven women. **Findings:** Emotional experience is characterised by feelings of anxiety, anguish and sadness, some women did neither understand the given information about the importance of amniocentesis, nor know how to interpret amniocentesis **Results:** In the communication of results, we verified the existence of emotional support provided by different health professionals that cause feelings in the pregnant women, such as proximity, tranquillity and coldness. **Discussion:** It is relevant explore deeply how women understand the information given by health professionals, because this exploratory study suggests that a big amount of information is not fully understood.

### Using self-determined motivation in predicting health reason practitioners of healthy exercise

Rodríguez-Marín Jesús, Cervelló Eduardo and Moreno Jose Antonio

This study's objective was to check the prediction of health/fitness reasons for doing physical exercise using psychological mediators and self-determined motivation. The study sample consisted of 524 (236 women and 288 men) practitioners of physical and sports activities are

not competitive, aged 18–77 years ( $M = 28.75$ ,  $SD = 12.99$ ). Psychological mediators were measured (BPNES), self-determined motivation (BREQ-2) and health reasons (MPAM-R). After the structural equation analysis with basic psychological needs, self-determined motivation and the health reason as latent factors, it was determined that satisfaction of the needs for competence and relatedness positively predicted self-determined motivation, and the latter, in turn, also positively predicted the health reason. Results shown that the sport coach's ability to satisfy these needs will strengthen exercisers' self-determined motivation, and encourage them to continue to do exercise and follow sport programmes for health reasons.

**Keywords:** self-determination, psychological mediators, factorial validity, health, fitness

### **Quality of the social work services for the victims of human trafficking in Romania**

Roman Claudiu, Goian Cosmin and Vintila Mona

**Background:** The existence of some services of assistance in Romania is certain, the way in which these services respect the governmental standards of quality, is unknown. **Aim:** Highlighting the perception of beneficiaries, victims of human trafficking, with reference to the quality of the social services existing in Romania. **Methods:** Measuring through a quantitative questionnaire of the degree of social satisfaction for the victims of human trafficking regarding the services offered to them, in the assistance institutions from Romania, public or private. Number of victims questioned: 150. **Results:** 80% of the beneficiaries of social services declared themselves satisfied with the services offer to them. 55% received several forms of support in the frame of the centre: material, psychologic, medical, educational and juridic. **Discussions:** Social work services are present and appreciated from the point of view of the beneficiaries, but from the specialist' point of view there is still much to be done.

### **Anxiety, depression and stress in habitual wine drinkers and abstainers**

Romano Bellkiss, Hojaij Elaine, Pacheco Barbara, Prado Gabriela and Da Luz Protasio

Researches demonstrate protection of moderate alcohol consumption on the development of coronary heart disease and cardiovascular morbidity. It is suggested that moderate wine consumption contributes to emotional well-being, relieving stress (related to fat deposits in artery walls). This study evaluated/ compared levels of anxiety, depression and stress of wine drinkers  $\times$  abstainers. **Methods:** 126 male volunteers, aged between 50 and 70: Group A (67 consumers of one/two glasses of red wine, four to six times/week, at least for 5 years); Group B(59 abstinent for at least 5 years). **Instruments:** Beck Inventories (Anxiety/Depression), Lipp Inventory Symptoms Stress. **Results:** Group A: 88% minimal anxiety, 89% minimal symptoms of depression, 10% symptoms of stress. Group B: 91% minimal symptoms of anxiety, 88% minimal symptoms of depression, 24% symptoms of stress. Results are not statistically significant. **Conclusions:** Consuming wine did not affect either emotional state or control of stress symptoms. May be drinkers have their own protective factors to cardiovascular disease.

### **Quality of life of habitual wine drinkers $\times$ abstainers**

Romano Bellkiss, Hojaij Elaine, Pacheco Barbara, Prado Gabriela and Da Luz Protasio

Researches demonstrate protection of moderate alcohol consumption on the development of coronary heart disease/cardiovascular morbidity. It is suggested that moderate wine consumption contributes to emotional well-being, relieving stress (related to fat deposits in artery walls). It is hypothesised that drinkers have better quality of life (QOL). The aim was to

evaluate/compare wine drinkers and abstainers QOL. **Methods:** 126 male volunteers, aged between 50 and 70: Group A (67 consumers of one/two glasses of red wine, four to six times/week, for at least 5 years), Group B (59 abstinent for at least 5 years). **Instruments:** SF-36 and WHOQOL-bref. **Results:** SF-36 showed statistical differences ( $p=0.045$ ) in the mental health dimension, better evaluated by Group B. WHOQOL-bref showed difference between groups in the physical domain ( $p=0.023$ ), with better self-evaluation by Group B. Still, both have positive perception of QOL. **Conclusions:** abstainers tended to consider their QOL better in relation to drinkers in the physical and psychological/mental.

### Personality characteristics of habitual wine drinkers × abstainers

Romano Bellkiss, Hojaij Elaine, Pacheco Barbara, Prado Gabriela and Da Luz Protasio

The aim of this study was to evaluate/compare wine drinkers and abstainers personality characteristics. **Methods:** 126 male volunteers, aged between 50 and 70: Group A (67 consumers of one/two glasses of red wine, four to six times a week, for at least 5 years), Group B (59 abstinent for at least 5 years). **Instrument:** Comrey Personality Scales. **Results:** significant difference between groups ( $p=0.049$ ) was on Orderliness vs. Lack of Compulsion subscale; approximately 70% of drinkers were assessed with lack of compulsion (ranging from regular to extreme), higher than abstainers. Both groups were equal: conformists in relation to society × rebels; a lot of resistance/energy × demotivated; quiet/optimistic × who have mood swings. Many believe in honesty/good will of the people, are outgoing, sensitive and self-centred. **Conclusions:** Drinkers were more likely to disorganisation. Association between these characteristics and wine consumption could not be done.

### Quality of life and smoking after lung cancer diagnosis

Rowland Christine, Eiser Christine, Rowe Richard and Danson Sarah

**Background:** Given the established links between smoking and lung cancer (LC), patients who smoke may feel guilty or pessimistic about their outcomes. This may compromise adherence with medical advice. Our aims are to compare quality of life (QoL), and illness experiences of LC patients depending on smoking history. **Methods:** Clinical data and measures of QoL (EORTC-QLQ-C30+LC13) and illness perceptions (Brief IPQ) were returned for 100 newly diagnosed patients (Mean age: 68 years; 57% males). 26% were current smokers, 66% former smokers and 8% never smoked. **Findings:** There was a significant effect of smoking-status on QoL subscales physical-function ( $F(2, 95)=3.85, p=0.025$ ) and social-function ( $F(2, 95)=4.30, p=0.016$ ). *Post-hoc* Tukey's HSD show that never-smokers had significantly higher physical ( $p=0.046$ ) and social ( $p=0.020$ ) functioning than former-smokers. There was no significant effect of smoking-status on illness perceptions. **Discussion:** These findings have implications for care-planning in LC patients. Results are discussed in relation to smoking-cessation advice for patients and their families.

### Study of relation between computer games and general health on students in Iran

Sabet Mehrdad

**Aim:** Study of relation between computer games and general health is main objective of the present study. **Methodology:** The research is correlation type. A number of 379 students (7–11 years) were selected from among schoolchildren who were studying at primary schools of Tehran in 2010–11 School Year. Students also were asked to specify computer games with answering YES or NO. Research tool was General Health Questionnaire (GHQ). Logistic

regression method was used for analysis of data. **Findings:** The results showed that among general health components, variables of physical health, anxiety and sleep disorder have not any meaningful relation with computer games. The relation of depression and negativism has a reverse relation with computer games. **Conclusion:** With the increase of depression and negativism, probability of computer games is reduced. The positivism relation with computer games is direct and positivism will increase probability of computer games.

**Keywords:** general health, computer games

### **The dynamics of perfectionism in self-management of chronic illness: A theoretical account**

Saboonchi Fredrik, Björling Gunilla, Andreassen Sissel and Fossum Björn

Perfectionism denotes a tendency toward rigidly high goal settings and a preoccupation with failure. Acquiring a chronic disease often leads to an altered outlook of future expectations and goals. Self-management of a chronic illness involves a process of acquiring and applying new behaviours and skills, as well as goal adjustment, and social and emotional adaptations. Self-regulatory capacities of the individual become crucial in this process. A theoretical model of the influences of perfectionism on self-regulation and self-management is presented. Perfectionism asserts adverse influences on the self-regulatory process, which in turn functions as a mediator between self-management process and outcomes. Failure-focused appraisal and rigid adherence to high goal settings are presented as the main adverse dynamics in this model. The support for a sense of self-acceptance through validation of healthy core values, identifying attainable pathways and goals, strengthening goal adjustment and enhancing self-efficacy are presented as essential in self-management support.

### **Worries about sexual intimacy adversely influence changes in subjective health for patients with IBD**

Saboonchi Fredrik and Jäghult Susanna

The chronicity and the unpredictable course of Inflammatory Bowel Diseases (IBD) subject the patient to a considerable amount of distress. The patients' worries and concerns have been viewed as essentialities in their health-related quality of life and subjective health. Potential negative influences on changes in the subjective health may thus hamper the adjustment to the disease. A latent growth curve analysis (LGC) was conducted on self-reported data generated by a sample of IBD patients ( $n=197$ ) on three occasions, baseline, after 1 month and after 6 months. The main adverse influence on the slope of the change in subjective health was the worries about sexual intimacy ( $\beta=-0.60$ ,  $p<0.001$ ). The results indicate that these worries may prospectively impede a successful adjustment to the disease in short term ( $<6$  months), whereby a need to address this potentially sensitive issue in both clinical and research settings is articulated.

### **Mental and physical health in a sample of Romanian people living in Spain**

Sánchez-López María del Pilar and Brabete Andreea Catalina

**Background:** We propose to assess the influence on mental health and physical health (physical ailments and self perceived health) as a result of the migration process. **Methods:** We analyse the relationship between the 12-item GHQ (mental health) and physical health. All instruments were adapted to the Romanian language following the International Test

Commission Guidelines for Translating and Adapting Tests. **Participants:** 123 Romanian people (72 women and 51 men). **Methods:** We used Pearson's correlations to study the relationship between the variables of this study. **Results:** There is a direct relationship between mental health and physical ailments. There are no statistically significant correlations between mental health and self perceived health, but there is a tendency: less mental health correlates with less self perceived health.

#### **Why do depressive individuals show poor exercise behaviour? Studying social-cognitive mechanism regarding behaviour change**

Sarah Pomp and Lena Fleig

**Introduction:** Depression is among the leading causes of disability and related to poor exercise behaviour. Depression is negatively associated with positive outcome expectancies and positive experiences concerning exercise. Expectancies influence experiences. This study investigated the psychological mechanisms (i.e. expectancies and experiences) through which depressive symptoms affect exercise behaviour. **Method:** 187 rehabilitation patients completed a questionnaire during their rehabilitation and six weeks later. At T1 depressive symptoms and expectancies and at T2 experiences and behaviour were assessed. A multiple step mediation analysis was conducted. **Findings:** The effect from depressive symptoms through expectancies and experiences on behaviour was significant ( $p < 0.01$ ), as well as the effect through experience only ( $p < 0.05$ ). Depressive symptoms were negatively related to expectancies. Expectancies predicted experiences which were in turn associated with behaviour. **Conclusion:** Exercise interventions for depressed individuals should focus on positive expectancies and positive experiences concerning exercise and consider the interplay of these social-cognitive variables.

#### **Impact of fear appeals on intention to take driving risks among young male drivers in Ireland**

Sarma Kiran, Carey Rachel, Cashman Eoin, Aoife O Sullivan and Bogue John

Three experiments were conducted to examine the impact of exposure to fear appeals on intention to take driving risks. The objectives were to ascertain the effect of personality, message type and self-efficacy on the risk intentions. Participants were young males aged 18–24 with a full or 'provisional' driving license. Study 1: Two groups of participants were exposed to either death-related or neutral driving facts. In Study 2, participants were exposed to a fear + High controllability, fear + Low controllability, or no-fear condition. Finally, Study 3 was a part-replication of Study 1 and 2, but with an on-line sample of 'boy-racers'. In Study 1, participants who were exposed to death-related facts reported higher intentions to take driving risks than those exposed to neutral information. Impulsiveness was found to be a significant contributor to risky driving intentions. Study 2 and Study 3 are due for completion in April 2011.

#### **Comprehensive diagnosis of smoking behaviour facilitates the decision for an intervention strategy to stop smoking**

Schoberberger Rudolf

The choice of smoking cessation method should be tailored on the type of smoker. According to circumstances, self-help, outpatient or inpatient therapy should be the first-line intervention. In this context also different health professionals (e.g. psychologists, physicians, pharmacists) will be the primary point of contact. Experiences are based on representative survey data, an Austrian multicentre study and smokers who participated in inpatient

smoking cessation therapy. About 55% of Austrian smokers are at least in the contemplation phase and have the wish to change their smoking behaviour. Nearly 80% of them have clear signs of nicotine dependence. Some smokers are heavy nicotine dependent and have a lot of barriers to stop although they suffer from tobacco-associated diseases. 'Healthy' smokers with low degree of nicotine dependence will be successful with self-help methods. The stronger the nicotine dependence is pronounced, the more intense the therapy should be.

**Sleep disturbances in a 125 IBD patients sample: influence of anxiety and depression**

Schoenenberger Sandrine, Banovic Ingrid, Gilibert Daniel, Jebrane Ahmed and Cosnes Jacques

The incidence of anxiety and depression in Inflammatory Bowel Disease patients on the one hand, and, the presence of sleep disorders in the other hand are often reported. The objective was to assess the effect of depression (HAD-D), anxiety (HAD-A) and activity of the disease (assessed by a physician elsewhere) on sleep disorders (insomnia: ISI; daytime sleepiness: ESS) for 125 IBD outpatients. Results showed that depressive, anxious or patients with an active disease suffered more from insomnia. Multiple regressions showed that 7% part of ISI variance were explained by activity of the disease ( $\beta=0.27$ ,  $p=0.001$ ), 25% by depression ( $\beta=0.50$ ,  $p<0.00001$ ) and 26% by anxiety ( $\beta=0.51$ ,  $p<0.00001$ ). Insomnia is more attributable to anxiety and depression than to disease activity. In order to improve IBD patients' management, further research must take account a more complex combination of psychosocial stressors, medication, inflammation to explain the relation between inflammation, psychological suffering and insomnia.

**Engaging adolescents in a social movement around HIV-prevention: Which factors should we focus on?**

Schouten Barbara, Vlug Martijn, Hermanns Silvia, Spijker Esmee and van Weert Julia

The aim of this study was to identify factors underlying youngsters' involvement with dance4life, a global organisation around HIV/AIDS prevention that wants to establish a social youth movement of one million youngsters by 2014. The Youth Engagement Framework was used as a theoretical base for this study. 67 youngsters participated in this study, 21 of them were still active for dance4life's social movement at the start of this study, 46 were not. 23 youngsters were interviewed, 44 youngsters took part in subsequent online or face-to-face focus groups. Results show that youngsters, who are still involved in dance4life's social movement, are more intrinsically motivated about HIV/AIDS prevention, receive more social support from parents and friends, and are stimulated more by dance4life to remain part of their movement than youngsters who are no longer active. Hence, to stimulate youngsters' involvement in social movements around HIV/AIDS prevention, these factors should be enhanced.

**Programme (in)completion of a web-based tailoring lifestyle intervention, using a sequential and a simultaneous strategy**

Schulz Daniela, Schneider Francine, de Vries Hein, van Osch Liesbeth, van Nierop Peter and Kremers Stef

**Background:** Unhealthy lifestyle behaviours often co-occur and are related to (chronic) diseases. We studied the predictive value of person characteristics and five lifestyle behaviours on (in)completion rates of two computer-tailoring strategies: a sequential (SeqS) and a

simultaneous strategy (SimS). **Methods:** In a longitudinal study among 3474 adults, first a health risk appraisal, including feedback regarding (non)adherence to the five health guidelines, was offered. Second, personal advice on psychosocial determinants was provided, based on random assignment to SeqS or SimS. **Findings:** Discontinuation (SeqS: 69.0%; SimS: 80.7%) was predicted by a lower age ( $OR = 1.04; p < 0.001$ ) and an unhealthy lifestyle ( $OR = 0.71; p < 0.001$ ). Once respondents did not adhere to at least two guidelines, people receiving the SimS were more inclined to break off than people receiving the SeqS. **Discussion:** Drop-out rates were high. Duration and information overload might be possible reasons for the higher drop-out in the SimS. In the future, prolonged use of computer-tailored interventions should be studied.

### Community-based health promotion for socially deprived elderly: A needs assessment

Schulz Inga-Marie and Faltermaier Toni

As the population structure is facing long-lasting changes, active and healthy aging becomes essential. In health promotion, however, the needs of elderly and especially socially deprived elderly have rarely been addressed. In this study health-related needs of socially disadvantaged independently-living elderly within the setting of an urban district are explored to develop adequate health promotion approaches for this target group. Health as mental and social well-being and its relation to social networks, social support resources and social integration were emphasised. Seven intensive qualitative interviews were conducted and analysed thematically. Results indicate that health-related needs are highly heterogeneous; in particular, participants' social resources, social integration and their coping with social isolation vary considerably. However, elderly have skills and life experiences that community-based, low-threshold and outreach interventions can be based on to reach and to empower the elderly to activate their social resources and meet their diverse needs.

### Effective strategies for prevention of school bullying: Teachers' and social workers' views

Schwarz Frederike and Faltermaier Toni

**Background:** The aim of this study is to examine teachers' and school social workers' views on bullying in schools, to explore their ideas about causes and nature of school bullying, and especially regarding strategies for its prevention. **Methods:** Thirteen qualitative semi-structured interviews with school social workers and teachers were conducted at different schools. The data were transcribed and analysed thematically. **Findings:** Teachers, social workers and other school staff and their commitment towards and knowledge of school bullying are essential to make prevention efforts effective. Of particular relevance are internal and external support, networking of educators, and inter-professional cooperation. Sustainable and long-lasting strategies should also involve the students' parents. **Discussion:** Bullying prevention can improve conditions for learning and working, and for the health of everyone involved. Despite many publications and programmes there is a high demand for information, qualifications and training on prevention of school bullying among teachers and social workers.

### Emotion processing and social participation following stroke

Scott Clare, Phillips Louise, Johnston Marie, MacLeod Mary-Joan and Whyte Maggie

**Background:** Following stroke individuals show restrictions in social participation and difficulties in emotion processing (emotion perception, emotion regulation and depression).

This research examined whether difficulties in emotion processing predict social participation restrictions (SPR) or vice versa following stroke. **Method:** 48 patients completed measures of SPR (SIP, WHOQOL-BREF) and emotion processing, at 2 and 18 months post stroke. Multiple regression was used for analyses. **Results:** Emotion processing ability significantly predicted SPR but was no longer significant once Activity Limitation (AL) was controlled for. SPR significantly predicted emotion regulation and depression ( $\beta=0.417$ ,  $p<0.01$  and  $\beta=0.387$ ,  $p<0.01$ ) independently of AL. **Discussion:** While emotion processing predicts later SPR, this could be explained by AL. However, low levels of SP early after stroke predicts later emotion processing difficulties.

#### **Breaking bad news in chronical diseases: An interview study of patients and physicians**

Sébastien Montel, Marie-Lou Costantini, Nathalie Thilly, Anne-Christine Rat, Anne Lancelot, Laurence Wagner, Francis Guillemin, Laurent Muller and Elisabeth Spitz

**Background:** Research on the breaking bad news mainly focused on cancer disease. Few studies investigated this issue in other chronical diseases. We are exploring factors influencing the breaking bad news process in different chronical diseases. **Methods:** Patients and physicians concerned by different chronical diseases are interviewed. Patients/physicians are considered eligible if they received/broke bad news in the few months preceding the interview. A semi-structured interview is conducting by psychologists. The main issues tackled are: needs, emotions, cognitions, behaviour/attitude before, during and after the breaking. IPA will be used as data analysis. **Current stage of work:** We are proceeding to do the interviews of both patients and physicians. We will display the first results of this study during the EHP meeting. **Conclusions:** These qualitative data should help us to respond to the needs of the patients as well as those of the physicians who have to break bad news daily.

#### **Are depressive symptoms, perceived stress and binge drinking associated with marijhana use among university students?**

Sebena Rene, Orosova Olga and Gajdosova Beata

**Background:** The aim of this study was to investigate an existence of the relationship between binge drinking, depressive symptoms, perceived stress and marijhana use among university students. **Methods:** The sample consisted of 813 Slovak university students (1st–4th year; mean age  $21.1 \pm 1.8$ ; 63.8% female). Binary logistic regression was performed to assess the impact of depressive symptoms, perceived stress and binge drinking on the student's marijuana use. **Findings:** The result indicated that male gender and binge drinking were positively associated with marijuana use. Depressive symptoms were negatively associated with marijuana use. Finally perceived stress was not found to be associated with marijuana use. **Discussion:** Our findings confirm that males and binge drinkers may be at a higher risk for marijuana use. On the other hand, depressive symptoms were negatively associated with marijuana use among university students.

#### **Persons living with HIV/AIDS beginning antiretroviral therapy: Cognitive-behavioural intervention to treatment adherence**

Seidl Eliane Maria Fleury

**Background:** Adherence difficulties to the antiretroviral treatment set challenges to health professionals. The study aimed to describe a cognitive-behavioural intervention to patients beginning antiretroviral therapy and analyse the intervention effects on adherence

behaviour. **Methods:** Quasi-experimental design, with baseline evaluation and another one six months after the intervention. Ten patients participated, six of them men, ranging from 36 to 55 years. The instruments included semi-structured interview and a self-efficacy scale for treatment adherence on HIV/AIDS. The individual intervention included techniques such as self-monitoring adherence, problem solving and cognitive restructuring of beliefs about the disease and the antiretroviral treatment. **Findings:** Eight participants reported full adherence (ingestion higher than 95% of the doses) and an increase of self-efficacy scores. The immunological and virological indicators in the follow-up were compatible to satisfactory adherence. **Discussion:** The intervention favoured patient's adherence, with the development of self-efficacy and coping abilities, probably preventing treatment difficulties in the future.

#### Evaluating effects of health education workshops to prevent HIV infection in young offenders

Seidl Eliane Maria Fleury, Lima Iara, Souza Adriano Silva Sampaio, Fagundes Kayan Almeida, Ramos Gabriela Ribeiro and Ramos Ana Luiza Canêdo

**Background:** The objective was to evaluate the understanding of HIV/AIDS issues and beliefs on safe sex practices of imprisoned adolescents in young offenders' institutions before and after taking part in health education workshops. **Methods:** Quasi-experimental design. Thirty-two adolescents participated, 17 of them were women, ranging from 15 to 20 years. A questionnaire was answered before and 30 days after the workshop. The workshops were divided by gender, six hours long, using participative pedagogical methods. Paired Student's *t*-test was used for data analysis. **Findings:** Thirty participants mentioned sexual debut and 28 (93%) admitted irregular condom use. Boys and girls increased scores on HIV understanding and attested more positive attitudes and beliefs on safe sex practices after the workshop, but the scores' average difference reached statistical significance only for boys concerning beliefs ( $p < 0.01$ ). **Discussion:** Due to the vulnerability of imprisoned adolescents, continuous and longer interventions using other pedagogical methods are recommended.

#### Association between decisional balance on weight loss and occupations in Japanese middle-aged and older women

Seino Junko, Eto Kazuko, Ishikawa Rie and Ai Inoue

**Background:** The change of lifestyles of recent years leads to lifestyle-related diseases. The obesity of middle-aged and older women is also acknowledged as a problem. The purpose of this study is to clarify the association between decisional balance on weight loss and the occupation in middle-aged and older women. **Methods:** A questionnaire survey was conducted in 1397 women 35 years of age or older. The SPSS 17.0 J was used to investigate the frequency distribution and the analysis. **Results:** The response rate was 81.5%. The mean age was 50.8 years (SD, 11.08). The occupations are below: 361 of nursing job (33.1%), 280 of full-time housewife (25.6%) and 369 of the others (33.8%). The nursing job's DBS for middle-aged and older women is significantly low at 0.1% level than the others. **Discussion:** Due to nursing staff's acknowledgment of weight loss without excessive expectation, the profit point is low.

**An exercise-based implementation intention intervention in pulmonary rehabilitation patients**

Selzler Anne-Marie, Rodgers Wendy, Haennel Robert, Holm Siri, Vogan Norah, McKillop Ashley, Wong Eric and Stickland Michael

**Background:** There is a substantial need to increase exercise adherence in rehabilitation settings. Implementation intentions are if-then statements that aid in translating intentions into behaviours, although the effects of such an intervention have not been widely examined in exercise-based rehabilitation. **Methods:** The effect of an implementation intention intervention on exercise behaviour was assessed in 41 pulmonary rehabilitation patients using a repeated measures design: baseline, 8 weeks, 6 months post-rehabilitation. **Findings:** Compared to the control group, a significant interaction showed patients in the intervention showed increased exercise behaviour at higher intensities during rehabilitation ( $p < 0.05$ ). There was no significant difference between the groups at the 6-month follow-up. **Discussion:** An implementation intentions intervention effectively translated exercise intentions into behaviours in pulmonary rehabilitation patients, but the effect did not persist 6 months after rehabilitation. This finding highlights the need for sustained support following rehabilitation.

**Relationship between emotional labour and job satisfaction in teachers**

Sener Emine, Tabak Ruhi Selcuk, Sarlak Kader and Unsal Murat

To define and analyse the emotional labour and job satisfaction of teachers, who work in education sector which is one of the prominent service sectors, and to realise required organisation are essential for the effectiveness of both the manpower planning and the institution. Hence, this descriptive study was carried out to define the teachers' emotional labour and its relations with their job-satisfaction. The study group consisted of 98 teachers working in the schools in Karaculha District of Fethiye. 'Scale for Emotional Labour in Teachers', 'Job Satisfaction Scale' and 'Personal Information Form' were used as the data collection tools. Teachers' mean age is 33 years, and 89.8 % of them had no training for emotion regulation. Positive correlation was estimated between Emotional Labour and Job Satisfaction. Moreover, the employment of the strategies such as 'natural role play' and 'deep role play' is found to be effective in job satisfaction of teachers.

**Living and coping with Parkinson's disease: An interpretative phenomenological analysis**

Shaw Rachel and Sein Kim

**Background:** We know little about how Parkinson's disease (PD) patients develop strategies for coping with and making sense of their condition. This study explored three individuals' experiences of living with PD. **Method:** An idiographic approach was taken. Data were collected by semi-structured interview and lived experience descriptions, which were analysed using Interpretative Phenomenological Analysis. **Findings:** Two key themes demonstrate shared ways of making sense of a life with PD: the mind-body split illustrates how previously pre-reflective movement becomes a conscious effort; and individual defence mechanisms emphasises the idiosyncrasies in participants' ways of coping with PD and the challenges faced by the dominance of stoicism in UK culture. **Discussion:** Western models of coping are challenged; a sense of agency, set against physical challenges of mundane activities, demonstrates patients' will to maintain an active life. Services need to respect individuals' personal histories, their relationships and living arrangements as well as physical needs.

**Substance use in adolescence: The role of emotional and social competences on risk behaviours**

Simões Celeste, Matos Margarida Gaspar and Aventura Social Equipa

**Background:** The aim of the present work is to analyse the role of emotional and social competences on risk behaviour, namely alcohol and illicit drugs use, in a population of Portuguese adolescents. **Methods:** The sample included 3494 adolescents, mean age 15 years old (46% boys). Pupils attended 135 public schools from all Portugal. Data collection was held within the Health Behaviour in School aged Children survey. The questionnaire included questions about substance use, and personal and social competencies. **Findings:** Results showed that some of personal and social competencies – cooperation and communication, empathy, problem solving, self-awareness, self-efficacy and goals and aspirations are associated to the different types of substance use. Adolescents that have higher levels of these competences present lower level of substance use. Gender analysis presents different patterns that will be exposed in detail. **Discussion:** Implications for prevention field in different contexts (namely health and road safety) are discussed.

**Evaluating the impact of physical and social activity on health and well-being of older adults**

Simpson Liz, Gallagher Alison and Casey Fionnuala

**Objectives:** To determine the difference between older adults health and well-being when they engage with physical activities (e.g. walking, aerobics) compared to social/sedentary activities (e.g. painting, computer skills training). **Methods:** Questionnaires gathered data on cognitive function, depression, self-esteem, quality of life, happiness, physical activity and anthropometric measures. Thirty-nine community dwelling adults over the age of 50 years (mean age 68.3 (SD 7.73) years; range 51–85 years), 20 of whom were males, who were all members of University of Third Age (U3A) took part in this study. **Results:** Student's *t*-tests found self-esteem and quality of life were higher in those who attended physical activity classes. Physical activity data was converted to METS, those meeting or above the recommended guidelines had better scores on measures of depression, quality of life and happiness determined by one-way ANOVA ( $p < 0.001$ ). **Conclusions:** Engaging with physical activity was associated with better psychological well-being.

**Longitudinal view of the psychological correlates and antecedents of subjectively assessed psychosomatic problems**

Slezackova Alena, Blatny Marek, Millova Katarina and Jelinek Martin

**Background:** This study deals with the psychological predictors in adolescence and correlates of psychosomatic symptoms in middle age. The Brno Longitudinal Study on Life-Span Development, running from 1961, focuses on stability and changes of personality, life experience, personality coherence and health. **Methods:** The sample consisted of 70 participants (29 men and 41 woman aged from 41 to 44 years) who participated in this study. We used EPI at their 16 and SOC, NEO, TCI and Health Inventory at middle age. **Findings:** Results show psychological predictors of psychosomatic problems in adolescence. The most significant predictor was extraversion ( $-0.318$ ;  $p < 0.05$ ) at their age of 16. At respondents' middle age were found correlations between psychosomatic symptoms and extraversion ( $-0.267$ ;  $p < 0.05$ ), neuroticism ( $0.431$ ;  $p < 0.01$ ), sense of coherence ( $-0.361$ ;  $p < 0.01$ ) and self-directedness ( $-0.352$ ;  $p < 0.01$ ). **Discussion:** The results of this unique study show importance of psychological antecedents for the extent of psychosomatic symptoms in the adulthood.

**Reach and effect of a web-based multiple tailored smoking cessation intervention: Influence of recruitment strategy**

Smit Eline Suzanne, Hoving Ciska, Cox Vincent Cornelis Maria and de Vries Hein

**Background:** We investigated the influence of two different recruitment strategies on the reach and effect of a web-based multiple tailored smoking cessation programme. **Methods:** Dutch adult smokers were recruited via mass media and general practices. Differences demographic characteristics, retention and reported quit attempts and abstinence were assessed two days after quit date and after 6 weeks. **Findings:** General practice respondents ( $N=409$ ) were significantly lower educated, less addicted, more motivated to quit and to maintain non-smoking, more often female and more often suffering from cardiovascular or respiratory diseases than mass media respondents ( $N=1154$ ). General practice respondents showed significantly higher retention rates and more often reported making quit attempts and abstinence, which appeared to be caused by the recruitment strategies attracting different types of smokers. **Discussion:** The choice for recruitment via general practices or mass media determined the number and type of smokers recruited and thus influenced the intervention's public health impact.

**Effectiveness of a web-based multiple-tailored smoking cessation programme and tailored counselling by practice nurses**

Smit Eline Suzanne, Hoving Ciska and de Vries Hein

**Background:** We investigated the effectiveness of a web-based multiple-tailored smoking cessation intervention and tailored counselling by practice nurses amongst Dutch smokers. **Methods:** Eighty practice nurses recruited adult smoking patients motivated to quit smoking during a one-year recruitment period. After giving informed consent, smokers ( $N=408$ ) were assigned to (1) web-based tailoring and counselling; (2) web-based tailoring only or to (3) care as usual. After 6 and 12 months, the effect of the intervention on 24 h point prevalence abstinence, 7-day point prevalence abstinence and prolonged abstinence was assessed using logistic regression analyses. **Findings:** No significant differences were found when comparing the three groups regarding abstinence measures at follow-ups. **Discussion:** Neither of the two interventions resulted in significantly higher abstinence rates than care as usual. However, usual care interventions were heterogeneous and often quite extensive programmes, potentially explaining the results.

**A collaborative approach to designing an intervention for patients with atrial fibrillation**

Smith Danielle E., Pattison Helen M., Borg Xuereb Christian, Lip Gregory Y.H. and Lane Deirdre

**Background:** Patients diagnosed with atrial fibrillation (AF) have an increased risk of stroke, and need to adhere to treatment and lifestyle recommendations to reduce likelihood of adverse events. AF patients are often highly symptomatic relying on subjective indicators to manage their illness. **Method:** Intervention design comprised two parallel processes: (1) targeting theoretical constructs within the common sense model and (2) piloting intervention materials, using expert patient panels (2 focus groups with 6 patients), individual patient interviews ( $n=6$ ) and expert cardiologist feedback. **Findings:** Each component of the intervention was adapted and moderated following patient and cardiologist feedback, e.g. presentation of risk information. The final intervention comprises DVD (including patient narratives), worksheets, patient education booklet and a self-monitoring diary. It is currently being evaluated in a

randomised control trial [ISRCTN93952605]. **Discussion:** Health psychologists play an intrinsic role in this collaborative process, whereby intervention development evolves through theoretical and pragmatic piloting.

### **It's all in your mind: Impact of illness representations and motivations on diabetes self-care**

Sophie Recchia, Georges Steffgen, Martine Hoffmann and Elisabeth Spitz

Based on the common sense model of self-regulation and the self-determination theory, the objectives of the present study are twofold: Firstly, to analyse the impact of illness representations and motivations on diabetes self-care. Secondly, to explore whether the predicted effects are maintained over time. The study sample is composed of 261 type 1 diabetics who filled in a questionnaire composed of self-rated HbA1c values, the Summary of Diabetes Self-Care Activities Revised (SDSCA-R), the Brief Illness Perception Questionnaire Revised (BIPQ-R) and the Treatment Self-Regulation Questionnaire (TSRQ). Six months later, the same patients were contacted with a participation rate of 46%. Results show that patients having a high degree of control over their diabetes and being more autonomously motivated have a better glycaemic control (HbA1c), as well as better self-care behaviours 6 months later. Interventions comprising patients' illness representations and motivations are discussed.

### **The impact of exposure to continuous missile attacks on diabetes self-management and glycaemic control**

Soskolne Varda, Dekel Rachel and Vinker Shlomo

**Background:** The effects of exposure to extreme chronic stress on diabetic patients' health have rarely been studied. **Aims:** To examine the impact of a 10-years exposure to missile attacks on diabetes self-management and glycaemic control. **Methods:** A comparative study of type 2 diabetes patients (216 from exposed region, 190 from non-exposed region), interviewed in 2010. **Measures:** background variables, depression, diabetes self-management, PTSD. Glycaemic control (HbA1c) values (last 3 years) were retrieved from medical records. **Findings:** Patients residing in the exposed region, compared to those from non-exposed region, reported higher levels of PTSD ( $p < 0.001$ ), similar levels of depression, poorer self-management (e.g. lower frequency of exercise, sugar monitoring,  $p < 0.01$ ) and poorer glycaemic control ( $p = 0.06$  in 2008, but n.s. in following years). PTSD levels were significantly related to self-management behaviours, but not to glycaemic control. **Discussion:** Exposure to extreme chronic stress affects diabetes health behaviours. The impact on physiological markers requires additional research.

### **Moderators of change in the planning-saturated fat intake relationship in obese adults**

Soureti Anastasia, Hurling Robert, Cobain Mark, van Mechelen Willem and Chin A. Paw Mai

**Background:** To examine the mediating effects of planning on the intention-behaviour relationship and the moderating effects of age, self-efficacy and intentions in this relationship. **Methods:** This study was conducted over a 5 week period among 571 obese adults (mean age = 46.9 years, BMI = 35.7). Intentions, action self-efficacy, maintenance self-efficacy, planning and saturated fat intake were measured by self-report. The moderated mediation hypothesis was tested using multiple regression analysis. **Results:** Planning mediated the intention-behaviour relationship for both perceived as well as percentage saturated fat intake. Age, self-efficacy and intentions were moderators of this relationship. Younger individuals, high intenders and people with higher levels of maintenance self-efficacy at higher levels of

planning showed greater reductions in their perceived saturated fat intake. **Discussion:** For successful behaviour, change knowledge of mediators and moderators is needed. Future interventions targeting planning to change saturated fat intake should be guided by people's intentions, age and self-efficacy levels.

**Single parent family and adoption: Experiences, motivation and family function**

Spathari Anastasia and Loumakou Maria

The single parent family who adopts children is a growing phenomenon abroad in comparison with Greece where it has just started to occur. Our objectives are to explore the experiences, motivations and family function of six Greek single parent families as well as their special characteristics of their personality and temperament. The methodological approach of this research is the multiple case study and the interviews are semi-structured whereas the analysis of the data collection is based on categories from the six single adoptive mothers' answers. Furthermore, the depiction and analysis of the family resilience, cohesion and flexibility towards stress factors is achieved through a questionnaire based on weighed scales (Self Efficacy Scale & Family Cohesion Scale) in relation with the demographic components of age, education and social-economic status. The analysis reveals that those families are exclusively women, highly educated with social support which empowered them to their willingness and decision of becoming single adoptive mothers.

**Classroom outcomes of a multifocused prevention program for high risk preschoolers: Results from a multiple baseline study**

Stefan Catrinel Alice, Repede Giorgiana, Poenaru Raluca, Tion Diana, Sut Veronica and Miclea Mircea

Age-appropriate social-emotional development in preschoolers constitutes a relevant protective factor against early onset conduct problems. The main objective of this study was to test the efficacy of a multifocused prevention program for children exhibiting deficient social-emotional development. We used a non-concurrent multiple baseline design ( $n=4$ ), and data were collected using observation for four classroom behaviours: compliance, frustration tolerance, problem-solving and play cooperation. The results indicated that consistent improvements in the targeted behaviours were found in the maintenance phase of the intervention, while immediate postintervention changes could be attributed to either age or carry-over effects. This study is relevant for understanding the intervention mechanisms involved in preventive intervention's effects on high risk children, which seems to be somewhat different from those reported for clinically referred children. Also, these results emphasise the importance of providing high risk children with extensive teach and practice sequences for consolidating targeted behaviours.

**Women responsiveness to HPV vaccination brochures: a qualitative study**

Stefania Deac, Iulia Oltean, Corina Zaharia and Adriana Baban

Romania has the highest rate of mortality due to cervical cancer in Europe. Health education and information campaign can play an important role in reducing it. The aim of this study is to assess the women responsiveness to printed information about the cervical screening and HPV virus and vaccine. 8 focus groups and 16 individual semi-structured interviews were carried out. Thematic analyse was used in order to interpret the results. The findings show that the opportunity to receive new information is well received by women; they have a positive perception regarding the Pap smear in contrast with the fact that most of them were broadly

against the HPV vaccine for themselves and for their children. In order the campaign vaccine to be accepted, information provision is likely to be a key in ensuring parents understanding the rationale for vaccination at a young age.

**Prototypes explain gender differences in dieting behaviour. Do boys eat less healthy because healthy food is uncool?!!**

Steinhilber Amina and Dohnke Birte

**Background:** Diet quality, in particular for boys, declines from childhood to adolescence (RKI, 2003-2006). The present study analysed gender differences in eating behaviour based on the Prototype/Willingness Model. Previous research has already shown (Gerrits et al., 2009) that adolescents have clear images of eater prototypes which are associated with eating behaviour. Both gender differences in prototype perception as well as in eating behaviour were expected: Girls' diet quality and prototype perception being more favourable. It was hypothesised that perception of healthy and unhealthy eater prototypes mediate the gender difference in eating behaviour. **Methods:** 184 students filled out a questionnaire regarding eating behaviour and eater prototype perception. Prototype perception was assessed by asking participants to freely list characteristics ( $N=88$ ) as well as by an evaluation on a global scale ( $N=184$ ). **Findings:** The results confirm the expectations stated above. **Discussion:** The importance of gender differences in interventions on healthy eating is discussed.

**Self-rated health, mood disorders and quality of life amongst Parkinson's disease patients**

Suflarska Radka, Nagyova Iveta, Krokavcova Martina, Rosenberger Jaroslav, Gdovinova Zuzana, Groothoff J.W. and Van Dijk J.P.

**Background:** Depression and self-rated health are predictors of health-related quality of life (HRQOL). We aimed to explore how mood disorders are associated with HRQOL in PD patients with good and poor self-rated health (SRH). **Methods:** The sample consisted of 124 patients dichotomised into good SRH ( $N=79$ ; 51.9% female) and poor SRH ( $N=45$ ; 37.8% female). Disease severity was measured with the Unified Parkinson Disease Rating Scale, HRQOL with the Parkinson's Disease Questionnaire-39, mood disorders with the Hospital Anxiety and Depression Scale. Data were analysed using multiple linear regression. **Results:** In patients with good SRH, age, gender, education, disease duration and disease severity explained 66% of the variance of HRQOL, of which mood disorders explained 13%. In patients with poor SRH, the model explained 52%, 21% of which was explained by mood disorders. **Conclusions:** Mood disorders might play a significant role in worsening HRQOL, which subsequently might influence global self-ratings on health.

**Ethnic diversity and child and adolescent mental health**

Svirydzenka Nadzeya, Dogra Nisha and Vostanis Panos

**Background:** This paper aims to provide reliable evidence on mental health needs of young people from Indian ethnic minority background in the UK as current research on the subject is limited and remains largely inconclusive, thus failing to appropriately guide policy and practice. **Methods:** Extensive survey examined the prevalence rate of mental health problems (SDQ) and service needs of adolescents of Indian descent ( $M_{age} = 13.74$ ,  $SD = 0.66$ ;  $N = 557$ ) while controlling for a range of other factors like the socio-economic status. **Findings:** Preliminary analysis showed that, comparable to the prevalence rates in the ethnic majority population, 10% of Indian adolescents were at threat of having or developing mental health

problems. **Discussion:** This paper shows that ethnic background alone may not serve as a reliable benchmark for developing appropriate mental health policy and services. This paper further suggests new strategies of including ethnicity in health research for evidence-based improvement of both.

### Relations between candidate nurses' health locus of control and health behaviours

Tabak Ruhi Selcuk and Sarlak Kader

As a psycho-social behaviour determinant, health locus of control (HLC) plays an important role in adopting and maintenance of health behaviours. Candidate nurses are expected to be aware of their health locus of control, especially as the role models of healthy lifestyles. Hence, this descriptive study was carried out to define the candidate nurses' HLC levels and their relations with certain health behaviours in terms of health promotion. Nursing students (608) in two different Schools of Health Sciences were included in this study. The B form of the Multidimensional Health Locus of Control Scale (Wallston, Wallston, & DeVellis) was used as the data collection tool. Significant differences were estimated in HLC levels by gender and schools. Candidate nurses who received information about HLC were found to have significantly higher Internal HLC scores and lower Chance HLC scores. Positive correlations were estimated between IHCL and healthy nutrition, exercise and non-smoking habits.

### Burnout among teachers. An application of job demands-job resources (JD-JR) model

Taddei Stefano, Caria Mariella, Contena Bastianina, Venditti Francesca and Venturini Eva

**Background:** The JD-JR model is used to study the processes involved in teachers' burnout. Recent researches highlight the role of JD and JR respectively on burnout and work engagement and underline the importance of JR for adaptation of the subject in his work environment. This research intends to investigate the relationship between (a) physical and psychological JD, and the three dimensions of burnout; (b) JR as social support, task autonomy, decision-making and the work engagement. **Methods:** It was administrated to 215 teachers a questionnaire consisting of Job Content Questionnaire, Maslach Burnout Inventory-General Survey, Utrecht Work Engagement Scale. The data were subjected to descriptive and multivariate analysis. **Findings:** The results allow to underline a relationship between JD and emotional exhaustion ( $r=0.45$ ;  $p \leq 0.001$ ), and between JR, personal accomplishment ( $r=0.20$ ;  $p \leq 0.001$ ) and work engagement ( $r=0.24$ ;  $p \leq 0.001$ ). **Discussion:** The results provide suggestions for prevention programs to burnout.

### Supporting children using play in Japanese hospitals

Takahashi Ryo, Inoue Yukiko, Yamamoto Keiko, Toshiko Kazama and Osada Hisao

Supporting children in hospitals using play was investigated. Nurses ( $n=4$ ) conducted eight types of play: drawing, puzzles, ball play, reading, handicraft, clay, blocks, and colouring, with infants ( $n=10$ ) and their parents (mothers: 9, fathers: 1) in hospitals in Japan. A total of 13 cases were examined from the following perspectives: the reason for choosing the play, effects of play on children, the condition of children and children's reactions. The results indicated the following. Nurses chose the type of play after considering the developmental stage and the medical condition of the children. From the perspective of nurses, children enjoyed themselves and concentrated, although some children had negative reactions. Some parents responded that they had a good time, whereas others responded that it was boring. It is suggested that the

type of play should be chosen after considering the characteristics and the spontaneity of the children.

### **It is not distress what makes you eat, but the way you deal with it**

Taut Diana and Baban Adriana

**Background:** The relationship between emotions and eating is subject to mounting research, but little is known about the mechanisms that modulate this relationship. **Objective:** To compare the effect of different emotional regulation strategies (ERS) on eating behaviour after induction of fear. **Method:** We set an experimental design ( $N=165$ ), with type of ERS instruction (suppression of emotional expression, reappraisal or no instruction while watching a fear-inducing movie) as between-subject measure, and amount of cookies and chips eaten as an outcome measure. Results show that after fear induction, it was the ERS employed by the participants that had a significant effect on food consumption,  $F(4, 322)=2.76, p<0.02$ , not the emotion itself. Participants who used reappraisal ate significantly less chips and chocolate compared to participants in the other two groups. **Discussion:** Results show that the way we deal with negative emotions might be more relevant for explaining eating than the distress itself.

### **The health of grandchildren in relation to perceived social support from grandparents**

Tavel Peter, Kolarcik Peter, Madarasova Geckova Andrea and Sandora Jan

Social support is important for mental health of adolescents. The aim of the research was to analyse mutual contacts of grandparents with their grandchildren and to show how grandchildren benefit from this contact and from the perceived social support. The sample consisted of 1992 Slovak adolescents ( $n=1992$ , mean age 16 years, 54% females). Respondents were asked to fill out a questionnaire of perceived social support, scales of vitality and mental health (RAND-36), Antonovsky sense of coherence scale, loneliness scale and scale of feeling. Hierarchical linear model was used for analyses. Even the results of the analysis were subtle, based on the presence of non-linear interactions, we concluded that if there is any influence of the social support given by grandparents, then this influence on the mental health and wellbeing of adolescents (vitality, mental health, sense of integration, emotional state) is of positive nature.

### **How older people of different age perceive and experience the unavoidable fact of their own death**

Tavel Peter and Sandora Jan

The study analyses existential cognition (Terror Management Theory) of Czech seniors (12M/35F) and its influence on mental health. Data were gathered by the means of semi-structured interviews, divided into four focus groups and analysed using IPA. The analyses showed that the notion of death activates defence mechanisms. With increasing age, death becomes present and actual. Between 50 and 59 years, the attitudes toward death are strongly polarised. Very distinct defence mechanisms were observed by participants between 60 and 69 years. A very pronounced fear of being dependent on the help of others at the end of one's life appears. Between 70 and 79 years, the death is a reality and a part of life. Recapitulation and evaluation of previous life plays a significant role. An explicit desire to die appears by some respondents over 80, as a way out of a life, the quality of which is significantly lowered by limitations and pain.

### Anxiety and depression in women with fibromyalgia

Terol cantero M<sup>a</sup>Carmen, Sanz Baños Yolanda, Bernabé Castaño Miguel, Martín-Aragón Maite, Pastor Mira M<sup>a</sup>Angeles and Cabrera Perona Victor

**Introduction:** In the field of health, psychology is a challenge to identify psychosocial variables that cause anxiety and depression responses of different intensity in women with fibromyalgia. **Objectives:** Evaluating the clinical, sociodemographic and psychosocial variables among women with fibromyalgia treated in hospitals and in associations. **Method:** 139 women with fibromyalgia were interviewed. The average age of 51.14 (SD = 9.5) years, most were married (75.4%). We use demographic and clinical variables Questionnaire (ad hoc), Stress and Coping Assessment Scale (EAE, Terol et al., 1999, CEA, Rodríguez Marín et al, 1992), Social Comparison Orientation Scale (Buunk et al., 2005), Social Comparison Illness (Terol et al., 2007), Anxiety and Depression Scale (HAD; Terol et al., 2007). **Results:** Anxiety and depression predictors for hospital sample were different coping strategies like as desiderative thoughts, religiosity or positive thoughts. Anxiety and depression predictors for self-help group were downward identification or upward contrast. **Discussion:** The relevance of social comparison strategies as predictors of emotional profile in women with fibromyalgia who are involved in self-help groups comparing to women attended the hospital specialised care is checked.

### Smoking is okay, if I compensate for the negative health effects

Theda Radtke, Urte Scholz, Roger Keller and Rainer Hornung

**Background:** Compensatory health beliefs (CHBs) are defined as beliefs that unhealthy behaviours like smoking can be compensated for by engaging in healthy behaviours like exercise. These beliefs are thus likely to thwart health behaviour change in individuals. Thus, the aim was to investigate whether smoking-specific CHBs add to the prediction of intention formation within the Health Action Process Approach (HAPA). **Methods:** 224 adolescent smokers completed measures of CHBs and the HAPA at two points of measurement. Data were analysed by structural equation modelling. **Findings:** Smoking-specific CHBs were significantly negatively correlated with HAPA-specific variables like self-efficacy. Moreover, the CHBs were significantly negatively related to the intention to stop smoking over and above HAPA-specific predictors, but unrelated to smoking behaviour. Overall, 49% of variance in the intention to stop smoking was explained. **Discussion:** Smoking-specific CHBs seem to be relevant barriers, especially in regards to intention formation within the HAPA.

### The effectiveness of psychological interventions for adults with skin conditions: A meta-analysis

Thompson Andrew, Lavda Anastasia and Webb Thomas

**Background:** The role played by psychological factors in skin conditions is acknowledged. Clinical guidelines indicate the need for interventions, yet the effectiveness of psychosocial interventions has not been evaluated. **Methods:** A meta-analysis was conducted. Database searches identified 4319 records. Studies were included if participants were allocated to either a psychological intervention or comparison condition. Twenty-one studies were included with data being extracted according to a predetermined protocol. **Findings:** Across different outcome measures, psychological interventions had a medium-sized effect on skin conditions ( $g = 0.53$ ,  $p < 0.001$ , 95% CI: 0.34 to 0.71). In relation to specific outcome measures, interventions had a small effect on skin severity, a medium-to-large effect on itch/scratch and a medium-sized effect on psychosocial outcomes. **Discussion:** Psychological interventions are

beneficial in skin conditions. The range of interventions available is limited. Self-help and formal psychotherapies require further development and evaluation.

### Women living with limb prostheses: Accounts of naturalistic adjustment

Thompson Andrew, Newell Robert and Clarke Sally, The Appearance Research Collabor (ARC)

**Background:** Little is known about the experience of living with prosthesis particularly in women, with prior qualitative studies tending to be with males. **Methods:** In-depth semi-structured interviews were conducted with six women aged 29–67 with limb prostheses, and analysed using an interpretative form of thematic analysis. **Findings:** Participants' mostly described adaptation to loss or absence of a limb in positive terms, rarely describing high levels of distress. Emphasis was placed on taking a positive mental attitude, which involving confronting difficulties (including the negative reactions of others) and asserting independence. **Discussion:** The findings add to emerging evidence regarding the importance of understanding naturalistic active coping strategies. Such coping strategies differed subtly from those described by male participants in previous studies. The findings reinforce the importance of promoting both active coping in people with visible difference and education and attitude change in the general public.

### Coping strategies in patients after treatment for functioning or non-functioning pituitary adenomas

Tiemensma Jitske, Kaptein Adrian A., Pereira Alberto M., Smit Johannes W.A., Romijn Johannes A. and Biermasz Nienke R.

Coping strategies may affect quality of life (QoL), which is decreased in patients after treatment for pituitary tumours. We included patients treated for Cushing's disease ( $n=42$ ), for acromegaly ( $n=80$ ), and for NFMA ( $n=61$ ). These patients were compared with three reference populations: an a-select sample from the Dutch population ( $n=712$ ), patients with chronic pain ( $n=59$ ) and patients receiving primary care psychology services ( $n=525$ ). Coping strategies were assessed by the Utrecht Coping List. Compared to the a-select sample, patients with pituitary adenomas reported less active coping, sought less social support, and reported more avoidant coping. In contrast, patients treated for pituitary adenomas reported somewhat better coping strategies than patients with chronic pain and those with psychological disease. Patients treated for pituitary adenomas display different and less effective coping strategies compared with healthy controls. A targeted intervention might help to stimulate patients to use more effective coping strategies. This might improve their QoL.

### Perceived quality of life change in pulmonary rehabilitation patients over 6 months

Todosijczuk Ivan and Rodgers Wendy

**Background:** A key goal of pulmonary rehabilitation is enhancing quality of life (QOL). How QOL improvements are sustained following rehabilitation is not well understood. Some aspects of QOL should change following rehabilitation if effective disease management strategies were learned. **Methods:** A repeated measures design (pre, post, 6 month) assessed exercise capacity and changes in disease specific QOL (St. George's Respiratory Questionnaire) in 103 pulmonary rehabilitation patients. **Findings:** Sixty-two patients completed questionnaires all three times. Fifty-three also completed the final fitness test. Patients averaged 91% attendance during rehabilitation. QOL scores improved 10% on

average. Symptoms and activities subscales changed primarily post-rehabilitation whereas the impacts subscale changed consistently over 6 months. Fitness increased over the program but declined after 6 months. **Discussion:** Identifying factors associated with change in QOL is a priority for developing effective rehabilitation programs. Disease management strategies appear to be particularly effective influencing the day-to-day impact of respiratory disease.

### Men's health and work: how do men perceive health in relation to their work and self-concept?

Toni Faltermaier

Although there is not much research on men's health, we do know that they have high prevalence in serious diseases, frequently show risk behaviours and do not invest much in health behaviour. What are the reasons for men's high health risks and what role has men's gender role? In a salutogenic and lay representational perspective, this paper analyses qualitative data on men's representations of health, perceptions of work stress, health risks and resources. Primary data are used from a qualitative study using semi-structured interviews with 30 middle-aged men in management positions, secondary data from a qualitative-biographical interview study on 30 young and middle-aged men in manual and non-manual occupations. Results of analyses using a 'grounded theory' approach indicate that men's personal meaning of work is essential for their perception of health risks and their intentions to health actions. Results are discussed in relation to men's gender role and self-concept.

### A mind-body technique for symptoms related to fibromyalgia and chronic fatigue syndrome

Toussaint Loren, Abboud Lana, Whipple Mary, Vincent Ann and Wahner-Roedler Dietlind

**Background:** Fibromyalgia and chronic fatigue syndrome (CFS) are debilitating disorders. The purpose of this study was to examine the efficacy of a novel mind-body approach (Amygdala Retraining) to improve symptoms of these disorders. **Methods:** Design: Single-blind, randomised, controlled trial. **Participants:** 21 fibromyalgia and/or CFS patients. **Intervention:** Randomisation to standard-care (1.5-day multidisciplinary program) or Amygdala Retraining (2.5 h training-course, home-study DVD) with standard-care. **Follow-up:** bimonthly phone-calls for 3 months. **Outcome measures:** Short Form-36, Measure Yourself Medical Outcome Profile, Multidimensional Fatigue Inventory, Epworth Sleepiness Scale, Fibromyalgia Impact Questionnaire. **Statistical analysis:** One way analysis of variance (ANOVA), mixed model repeated measures ANOVA, chi-square. **Findings:** Analyses showed statistically significant improvements in physical health, energy, pain, symptom distress, and fatigue in patients who received Amygdala Retraining compared to standard-care. **Discussion:** These data provides reason for optimism regarding the efficacy of mind-body approaches to help patients cope with symptoms of fibromyalgia and CFS.

### Experience of emotional distress: Neuroticism and subjective perception of negative emotions

Trnka Radek, Balcar Karel and Kuška Martin

Experience of emotional distress is significantly influenced by subjective perception of different negative emotions as well as personality traits. This study aims to explore interrelations of neuroticism and subjective assessments of 10 different negative emotions – disgust, anger, sadness, fear, contempt, hate, disappointment, jealousy, envy and guilt. 187 adults (102 females; 85 males) completed 'Strategies of coping – SVF 78' inventory (Janke & Erdmann, 2003) and Eysenck Personality Scales (Eysenck & Eysenck, 1991). Further, they

assessed valence of each of 10 given negative emotions on 10 cm scales. Generally, neuroticism was negatively correlated with valence ( $r = -0.231; p < 0.01$ ). In other words, high N-persons assessed negative emotions as more negative than low N-persons. Males generally assessed negative emotions more positively than females ( $r = -0.360; p < 0.01$ ). Yielded results may help in future clinical work with neurotics.

### **A contextual approach in testing the Job-Demand-Control-Support Model among operators**

Truchot Didier

**Background:** In line with critics arguing for context specificity in occupational stress research and with authors who pointed out the need to develop more specific measures for specific occupational groups we examined how the Demand-Control-Support model applied in a well-defined occupational group with a specific measure. **Methods:** In accordance with recommendations of context-specificity in occupational stress research, we first conducted semi-structured interviews with 20 operators to identify their specific experienced sources of job demands, control, and support in order to develop a specific measurement scale. We then had 146 operators respond to the scale established from this analysis, along with the MBI-GS (to assess burnout) and demographic characteristics. **Results:** Factorial analyses revealed 3 latent factors: job demands, organisational climate (i.e. control + supervisor support), and support from colleagues. Hierarchical regression analyses support the value of augmenting the components of the DCS model with situation-specific stressors.

### **Influence of self-esteem on coping in adolescents: Age and gender differences**

Tuma Pavel, Millová Katarína, Jankovská Markéta, Šašinka Cenek and Tyrlík Mojmír

The study deals with age and gender differences in usage of coping strategies and self-esteem in adolescence. Participants were divided in younger (12–15 years;  $N = 275$ ) and older (16–19 years;  $N = 166$ ) group. Brief COPE was used to identify coping strategies and SLCS-R scale to identify self-esteem. Between-subject test showed that younger adolescents more often used denial ( $F = 12.856, p < 0.01$ ). Older chose more often humour ( $F = 4.222, p < 0.05$ ). In younger group were more frequent feelings of self-incompetence ( $F = 3.865, p < 0.05$ ) and self-rejection ( $F = 15.578, p < 0.01$ ). Girls used more emotional ( $F = 30.755, p < 0.01$ ) and instrumental support ( $F = 12.140, p < 0.01$ ). Boys chose more often humour ( $F = 24.929, p < 0.01$ ). Correlation and regression analysis showed that the self-competence is positively related to adaptive strategies and negatively related to maladaptive strategies. Self-incompetence was positively associated with maladaptive coping. Age was important in the relationship between self-esteem and coping, especially in maladaptive strategies. The results show the dynamic changes in coping and self-esteem during adolescence.

### **Suicide prevention in law enforcement**

Turc Darius, Turc Mirela and Androsiac Eugen

The main purposes of Employee Assistance Programs (EAP) in law enforcement are early detection of dysfunctional psychological potential, monitoring and counselling the personnel who have such problems. The aim of this paper is to present the Early Warning and Psychological Intervention System, a model of suicide prevention in law enforcement, based on a similar tool (Early Warning System), utilised in USA. A case study will also be presented. This system is designed for psychologists, to identify and monitor the officers who might have job difficulties (maladaptive behaviours) or personal problems (life events, financial

difficulties, health diseases, etc.) and to provide them with the appropriate counselling or training. As an early response, the psychologists can intervene before such an officer is in an irreversible situation (a suicide act) and to providing psychological assistance. We believe that it can be an effective management tool, needed to raise standards of performance in EAP.

#### **Life story narratives and post-trauma adjustment in survivors of traumatic injury**

Valvano Abbey, DeRoon-Cassini Terri, de St. Aubin Ed and Brasel Karen

**Background:** This study was conducted to determine thematic differences within the life story narratives of individuals demonstrating resilient versus distressed post-trauma trajectories and to determine how emergent themes related to psychological outcomes. **Methods:** A mixed-methods, cross-sectional investigation utilising in-person interviews was conducted with individuals 6 months to 10 years post-trauma. Participants had extended stays in the surgical ICU at a level 1 trauma centre. Measures included the Life Story Interview (analysis based on grounded theory) and seven quantitative measures evaluating psychosocial health. **Findings:** Sixty-three participants completed the study. Average time since injury was 1897 days, average ICU stay was 20.3 days, 20% met criteria for PTSD, 10% for depression and 15% for anxiety. Quality of life for this sample was low. Thematic differences were found between resilient *versus* distressed individuals, and particular themes correlated significantly with psychosocial outcomes. **Discussion:** Findings suggest life story differences related to psychological distress and health.

#### **Effects of interpersonal communication and campaign exposure on cannabis use, TPB variables and social norms**

Van den Putte Bas, De Bruijn Gert-Jan and Monshouwer Karin

**Background:** Most studies on the effects of health campaign exposure ignore that people also discuss the health topic. **Methods:** Two-wave longitudinal study among 601 adolescents measuring cannabis use, anti-cannabis campaign exposure, interpersonal communication about cannabis, theory of planned behaviour variables, and injunctive and descriptive norms. **Findings:** Cannabis use is not influenced by campaign exposure ( $\beta = +0.02$ ), is significantly increased by conversations with close friends ( $\beta = +0.23$ ) and siblings ( $\beta = +0.13$ ), and significantly decreased by conversations with parents ( $\beta = -0.09$ ). Peers ( $\beta = +0.04$ ) and teachers ( $\beta = -0.01$ ) have no significant influence. Adding interaction effect between frequency and valence indicates that effects of conversation on cannabis use depend on valence (e.g. interaction effect for friends is  $-0.24$ ). Similar results as for use are found for intention, attitude, self-efficacy, subjective, injunctive and descriptive norms. **Discussion:** An important objective of anti-cannabis campaigns should be to stimulate adolescents who are negative about cannabis to participate in discussions about cannabis use.

#### **Self-management support needs of chronically ill through the course of illness and the course of life**

Van Houtum Lieke, Rijken Mieke, Heijmans Monique and Groenewegen Peter

**Background:** Starting from several psychological and social theories, this study aims to explore the needs for self-management support of people with chronic conditions through the course of illness and across different phases of life. **Method:** Data from 2500 chronically ill, collected in 2009–2011, will be analysed cross-sectionally and longitudinally. Main measures are perceived self-management tasks, related support needs, and perceived proactive structured

chronic care (PACIC). **Expected results:** We expect the perception of self-management and the related support needs to differ between people differing in disease type, illness stage and phase of life, and to change over time. **Current stage of work:** Development of a comprehensive theoretical model. **Discussion:** Support for self-management should be tailored to the specific needs of people with chronic conditions. This requires a thorough insight into these needs. Results of this study can be used to improve recognition of the needs for self-management support in clinical practice.

#### **Young athletes living in an elite sport centre: Associations with athletic identity and well-being**

van Hove Pepijn, Verkooijen Kirsten and Dik Giel

**Background:** A narrow focus on sport performance in elite sport centres (CTOs) may encourage its residents to develop strong and exclusive athletic identities which may affect well-being. This study investigated whether CTO athletes differ from non-CTO athletes in athletic identity and well-being. **Methods:** Self-reported data were collected among athletes living in a CTO and elite athletes not living in a CTO ( $N=61$  and  $N=63$  respectively, age range: 16–30). Measures included the WHO Quality of Life instrument (WHOQOL-BREF), the Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001), and the Athlete Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001). **Findings:** CTO athletes reported lower psychosocial well-being and a higher reduced sense of accomplishment. They also reported a marginally stronger athletic identity, but this appeared unrelated to well-being or sense of accomplishment. **Discussion:** Further research is needed to unravel the impact of the environment on identity and well-being.

#### **Drinking behaviour, the Prototype/Willingness Model and differentiation of five drinker prototypes**

van Lettow Britt, de Vries Hein, Burdorf Alex and van Empelen Pepijn

**Background:** We combined the Prototype/Willingness Model and Theory of Planned Behaviour (TPB) to study drinking behaviour among young adults, focusing on different drinker prototypes (heavy drinkers, moderate drinkers, abstainers, drunk and tipsy persons). **Method:** An online prospective study among 444 Dutch adults (aged 18–25) measured TPB constructs, willingness, intention, and prototype favourability and similarity for drinker prototypes (time 1), and past month binge drinking and drunkenness (time 2). Logistic and linear regressions were performed. **Results:** Binge drinking was explained by age, intention, willingness, perceived behavioural control, and abstainer and heavy drinker similarity. Descriptive norms, intention, and heavy drinker and abstainer similarity explained drunkenness. Also, abstainer similarity and similarity and favourability of drunk prototypes explained intentions and willingness over TPB. Tipsy prototype similarity explained intentions only. **Discussion:** The Prototype/Willingness Model adds to the TPB in explaining drinking behaviour among adults. Prototype similarity directly predicts behaviour. Differentiating alcohol prototypes is relevant.

#### **Characterisation of drinker images and respondents and mechanisms of favourability, similarity and vividness**

van Lettow Britt, Vermunt Jeroen, de Vries Hein, Burdorf Alex and van Empelen Pepijn

**Background:** We studied differences in alcohol image evaluation (abstainer, moderate, tipsy, heavy drinker and drunk), (2) subgroup differences (education, gender, drinking behaviour) and

(3) image characteristics. **Methods:** 152 adults (18–25 years old) evaluated the alcohol images on favourability, similarity and vividness. Open responses regarded image characteristics. ANOVA examined within-person and between-subgroup evaluation differences. Latent class analyses (LCA) differentiated between image characteristics. **Findings:** Characteristics distinguished between images (LCA). Ordering of evaluation followed similar patterns: moderate drinkers were characterised most positively, favourably and vivid, the reverse for drunk images. All images were imaginable. Evaluation mechanisms differed per subgroup: Binge drinkers alone favoured and resembled heavy drinkers. The tipsy image differentiated subgroups most, especially bingers. **Discussion:** Vividness findings contradict adolescence research. Tipsy images seem important, but have rarely been studied. Image evaluation differences explain differences in subpopulations and characteristics explain desirability. The results can inform interventions targeting alcohol intake among adults.

**The changes in consistency of attitude towards drugs from the aspect of the primary prevention programme length of drug addictions**

Verešová Marcela

The research starting point was approach of mediators to drugs use (Hansen et al., 1996) with the emphasis on the strongest mediate factor of drugs use- attitude towards drugs. The research objective was to experimentally verify the assumption of consistency increase tied to three-component structure of drugs attitude (measured by Questionnaire of drugs attitude, Varmuža, 1994) due to application the prevention programme which was based on combination the informational, affective and social skills training approach, with 180 university students (five experimental groups). We have noticed a various progress within the particular groups of consistency/inconsistency of drugs attitude, while progress trend leads from linked system of deviations with prevailing of inconsistent antidrug attitude to drugs towards a comparable representation of consistent antidrug attitude and inconsistent attitude with prevailing the antidrug attitude in two components (after 5 months) up to systematic set up of deviations with a significant representation in the antidrug attitude group (after 10 months).

**Does empathy alone account for prosocial behaviour in school?**

Veresova Marcela, Cavojova Vladimira, Belovicova Zuzana, Ballova Mikuskova Eva and Romanova Martina

Empathy is usually considered as a core element in prosocial behaviour. The aim of this paper is to explore how empathy relates to prosocial behaviour of preadolescent children. 197 children aged 11–15 participated in this study. Empathy was measured by three questionnaires – BES (Jolliffe, Farrington, 2006), ES (Caruso & Mayer, 1998) and IRI (Davis, 1983), then the composite score for empathy was calculated. Prosocial and antisocial behaviour was assessed by peer-nominated questionnaire. Results showed negative correlation between empathy and questions measuring antisocial behaviour and positive correlation between empathy and prosocial behaviour. There was no relationship between children's empathy and their popularity among peers. Empathy is in the focus of attention of health psychology and our results confirm the assumptions between high relevance of empathy for prosocial behaviour, thus contribute to the body of evidence that best prevention against violence and bullying is promoting empathy and sensitivity to others.

**Proactive coping and self-efficacy of drug users and abstainers in adolescence**

Verešová Marcela and Malá Dana

The research objective was to point to difference in a proactive coping and self-efficacy of drug users comparing with abstainers and to their relationship. We have used GSES (Schwarzer, Jerusalem, 1993) and PCI (Greenglass et al., 2001). Research sample consisted of 132 adolescents, including 53 abstainers and 79 drug users (alcohol, marijuana use). We have found out that abstainers have a significantly higher self-efficacy ( $t = 8.524, p < 0.001$ ) and prefer more significant proactive coping ( $t = 10.548; p < 0.001$ ) in comparing with drug users. We have also observed a significant positive relationship between proactive coping and self-efficacy with respondents in both groups ( $r = 0.836, p < 0.001$ ). High score of proactive coping and self-efficacy dominate with people who realise their own abilities and possibilities to solve the problems successfully, the problems which they accept as challenges to be active (Greenglass et al.), while this group of people was significantly represented by abstainers in our research sample.

**Cultural differences in the effect of health-hardiness on perceived health**

Verhoeven Chris and Brammer Laura

**Aim:** To investigate cultural differences in the effect of health-hardiness on perceived health between native Dutch and two ethnical groups living in the Netherlands. **Method:** 93 native-Dutch, 78 Turkish-Dutch and 25 Chinese-Dutch participants filled out a Dutch online questionnaire. Perceived health is measured by the RAND-36 and health-hardiness by the RHII-24. **Results:** Results confirm that health-hardiness has a positive effect on perceived health ( $R^2$  change 15%) with a total explained variance of 39.2% controlling for demographics and health complaints and diagnosis. For the native-Dutch, internal locus of control and health value has an effect on perceived health mediated by perceived health competence. For the Turkish only health value has a predictive value. No significant predictors were found for the Chinese. **Conclusion:** There are cultural differences in how perceived health is influenced by health-hardiness. This shows a need for specific interventions to improve health for different cultural groups.

**Students' exercise behaviour, social comparison style and self-identity**

Verkooijen Kirsten and De Bruijn Gert-Jan

**Background:** Exercise identity and exercise behaviour are positively correlated. The association may depend, however, on how people perceive and compare their own behaviour to others. Thus, social comparison style may serve as a moderator in the identity-behaviour relationship. **Methods:** Data were gathered in undergraduate students ( $n = 412$ , mean age = 21.5, 73.4% female) using self-administered questionnaires. Hierarchical regression on self-identity was performed with as subsequent steps: (1) age, gender, BMI, (2) exercise behaviour, (3) social comparison style and (4) exercise behaviour \* social comparison. **Findings:** The data showed a main effect of social comparison ( $\beta = 0.41$ ) besides an effect of exercise behaviour ( $\beta = 0.23$ ). Downward comparison was associated with stronger self-identity than upward comparison, which was associated with stronger self-identity than lateral comparison. No interaction effect was found. **Discussion:** Social comparison seems important in maintaining a strong exercise identity. Further research is needed to translate this into health promotion opportunities.

### Child chronic illness and family resilience

Villani Murielle, Montel Sébastien and Burgener Catherine

**Background:** Numerous Anglo-Saxon studies have established that chronic illness is a sufficiently significant risk to allow the introduction of the concept of family resilience and have set hypotheses relating to the emergence of such resilience. **Methods:** Using John Rolland's integrative psychosocial model about families, illness and disability, we describe and explain the construct of resilience among 30 French families with children suffering from severe chronic illness. Standardised and projective tests (FACES IV, Family Apperception Test, Family Relationship Index, Draw-a-Family), genogram and also a clinical approach are used. **Results:** We will present the first results of this study at the EHPS meeting. **Discussion:** The ultimate goal of this research would be to help and create perspectives for psychologists and social workers, in order to put in place prevention and protection measures to support families raising a child suffering from a chronic disease.

**Keywords:** resilience; family; children; chronic illness

### Sexual-affective behaviour at partners of patients diagnosed with type 1 diabetes

Vintila Mona, Goian Cosmin and Istrat Daliana

**Background:** Diabetes influences the patient and his lifestyle, representing a major stressor for a couple. **Methods:** This study aims to identify the psychological effects of diabetes mellitus on the sexual-affective behaviour and relationship parameters. It investigated 72 subjects, who were evaluated using Multidimensional Relationship Questionnaire and the Questionnaire for interappreciation of sexual-affective needs and attitudes. **Findings:** The partners of ill persons manifest sexual-affective behaviour in a lower extent than those with a partner diagnosed with type I diabetes mellitus  $t(70)=0.240$ ,  $p=0.0$ ,  $p<0.01$ . In terms of couple relationship significant differences were obtained regarding intimate relationship satisfaction, higher levels being obtained by healthy persons' partners  $t(70)=0.845$ ,  $p=0.00$ ,  $p<0.01$ , also regarding respect  $t(70)=0.417$ ,  $p=0.03$ ,  $p<0.05$ . While internal control of the relationship  $t(70)=0.539$ ,  $p=0.00$ ,  $p<0.01$  presented higher rates for the partners of people with diabetes. **Discussion:** Diabetes mellitus is a condition that affects the diagnosed person, his partner and their relationship.

### The family of origin as cause for sexual disorder in women: Case presentation

Vintila Mona, Goian Cosmin and Istrat Daliana

**Background:** Hypoactive Sexual Desire Disorder (33%) is a common condition in women that frequently coexists with inhibited arousal. **Methods:** A case study will be presented from a systemic approach: individual, biological, psychosocial, factors related to couple relationship and to family of origin. **Findings:** The client, L.P., 36 years of age is in a stable relationship for over 2 years. She presents no medical condition and is under no medical treatment that could explain her complaints. She admits that this has happened to her also in previous relationships after a very good sex life at the beginning of each of them. The problem cause was found to be in the antisexual beliefs learned in the family of origin. Treatment occurred by using a combination of structural and strategic techniques in couple therapy and individual sessions. **Discussion:** The client presented favourable conditions for treatment and the results were good without medical therapy.

### Breast cancer as influencing factor of coping strategies and couple relationship

Vintila Mona, Pantelie Rodica and Istrat Daliana

**Background:** Breast cancer remains impressive through its high frequency and serious evolution. **Methods:** Our aim was to analyse differences between women with cancer and healthy women, regarding coping manners and couple relationship. We investigated 30 women with breast cancer who underwent surgery and 30 healthy women. The multi-dimensional relationship questionnaire and COPE questionnaire were used. **Findings:** In terms of coping strategies ill women obtained significantly lower rates for active coping  $t(58) = -2.287$ ,  $p < 0.05$  and higher levels of search for socio-instrumental support  $t(51) = 2.452$ ,  $p < 0.05$ , search for socio-emotional support,  $t(51) = -2.991$ ,  $p < 0.01$ , and orientation toward religion  $t(58) = -2.682$ ,  $p < 0.05$ . Regarding couple relationship: ill women have higher scores of depression related to intimate relationship  $t(58) = -5.562$ ,  $p < 0.01$ , fear of relationship  $t(57) = 4.578$ ,  $p < 0.01$ , also lower scores for relational satisfaction  $t(58) = -7.175$ ,  $p < 0.01$  and internal control of the relationship  $t(52) = 5.978$ ,  $p < 0.05$ . **Discussion:** Breast cancer is a disease that affects a large number of women both on somatic and psycho-relational level.

### Design and methods of a targeted diabetes prevention programme for Hindustani Surinamese (dh!aan)

Vlaar Linda, Nierkens Vera, van Valkengoed Irene, Nicolaou Mary, Middelkoop Barend and Stronks Karen

**Background:** Despite the high prevalence of diabetes, preventive interventions for the Hindustani are lacking. Our aim is to evaluate the effectiveness of a targeted lifestyle intervention. **Methods:** In total, 546 people aged 18–60, screened with pre-diabetes, were invited for a randomised controlled trial. The intervention was performed by dieticians and consisted of a dietary counselling using Motivational Interviewing, a family session, cooking classes and a supervised physical activity programme. The intervention was culturally targeted using surface (colours, language) and deep structure (address family influences) adaptations. The control group received generic lifestyle advice. The measurements at baseline, 1 and 2 years include an OGTT, a physical examination and an interview. **Findings:** Motivating this group seems a challenge for the dieticians, but the experiences are positive. First results are expected this year. **Discussion:** This trial will provide valuable information on the effectiveness of a targeted lifestyle intervention among the Hindustani Surinamese.

### Effects of depression on anticipated and occurred barriers to physical activity: A daily diary study

Wagner Sebastian C., Kraemer Lena, Langguth Nadine, Gawrilow Caterina and Stadler Gertraud

**Objective:** The present longitudinal study investigated the effects of depression on barriers to physical activity. In particular, the study tested how depression affected participants' anticipation and the actual occurrence of barriers. **Methods:** At baseline, depression scores were attained for 47 undergraduate students using the CES-D. In evening diaries, participants reported anticipated and occurred barriers to physical activity on six consecutive days. **Results:** Lagged regression analysis revealed that depression predicted the daily number of anticipated

barriers ( $\beta=0.20, p<0.01$ ), but not the daily number of occurred barriers ( $\beta=0.07, p=0.21$ ).

**Conclusions:** This study showed that depressed participants anticipated more barriers to physical activity in everyday life than non-depressed participants, while all participants reported the same number of occurred barriers. The results are in line with clinical studies demonstrating pessimistic future perception among depressed patients, and highlight the importance of taking depression into account when investigating the determinants of physical activity.

**Time preference and adherence: Does sensitivity to delayed rewards predict preventive medicine use?**

Walker Sarah and Green James

Many health behaviours require a choice between immediate and future consequences. Measures of this time preference predict many poor health behaviours, but the relationship between sensitivity to delayed outcomes and the use of preventive medicines is less clear. Using personalised adherence measures, we sought to test whether delay discounting, impulsivity and future orientation predicted adherence to preventive medicines. 123 participants completed measures of delay discounting, impulsivity, future orientation and personalised measures of adherence via an online survey. Greater levels of future orientation predicted greater adherence to preventive medicines ( $r=0.53$ ), and higher impulsivity predicted poorer adherence to vitamin supplements ( $r=0.38$ ). Placing a lower value on the future and a greater emphasis on the present may lead to lower medicines adherence. Strategies that promote immediate benefits or reduce perceived distance to delayed outcomes may increase adherence.

**An exploratory study into the reconnection with the body (post-traumatic growth) following cancer diagnosis**

Walsh Deirdre

The aim of this study was to explore the experiences of five individuals post cancer diagnosis and treatment, to ascertain how 'the role of the body' affected PTG, and how the body facilitated the reconnection with the body. Interpretative phenomenological analysis (IPA) was the method used throughout. The participants tracked their bodies from a weakened state to where the body was 'brought back into context'. This synthesis of the old and new body created a 'battle survivor'. Throughout the patients' treatment, different aspects were given tangible roles, e.g. 'the alienation of the body', the hospital as 'the other', and 'childlike cancer patients'. Towards the end of the participants' physical trauma, the theme of 'universal oneness' was prominent. This theme encompassed the body as part of 'the circle of life' and 'nothingness and letting go'. Ultimately, this study highlights the role of the body throughout physical illness and illness adjustment.

**Predicting intention to uptake H1N1 influenza vaccine in a university sample**

Walsh Jane, Claire Byrne, Susie Kola and Kiran Sarma

**Background:** Global pandemic H1N1 has been associated with high symptom severity among young adults. The present research sought to examine factors affecting the uptake of the H1N1 vaccine using the Health Belief Model (HBM) and Theory of Planned Behaviour (TPB) as a framework during a period of time when the virus was classified by the WHO as being in the pandemic phase

**Method:** A sample of 201 university students completed a questionnaire

battery comprised of health, belief/attitudes, and behavioural intention measures. **Findings:** 63.5% of respondents indicated intention to be immunised. Logistic regression was performed with intention to vaccinate (yes/no) as criterion and only attitudes (Wald = 16.6,  $p < 0.0005$  1.89) and barriers (Wald = 7.68,  $p < 0.01$ ), emerged as significant predictors of intention to vaccinate. **Discussion:** The implication for health practitioners is that behavioural intent may be open to influence where psycho-education can create pro-vaccine attitudes and beliefs.

### The efficacy of a web-based educational intervention in promoting acceptability of the HPV vaccine

Walsh Jane

**Background:** Research has shown a lack of knowledge and uptake of the HPV vaccine among students. The research tested a web-based educational intervention on knowledge, intention and uptake of vaccination against HPV. **Methods:** This study was designed to evaluate a web-based intervention to improve knowledge about HPV and intention to vaccinate in a sample of 161 students. A 3 (baseline, post-intervention, one-month follow-up)  $\times$  3 (cervical cancer, cervical cancer and STI, control) prospective mixed design was employed. **Findings:** ANOVAs showed significant increases in knowledge and understanding of risk factors in the short term the cervical-cancer focused intervention ( $p < 0.05$ ). No changes in intention or uptake were observed from baseline in either condition. **Discussion:** The use of a web-based intervention was effective in improving knowledge of HPV risk factors in a college sample. This did not translate into positive intentions or uptake. Implications of these findings are discussed.

### Social support for medication adherence in old age – A double edged sword?

Warner Lisa Marie, Schüz Benjamin, Ziegelmann Jochen P., Wurm Susanne and Schwarzer Ralf

**Background:** In older adults with multiple illnesses, medication regimens become increasingly demanding and can result in suboptimal adherence. We examine general social support, medication-specific social support and social conflict to identify possible mechanisms that operate in predicting adherence. **Methods:** Observational study with two measurement points, 6 months apart, with 309 multimorbid adults (ages 65+). Adherence was regressed on general support, medication-specific support and social conflict while controlling for baseline adherence and covariates (sex, age, education, number of medicines, attitudes towards medicines and health status). **Findings:** Medication-specific support was the only, however negative predictor of adherence. Social conflict moderated this relation: Only in participants with high social conflict, medication-specific support was detrimental for adherence ( $OR = 0.42$ ,  $p < 0.05$ ). **Discussion:** These findings illustrate the need for a more refined analysis of various social factors that might enhance or compromise health behaviours in old age such as medication adherence.

### Illness representations and psychological morbidity in non-cardiac chest pain patients attending an emergency department

Webster Rosie, Norman Paul, Thompson Andrew and Goodacre Steve

**Background:** Acute chest pain accounts for a quarter of all emergency medical hospital admissions. However, approximately half are diagnosed with non-cardiac chest pain (NCCP). These patients have poor psychological outcomes, despite excellent long-term cardiac survival. This study applies the Common Sense Model (CSM) of illness representations to this issue.

**Methods:** 79 patients attending an emergency department with NCCP completed measures of illness representations (IPQ-R), health anxiety (HAI), and anxiety and depression (HADS). **Findings:** Illness representations and health anxiety explained significant amounts of variance in anxiety (57%) and depression (49%). Health anxiety and perceived psychological causes emerged as the most important predictors of anxiety and depression. **Discussion:** The CSM provides a strong theoretical framework for understanding the psychological reactions of NCCP patients. The results suggest that anxiety reduction and stress management interventions may be particularly appropriate for this group of patients.

**Why whole blood donors do not donate: Reasons of no-show behaviour investigated**

Wevers Anne, Veldhuizen Ingrid, De Kort Wim, Van Baaren Rick and Wigboldus Daniel

**Background:** In the Netherlands 50% of invited whole blood donors do not show-up to donate. This study determined the reasons of no-show behaviour. **Methods:** No-show reasons were recorded during one month among 4.901 invited whole-blood donors. Additionally, structured telephone interviews were held with 90 randomly selected no-show donors. An interview schedule was used, with closed and open-ended questions about satisfaction with the invitation system, reasons for not showing and physical reactions. **Findings:** Most common reasons for no-show were: medical (31.5%), like influenza; time constraints (23.6%); holiday/sports/hobby (9.5%). Interviews revealed that donors are satisfied with the invitation system. No-show donors, women or adolescents, experience more physical reactions but did not mention this explicitly as no-show reason. **Discussion:** Donors explicitly mention general reasons for not donating. However, it seems that negative donation experiences indirectly lower the show-rate as well.

**Psychosocial influences determining Australians' sun safe practices: Testing an extended theory of planned behaviour**

White Katherine, Young Ross, Leske Stuart and Hawkes Anna

**Background:** This research investigated the sun protection intentions and behaviours of adult Australians in a high risk skin cancer area, using an extended theory of planned behaviour (TPB) incorporating the additional social influences of group and image norms. **Methods:** The study comprised a quantitative, prospective examination of the attitudinal, normative and control influences predicting adults' sun protection decisions. A questionnaire was completed at two time points by 400 Australian adults across metropolitan, regional, and coastal areas of Australia. **Findings:** The proposed structural equation model for sun protective behaviour fitted the data well and highlighted the role of attitudes, control factors, and group norm as the major determinants of people's intentions. **Discussion:** The TPB served as an informative framework for understanding adults' sun protection decision-making, with the findings reinforcing the notion that group-based strategies are likely to be a useful target for sun safe interventions.

**2-Year follow-up of a multidisciplinary cognitive-behavioural intervention program for obese adult**

Wiebke Goehner, Martina Schlatterer, Harald Seelig and Reinhard Fuchs

**Background:** We evaluated the effects of a multidisciplinary group intervention on psychological factors, physical exercise, diet, and weight. **Methods:** 316 persons with obesity followed public calls to participate in the intervention program or comparison group.

Questionnaires were completed at Baseline, 6, 12 and 24 months follow-up; included were psychological variables of the MoVo process model, behavioural variables, and weight. **Findings:** At 24 months follow up, the IG lost of 5.57% weight (CG: 1.12%; t1–t4,  $p < 0.01$ ). Results yielded significant interaction terms indicating a substantial effect of the intervention on food choice and the level of physical exercise ( $p < 0.01$ ). The IG showed significantly enhanced self-efficacy, stronger goal intentions, and more detailed implementation intentions than the CG at follow ups. **Discussion:** Findings confirm that the intervention program has the potential to evoke enduring changes in cognitions, level of physical exercise and healthy eating behaviour, resulting in substantial weight loss.

### **Psycho-social determinants of occupational burnout and subjective health amongst nurses**

Wilczek-Ruzyczka Ewa

**Background:** This study is aimed at establishing which determinants and to what extent they affect occupational burnout in subjective health. **Methods:** The research involved 250 nurses aged between 22 and 54 with an average of 12 years work experience. The following research methods were used: Burnout Inventory (Maslach Ch.), Effort – Reward Imbalance (Siegrista et al.), Attitude Towards Shiftwork Scale (Iskra-Golec I.), Manual for Minnesota Satisfaction Questionnaire (Weiss D.J. et al.) and Standard Shiftwork Index (Barton J. et al.). **Findings:** In the group of low work satisfaction and negative attitude towards shiftwork, up to 31% of emotional exhaustion and up to 23% of depersonalisation results can be explained by occupational stress included in the regression model as the efforts-over-rewards imbalance. Emotional exhaustion significantly correlates with subjective health in terms of cardiovascular ( $r = 0.32$ ;  $p < 0.01$ ) and digestive ( $r = 0.26$ ;  $p < 0.05$ ) systems. **Discussion:** It is important to monitor occupational stress and symptoms in subjective health.

### **The effect of fatigue and insomnia on the relationship between stress and burnout among surgical nurses**

Wilczek-Ruzyczka Ewa and Basinska Beata

**Background:** Burnout syndrome and fatigue have an impact on the quality of medical care and safety of patients. Siegrist's effort-reward imbalance model has been adopted as a concept of occupational stress. **Methods:** 167 surgical nurses (mean age of 38) filled in effort-reward imbalance by Siegrist (2002), Maslach Burnout Inventory (2000), index of fatigue at work and Athens Insomnia Scale by Soldatos (2007). Correlational design was used. **Findings:** Occupational stress influenced emotional exhaustion and depersonalisation, but not personal accomplishment. After controlling the length of shifts, fatigue at work was a fully mediated link between stress and emotional exhaustion. The effort-reward imbalance increased fatigue at work, and fatigue intensified forces draining. Sleep difficulties had a direct effect on emotional exhaustion and depersonalisation among nurses. **Discussion:** Two different mechanisms of fatigue and sleep difficulties on burnout were observed among nurses.

### **Preliminary evaluation of a brief walking intervention: Pilot exploratory trial**

Williams Stefanie L., Dale Jeremy, Michie Susan and French David P.

**Background:** Previous research has demonstrated the efficacy of a brief walking intervention when delivered to adult volunteers. We report on a pilot exploratory trial to evaluate the efficacy of this intervention delivered by practice nurses in primary care. **Methods:** Eight practice nurses were recruited and trained. 52 patients received the intervention. Patients wore

a pedometer, and completed questionnaire measures, including self-efficacy pre- and immediately post-intervention. **Findings:** There was a statistically significant increase in objectively assessed walking between baseline ( $M = 22$  mi,  $SD = 12.77$ ) and post-intervention ( $M = 26$  min,  $SD = 13.07$ ,  $p = 0.013$ ), but no significant change in self-efficacy ( $p = 0.638$ ). **Discussion:** The results of this pilot trial suggest that the intervention was effective in bringing about increases in walking, but not by the expected mechanism of changing self-efficacy. However, this trial provided information to refine the intervention and study procedures. This will help to maximise the effectiveness of a fully powered explanatory trial, currently underway.

### Depression, compliance and metabolic state among diabetic outpatients

Wojtyna Ewa and Paruzel Mariola

The diabetic patients are characterised by the low level of compliance, what is insufficient for long-term health maintenance. At the same time, they have much more often depression (about 15–40%). The aim of this study is to examine the relations between depression, compliance and metabolic state among diabetic outpatients. **Methods:** This study included 205 diabetic outpatients. The structured interview, the psychiatric examination, the measurement of HbA1c and the Adherence Questionnaire and BDI were used. **Findings:** Depression of at least moderate severity was observed in 26.83% of patients. The study showed a significant relationship between HbA1c and compliance ( $r = -0.37^{**}$ ) and HbA1c and depression ( $r = 0.21^{**}$ ). It was confirmed the mediating role of depression for the association between HbA1c and monitoring blood-glucose, hypoglycaemic medication and (only for women) total of adherence. **Conclusion:** The reducing of depression in diabetic outpatients may help to achieve better outcomes for the metabolic status, especially for women.

### Decision processes in clinical intuition

Woolley Amanda and Kostopoulou Olga

**Introduction:** We conducted an interview study to identify the types of decision processes involved in cases of intuition reported by clinicians. **Method:** Participants were 18 General Practitioners (9 female; mean age 44). Cases involving intuition were reported and the Critical Decision Method was employed to establish a timeline of events and probe each judgement. Transcripts were reordered around judgement points and coded for associated cues, expectations, goals and actions to map out the decision-making process. **Results:** Three types of intuitive decision process were identified. Gut-feeling processes where the initial interpretation of the situation was later rejected. Recognition processes where GPs immediately recognised the problem and committed to that judgement despite conflicting information and reasonable alternatives. Insight-type processes where there was no recognition of the situation until a solution emerged without awareness. **Conclusion:** Findings highlight an area of non-analytic clinical reasoning beyond the well-known concepts of heuristics and pattern recognition.

### The role of personal resources in effective coping with stage fright

Wrona-Polanska Helena, Polanska Marta and Polanski Marek

The objective of this report is to describe relations between experienced stage fright, coping strategies, personal resources and health status. The theoretical basis researches are functional model of health (Wrona-Polańska, 2003), in which health is a function of

creative coping with stress and personal resources. **Methods:** Questionnaires examining fears, coping strategies, personal resources and grading scales of health. Examined persons were 210 students of music schools. Results show that the effectiveness of managing stage fright depends on the coping strategy focused on the task, looking for social contacts as a source of support, and personal resources. Effective coping with stage fright depends on sense of coherence, positive self-evaluation, mechanism of perceived control and good instrumental preparation for the performance. **Conclusions:** The level of stage fright is a function of creative coping and personal resources. To promote health we should increase personal and social resources.

### **Children Prenatally exposed to alcohol – A case study**

Xavier Maria, Carvalhal Tania, Lopes Emanuela and Costeira Maria

Alcohol use during pregnancy is a significant public health problem. Purpose of this poster is to present the developmental characterisation of a group of children prenatally exposed to alcohol, born at a Hospital Unity of North of Portugal between 2005 and the first 6 months of 2009, and discuss difficulties of detecting prenatal alcohol exposure. Analysis of paper medical records allowed identification of 13 children. Emotional and behavioural problems were studied by use of Achenbach's Child Behaviour Checklist (CBCL) and general development and language, motor and social development and cognition were assessed using the Griffiths Mental development Scales (0–2 and 3–8 years). Socio-demographics characteristics were assessed by caregiver interview. 61.5% mothers report not to currently consume alcohol. All children scored below the normative mean (problems in language, mobility and autonomy). CBCL results were related to nonclinical normative sample. Prenatal exposure was under-diagnosed but adequate diagnosis is critical to early intervention.

### **Effectiveness of stress-management training on nursing stress, job satisfaction, coping self-efficacy in hospital nurses**

Yari Malihe

**Objective:** The goal of this study was to determine the effectiveness of SMT on decreasing nursing stress, increasing job satisfaction and coping self-efficacy. **Methods:** The study investigated 40 women nurses were randomly assigned into two groups (one experimental and one control group). Experimental group attended in 12 sessions SMT. The performed SMT was included: cognitive coping skills training, cognitive reconstructing training, time management training, effective communication skill training, self assertion training, creatively problem solving training and performing progressive muscle relaxation (PMR). Research instruments were Expanded Nursing Stress Scale (ENSS), Job Description Inventory, Coping Self-Efficacy Scale, participants measured and compared with to each other in pre-test and post-test stages. **Results:** The results showed that SMT is effective on decreasing nursing stress and increasing job satisfaction and coping self-efficacy ( $p < 0.05$ ) in hospital nurses. **Conclusions:** Results show a clinically significant beneficial effect of SMT in hospital nurses. Industrial-organisational psychologist can use of this intervention in organisational personnel's training programs on improving organisational development and effectiveness.

**Effectiveness of relaxation-based cognitive behavioural therapy on depression, social adjustment and happiness of cardiac patients**

Yari Malihe and Hassanzade Dalooee Mahdi

**Objective:** The goal of this study was to assess the effects of relaxation-based CBT on decreasing depression, increasing social adjustment and happiness of CVD patients. **Methods:** 30 CVD patients were randomly assigned into two groups (one experimental and one control group). Experimental group attended in 12 sessions CBT. The performed CBT accompaniment to relaxation included two parts: First part involved performing progressive muscle relaxation. Second part involved cognitive reconstructing, coping skills, thought-stopping training. Research instruments were Beck Depression Inventory and Social Adjustment Scale and Oxford Happiness Inventory. Participants measured and compared with to each other in pre-test and post-test stages. **Results:** The results of this study showed relaxation-based CBT decreased depression, increased social adjustment and happiness ( $p < 0.05$ ) of experimental group. In addition, results showed there was a significant decrease in experimental group's heart rate, blood pressure. **Conclusions:** Results show beneficial effects of this intervention on CVD patients. Health psychologist can use this intervention as complementary therapy for CVD patients.

**Long-term effectiveness of dutch obesity intervention in teenagers (DOiT) with parallel process latent growth modelling**

Yildirim Mine, Singh Amika, te Velde Saskia J., van Mechelen Willem, Brug Johannes and Chinapaw Mai J.M.

**Background:** We aimed to evaluate the long-term effectiveness of DOiT intervention on overweight measures and possible mediating effects of energy-balance related behaviours (EBRBs). **Methods:** 1108 adolescents (12.7 y, 50.5% girls) provided longitudinal data on body mass index, waist circumference and sum of skinfold thicknesses, consumption of sugar-containing beverages, high caloric snacks, active transport and screen-viewing behaviour. We used a parallel process latent growth modelling approach. **Findings:** Intervention resulted in a less increase for waist circumference over time compared to control. Although the intervention group lowered the sugar-containing beverage consumption more, in particular soft drink consumption, compared to the control group, this could not explain the intervention effect on the overweight measures. **Discussion:** The findings showed that the changes in overweight measures do not track with changes in EBRBs. Mediating effects of other EBRBs, e.g. daily physical activity, fruit and vegetable intake, should be investigated in future studies.

**Young people's attitudes towards unprotected sex and pregnancy**

Young Honor

Despite Government initiatives, the UK continues to have one of the highest adolescent conception rates in Europe. Whilst knowledge, skills and confidence are important in influencing sexual health behaviours, research evidence highlights the importance of attitude change in the development of health-behaviour interventions. This research aimed to develop a more comprehensive understanding of the underlying paths adolescents take to parenthood. Semi-structured interviews with adolescent parents and non-parents were designed to establish how young people think and talk about unprotected sex and pregnancy. A thematic analysis, shaped around the Theory of Planned Behaviour, identified emergent themes relating to perceived consequences of childbearing, social environment influencing teenage behaviour and

perceptions of control over sexual behaviour. Additionally, the importance of perceived social support, sexual health knowledge and future forethought were identified. These findings can be used to inform the development of effective interventions targeting the most salient beliefs which drive teenage sexual behaviour.

### **Happiness and life satisfaction of adolescents related to communication with parents**

Zaborskis Apolinaras, Zemaitiene Nida and Petruskeviciute Jovita

Open communication between children and parents is an important factor for mental health in children. The aim of the study was to examine associations among interpersonal relations with parents, happiness and life satisfaction of adolescents. This study was carried out in 2010, according to the methodology of WHO international HBSC study. The country representative sample of 5912 schoolchildren was surveyed. Difficulties to talk to their parents, in total, were observed in 41.6 percent of boys and 56.4 percent of girls ( $p < 0.001$ ). Adolescents living in intact families, in comparison to those living in broken families, were more likely to feel unhappy and to dissatisfy with their lives. Adolescents experiencing difficulties in communication with both or one of the parents were more likely to feel unhappy and dissatisfied with their lives. Harmonious relations among parents and children play an important role in life satisfaction and mental wellbeing of school children.

### **Aggressive behaviour and emotional well-being among Palestinian adolescents of incarcerated family members**

Zaool Luay, Sebena Rene and Lovas Ladislav

**Background:** The aim of this study was to investigate differences in emotional well-being and aggressive behaviour between Palestinian adolescents of incarcerated family members and adolescents from regular families. **Methods:** 300 adolescents of incarcerated family members were matched with an equal number of adolescents from regular families. The sampling was random and groups did not differ in demographic variables. Children completed measures of aggressive behaviour and emotional habitual well-being scale. To compare the level of aggressive behaviour and emotional well-being analysis of variance was performed. **Findings:** Results revealed significant differences between the groups in level of physical aggression ( $p < 0.001$ ), verbal aggression ( $p < 0.001$ ), hostility ( $p < 0.001$ ) and anger ( $p < 0.001$ ). Children of incarcerated family members experience significantly higher level of negative emotions ( $p < 0.001$ ) and significantly lower level of positive emotions ( $p < 0.05$ ) than their counterparts. **Discussion:** Family member imprisonment appears to affect children's emotional well-being. These children also display more behaviour problems.

### **The links between spirituality and social support with alcohol consumption of individuals attending AA groups**

Zardeckaite-Matulaitiene Kristina and Barisiene Rita

The aim of the research was to establish relations among alcohol consumption characteristics, spirituality and social support of people who attend AA groups. AUDIT was used to assess alcohol consumption problems, Daily spiritual experiences scale was used to assess spirituality; and scale of perceived multidimensional social support was used to assess the social support. 154 people (112 men and 42 women) who attend AA group participated in this study. The results showed negative correlation between spirituality and number of alcohol problems of individuals attending AA groups. Some gender differences were found in links among alcohol consumption characteristics, spirituality and social support. Spirituality was

more related to problematic alcohol consumption, but social support was more related to alcohol consumption experience for individuals who attend AA group till 4 years. Neither spirituality, nor social support predicted any of alcohol consumption characteristics of individuals attending AA group more than 4 years.

### **The influence of family therapy on marital conflicts**

Zarnaghash Maryam and Jahangiri Leila

The aim of the present research was considering influence family therapy on marital conflicts. In this project, clinical interview and ENRICH marital satisfaction scale were used. Also via pre test–post test with control group (30 couple) and experimental group (34 couple), marital conflicts were evaluated. Results of *t*-test, *F*-Test and Tukey Test were showed family therapy has significant influence on solving of marital problems especial communication problems between couples. Also family therapy decreased individual conflicts in females.

### **Maternal infant-rearing attitudes linked with infant-rearing practices and difficulties**

Zemaitiene Nida, Sirvinskiene Giedre, Jusiene Roma and Breidokiene Rima

Parental attitudes towards childrearing correspond with childrearing behaviours and play salient role in child development. The aim of this study was to evaluate associations between maternal infant-rearing attitudes, infant-rearing practices and difficulties. The 237 mothers of full-term infants, participating in longitudinal birth-cohort study, completed questionnaires 3–4 months and 6–7 months postpartum. The questionnaire included infant-rearing attitudes and beliefs scale. A high score on this measure indicated an infant-centred, flexible approach. Infant rearing difficulties were evaluated using Anxiety regarding children subscale and separate questions. Mothers who reported more infant-centred attitudes indicated less anxiety regarding infant care 3–4 months postpartum and were more prone to breastfeed baby 6–7 months postpartum. Infant-centred approach was associated with fewer difficulties in understanding infant crying reasons, shorter period of calming him down and feeding on demand rather than on fixed-time schedule. Infant-centred rearing attitudes were associated with less child-rearing difficulties and longer breastfeeding.

### **Factors related to breast cancer prevention in Chinese women living in the UK**

Zhang Ying, Pattison Helen and Shaw Rachel

**Background:** This study aimed to understand Chinese-British women's beliefs about breast cancer and its prevention. **Method:** Thirteen focus groups were conducted separately with 52 older (over 50) and 21 younger (under 35) participants. All data were transcribed verbatim and analysed by using thematic analysis. **Findings:** Older participants held a more holistic view of health maintenance, had less specific knowledge about breast cancer and its causes than younger participants. They showed positive attitudes to breast cancer screening and most had responded to receiving a mammography invitation letter. Language was a key barrier to older participants using medical care and information. Younger participants were highly critical of health care in UK and put great emphasis on genetic causes of breast cancer. **Discussion:** The findings suggest strong cultural influence and language concerns but differences between age groups. These factors are important in designing and implementing breast cancer screening services which target Chinese women.

**Psychosocial predictors of adolescent smoking initiation: findings from two Balkan countries**

Zlatev Martin, Eiser J. Richard, Rodafinos Angelos and Lazuras Lambros

**Background:** High rates of tobacco use and rather weak means to fight against the tobacco epidemic were reported in Albania and Bulgaria. The aim of this study was to assess smoking trends in Albanian and Bulgarian adolescents, and to identify the psychosocial drivers of smoking initiation among non-smokers. **Method:** A total of 492 Albanian and 495 Bulgarian high-school students, aged 12–16 years, completed anonymous structured questionnaires covering a wide range of psychosocial correlates of smoking. **Results:** Reported smoking rates were higher in Bulgarian participants. Smokers were predominantly males in Albania and females in Bulgaria. Further, Bulgarian students reported more frequent smoking in their homes, in the school premises, and in public places. Finally, health risk beliefs predicted intentions of non-smoking Albanian participants to start smoking, and normative beliefs intentions of Bulgarian non-smokers. **Discussion:** Findings suggest that national strategies for tobacco prevention should take into consideration cultural differences.

**The right (not) to smoke: Attitudes of Balkan company executives**

Zlatev Martin, Rodafinos Angelos, Eiser J. Richard and Lazuras Lambros

**Background:** This study aimed to explore whether smokers and non-smokers differ in their opinion about matters associated with their rights in the context of a smoking ban – an issue often ignored in previous research. **Methods:** An anonymous structured questionnaire was used to collect data from 145 executives studying for a Masters degree in Business Administration, in South East Europe – the region with the highest smoking prevalence in Europe. **Results:** Smokers and non-smokers differed in their beliefs about the right to smoke in the context of a smoke-free policy. Smokers argued for their right to smoke and non-smokers felt stronger about their right to be protected from exposure to second-hand smoke. Smokers regarded turning down a smoker applicant for a job as an act of discrimination. **Discussion:** Public health interventions to promote smoke-free policies should consider these differences when shaping messages to enhance smokers' acceptance of smoke-free policies.

**The impact of general and health-specific variables on the intention and planning to change behaviours**

Zycinska Jolanta

The aim of this study was to determine the role of general and health-specific variables (intrinsic motivation and self-efficacy) in formulating the intention and planning to change the diet and physical activity and quitting smoking while adapting to the disease. This study comprised 60 patients (aged below 65) undergoing hospital treatment due to ACS. The following tools were used: the GMS and TSRQ (intrinsic motivation) and the GSES and the author's own questionnaire (self-efficacy). The health-specific self-efficacy is a variable that explains the intention to change the examined behaviours. The diet-specific self-efficacy interaction with general variables is also important. General intrinsic motivation produces a reverse effect as regards the intention to change the diet and physical activity. The general variables do not have a direct effect on planning. General variables influence the formulating of intention if the patients are optimistic about their own capabilities and experience pressure to accomplish goals.

### Predictable *versus* unpredictable pain: An experimental investigation on the extinction of fear of pain

**Background:** We examined the extinction of fear of (movement-related) pain (FOP) induced by predictable *versus* unpredictable pain. **Method:** During acquisition, one movement (CS+) was paired with painful shock in the predictable condition; shocks were delivered during the intertrial interval (ITI) in the unpredictable condition. Next, in the Predictable Extinction Group (PEG;  $n=25$ ), the CS+ was extinguished, but not in the Control Group (CG;  $n=25$ ). The CG continued to receive unsignalled ITI shocks, but not the Unpredictable Extinction Group (UEG;  $n=25$ ). We measured self-reported FOP and eyeblink startle modulation. **Findings:** FOP during the CS+ was extinguished in the PEG, but not in the CG (Block  $\times$  CS-type  $\times$  Group:  $F(4, 192) = 12.62, p = 0.0001$ ). Interestingly, context exposure also attenuated FOP during the unpredictable movements in the UEG, but not in the CG (Block  $\times$  Group:  $F(4, 192) = 5.37, p = 0.001$ ). **Discussion:** These findings suggest that context exposure may be a viable pathway in the treatment of generalised pain syndromes.

Presenter: Meulders, Ann, University of Leuven

Author: Vansteenvagen, Debora, University of Leuven

Author: Vlaeyen, Johan, University of Leuven and University of Maastricht

### Does safety behaviour hamper the extinction of fear of movement-related pain? An experimental investigation in healthy participants

**Background:** We investigated the effect of safety behaviour (i.e., an avoidance response) during extinction on fear of movement-related pain (FOP). **Method:** A movement previously followed by a painful shock was extinguished, while providing the opportunity to perform an avoidance response in the Safety group ( $n=26$ ), but not in the Control group ( $n=26$ ). Self-reported expectancy and FOP were measured as well as eyeblink startle modulation and analysed with a 2 (Group)  $\times$  3 (Movement)  $\times$  2 (Block) repeated measures ANOVA. **Findings:** Self-reports show that an avoidance response hampers the extinction of movement-related FOP ( $p < 0.05$ ). Eyeblink startle modulation results are more difficult to interpret. **Discussion:** The present results suggest that safety behaviour can mitigate the effect of an extinction procedure (i.e., 'protection from extinction'). This may have important implications for the effectiveness of exposure *in vivo* therapy in chronic musculoskeletal pain patients who perform safety behaviour during therapy.

Presenter: Volders, Stéphanie, University of Leuven

Author: De Peuter, Steven, University of Leuven

Author: Meulders, Ann, University of Leuven

Author: Vervliet, Bram, University of Leuven

Author: Vlaeyen, Johan, University of Leuven and University of Maastricht

### Pain-related fear and chronic pain: Interoceptive conditioning of fear of pain

**Background:** Interoceptive exposure is effective in the treatment of fear of pain. Interoceptive conditioning of fear of pain is understudied. **Method:** Healthy participants received a respiratory resistance for 8 s (i.e. interoceptive CS). The experimental group ( $n=25$ ) received a mildly painful shock (US) to the back of the lower ribcage immediately after CS-offset. The control group ( $n=25$ ) received the US approximately 30 s after CS offset. **Findings:** Online shock expectancy data revealed a main effect ( $p < 0.05$ ), suggesting stronger shock expectancy during the CS in the experimental group compared to the control group. A significant Phase  $\times$  Trial  $\times$  Group interaction effect in the electrodermal data (log transformed;  $F(3, 141) = 7.01, p = 0.001$  (Greenhouse-Geisser  $\varepsilon = 0.72$ ),  $\eta^2 = 0.13$ ) revealed

fear conditioning in the experimental group but not in the control group. **Discussion:** Future research building on these findings may guide the development and optimisation of therapies for fear of pain.

Presenter: De Peuter, Steven, University of Leuven

Author: Van Diest, Ilse, University of Leuven

Author: Vlaeyen, Johan, University of Leuven and University of Maastricht

### The role of experiencing positive emotions in promoting psychological health and well-being

**Background:** During the last 15 years, psychologists worldwide have been studying the potential beneficial role of experiencing positive emotions to psychological health and well-being. **Methods:** The aim of this presentation is to provide a comprehensive synthesis of research findings which support the notion that experiencing positive emotions is linked to broadening, coping, building resources, strengthening resilience and increasing the subjective estimate of happiness, well-being and overall psychological health. **Findings:** We will emphasise the implications of these findings regarding theory, research and practice in the field of Health Psychology, the role of variables – such as happiness and positive meaning finding – in protecting against depression and anxiety, and promoting psychotherapy effectiveness. **Discussion:** Finally, we will outline interventions and strategies which strengthen psychological health and well-being.

Author: Stalikas, Anastassios, Panteion University of Social and Political Sciences

Presenter: Galanakis, Michael, Panteion University of Social and Political Sciences

Author: Fitzpatrick, Marilyn, McGill University

### Early prevention for substance abuse in preschool children

**Background:** The purpose of this study is to present the application of an innovative program for early prevention of substance use, designed specifically for pre-school children. The program is titled: 'Your strength is you!' **Methods:** It consists of a series of psycho-educational activities aimed at informing children about the consequences of substance use, while strengthening basic skills related to mental health (self esteem, management of feelings, communication skills). **Findings:** The program was applied to a group of 30 preschool children with very satisfactory results, as shown by comparison with another same-age group of children, who did not receive this prevention programme. **Discussion:** The experiential activities of this early prevention programme will contribute to the development of an ability to identify basic risk factors for drug use enhancing behaviours of resisting possible peer-group pressures for use, and strengthening the child's autonomy and social adjustment.

Presenter: Coccossis, Maria, A' Dept of Psychiatry, University of Athens

Author: Papadofragaki, Anastasia, A' Dept of Psychiatry, University of Athens

### Self management of type 2 diabetes: Self-efficacy believes and self-care behaviours

**Background:** This study aimed to explore: possible correlations between type 2 diabetes patients' self-efficacy beliefs regarding diabetes self-management and socio-demographic and disease-related factors; correlation between self-efficacy scores and performance of self-care activities. **Methods:** Cross-sectional survey; 240 diabetes patients on oral anti-diabetic medication completed self-report questionnaires. **Findings:** Multiple regression analyses revealed that socio-demographic and disease-related factors accounted for 10% of the variance in overall diabetes management self-efficacy  $F(8, 240)=4,43, p<0.001$ . Years of education and attendance of diabetes education were positively correlated ( $\beta=0.17, t=2,50$ ,

$p < 0.05$  and  $\beta = 0.19$ ,  $t = 3.13$ ,  $p < 0.01$  respectively), whereas medication for depression was negatively correlated ( $\beta = -0.16$ ,  $t = -2.52$ ,  $p < 0.01$ ) with the overall diabetes-related sense of self efficacy. **Discussion:** Self-efficacy regarding diabetes self-care is multifactorial. Utilisation of qualitative methodology could contribute to the understanding of this complex concept.

Presenter: Stathopoulou, Harikleia, Medical School, University of Athens

Author: Paschali, Antonia, Dept of Nursing, University of Athens

Author: Karanikola, Maria, Nursing Faculty, Cyprus University of Technology

Author: Poulios, Antonios, University of Athens

Author: Grozou, Anna, General Hospital of Piraeus Agios Panteleimon

Author: Katopodi, Anastasia, General Hospital of Piraeus Agios Panteleimon

Author: Tountas, Yiannis, University of Athens

### Turnover and professional satisfaction among Greek nursing staff

**Background:** Luck of nursing staff in Greece, combined with an increased demand for qualitative health services, urgently calls for exploring nurses' turnover and its determinants.

**Methods:** 405 nurses (13% males) from two public hospitals (one military) participated in this study, self-completing Turnover Cognitions and Index of Work Satisfaction questionnaires.

**Results:** 41% of the participants had chosen to work on the specific department; 37% had chosen nursing and 55% was generally satisfied with their profession. Turnover was significantly related with work satisfaction: lower levels of satisfaction were correlated with nurses' intention to leave clinical practice ( $r = -0.35$ ,  $p < 0.0001$ ), Organisation ( $r = -0.14$ ,  $p < 0.005$ ) and profession ( $r = -0.43$ ,  $p < 0.0001$ ). **Discussion:** Turnover was recorded for the first time among Greek nursing staff. Finding were close to those of international research indicating that in every health system work satisfaction affects nurses' turnover and calling for immediate interventions towards the direction of increasing nurses' satisfaction.

Presenter: Sereti, Ourania, General Military Hospital of Athens

Author: Koulierakis, George, National School of Public Health

### Thinking differently about prior temptation influences effectiveness of coping plans for unhealthy snacking

**Background:** When formulated adequately, coping plans – plans that specify how to deal with future difficult situations – may be very effective. However, little is known about which strategies help to formulate high quality coping plans. We examined how two different ways of

mentally simulating prior difficult situations (process vs. outcome simulation) before formulating a plan, may enhance self-efficacy and coping plan effectiveness. **Methods:** Participants ( $N = 122$ ) were randomly assigned to one of the four conditions: 2 (process vs. outcome simulation)  $\times$  2 (action plan vs. no plan). Dependent variables were self-efficacy and unhealthy snack consumption during the subsequent week. **Findings:** Participants who made plans reported higher self-efficacy and consumed less unhealthy snacks than participants who did not. This effect was particularly strong in the outcome simulation condition. **Discussion:** Findings suggest that the effectiveness of coping plans may depend on the way people reconstruct prior difficult situations.

Presenter: Vinkers, Charlotte, Utrecht University

Author: Adriaanse, Marieke, Utrecht University

Author: De Ridder, Denise, Utrecht University

### Reliving tempting situations improves the quality of implementation intentions

**Background:** When trying to break habits, effective implementation intentions require specifying the critical cue that triggers the unwanted habit. Yet, for complex behaviours like eating, this is not always straightforward. When formulating plans in a rational state, people may underestimate the challenges of tempting situations. It is hypothesised that including a mental imaginary component improves the identification of critical cues, by making the tempting situation vivid during plan construction. **Methods:** After monitoring their snacking reasons for 1 week, participants ( $N=68$ ) formulated implementation intentions while (only in the experimental condition) mentally reliving tempting situations. **Findings:** Participants in the experimental condition (vs. control) reported to be more able to identify their personally relevant cue for snacking, knew better in what situation they could change their habit, and reported having a more effective plan (all  $p$ 's  $< 0.05$ ). **Discussion:** Making tempting situations vivid while formulating plans to break habits enhances plan quality.

Presenter: Verhoeven, Aukje, Utrecht University

Author: Adriaanse, Marieke, Utrecht University

Author: De Ridder, Denise, Utrecht University

### Can collaborative implementation intentions promote physical activity in council employees? A randomised controlled trial

**Background:** Collaborative implementation intentions involve individuals planning, with another person, when, where and how they will perform a behaviour together. Previous research suggests they can effectively change behaviour but there has been no fully randomised test. **Methods:** Council employees ( $N=257$ ) were randomly allocated to collaborative implementation intention, partner-only, implementation intention or control groups before completing physical activity-based measures at baseline and follow-ups at 1, 3 and 6 months and weight-based measures at baseline and 6 months. **Findings:** As well as losing the most weight,  $F(3, 158) = 2.38$ ,  $p = 0.04$ , there was evidence that participants in the collaborative implementation intention group were more physically active (1 month:  $F(3, 169) = 2.69$ ,  $p = 0.03$ ; 3 months:  $F(3, 160) = 2.32$ ,  $p = 0.04$ ; 6 months:  $F(3, 160) = 1.96$ ,  $p = 0.06$ ). **Discussion:** Collaborative implementation intentions represent a potentially useful intervention to change important health behaviours that help reduce weight. Further research is needed to clearly identify underlying mechanisms.

Presenter: Prestwich, Andrew, University of Leeds

Author: Lawton, Rebecca, University of Leeds

Author: Ward, Jane, Bradford Institute for Health Research

Author: Ayres, Karen, University of Leeds

Author: McEachan, Rosie, Bradford Institute for Health Research

### Prostatectomy patients' utilisation of social support and self-regulatory strategies: Managing urinary incontinence by pelvic-floor training

**Background:** Post-operative comorbidities often impair the health and autonomy of prostatectomy patients. Managing urinary incontinence by pelvic-floor training is important for convalescence. Self-regulatory processes (e.g. action planning) have proven to be explanatory factors for the translation of intentions into pelvic-floor training, however, the extent to which social support facilitates behaviour change has remained yet understudied.

**Methods:** 141 patients and their spouses completed measures on different kinds of behaviour-specific received (provided) social support, intentions, planning strategies and pelvic-floor training at four time points within 7 months post-surgery. **Findings:** From a dyadic perspective, spousal support had considerable effects on pelvic-floor training. High levels of support

predicted whether patients initiated planned pelvic-floor training. Findings were alike for different kinds of received support under study. **Discussion:** Findings imply that self-regulation of behaviour may be more effective if individuals are supported by significant others. Thus, theory advancement might gain from consideration of social exchange processes.

Presenter: Wiedemann, Amelie, Charité – Universitätsmedizin Berlin

Author: Burkert, Silke, Charité – Universitätsmedizin Berlin

Author: Knoll, Nina, Charité – Universitätsmedizin Berlin

#### **How does self-identification with exercise lead to exercise adherence: An identity theory perspective**

**Background:** Research links exercise identity to exercise behaviour. Less is known about how and under what circumstances exercise identity leads to exercise. Identity theory posits that identity leads to identity-relevant behaviour by serving as a self-regulatory control system. This presentation seeks to demonstrate how identity theory is useful for understanding the exercise identity-exercise behaviour link. **Methods:** Drawing on cross-sectional, prospective and experimental designs, analyses were conducted on data from three studies. **Findings:** Findings support identity theory predictions. Individuals appear to draw on own and other-derived feedback in making judgments about the consistency between their exercise and identity. These judgments are associated with affective and social cognitive responses that may facilitate self-regulation of exercise. Strength of exercise identity appears to influence the magnitude of affective and social cognitive responses to identity relevant feedback and identity challenges. **Discussion:** Identity theory provides a useful framework for understanding the exercise identity-exercise behaviour relationship.

Presenter: Strachan, Shaelyn, School of Human Kinetics, University of Ottawa

#### **The relationship between exercise self-identity and self-schema**

**Background:** Self-identity captures the meanings associated with viewing oneself in a role. Self-schemas are cognitive structures that describe interests in terms of self. This research examines how these concepts relate with respect to exercise. **Methods:** Secondary analyses were conducted on data from two studies. **Findings:** Study one ( $N=294$ ) and study two ( $N=111$ ) showed significant differences in exercise-self-identity scores by schema group: exerciser schematics had higher self-identity than other schema groups. Study one findings: significant differences between instrumental attitudes, affective attitudes and intentions by high and low self-identity groups; exerciser schematics had higher affective attitudes and intentions than other schema groups. Study two findings (data were collected twice, 1 week apart): self-identity correlated over 2 weeks,  $r=0.81$ , 21% of participants changed schema group; behaviour and intentions significantly differed between self-identity groups; schema differentiated behaviour but not intentions. **Discussion:** These are distinct constructs and relate differently to cognitions and behaviour.

Presenter: Berry, Tanya R., Faculty of Physical Education and Recreation, University of Alberta

Author: Strachan, Shaelyn, School of Human Kinetics, University of Ottawa

#### **Exercise identity and self-determination theory: Theoretical links and initial findings**

**Background:** This study examined the associations of self-determination theory (SDT) variables with exercise identity among men and women. **Methods:** A cross-sectional study

where perceived autonomy support by the exercise instructor, basic psychological needs, behavioural regulations and exercise identity were measured among 733 exercise participants aged 18–64 years. **Findings:** All types of behavioural regulations and the fulfilment of the need for competence were associated with the exercise role identity part of exercise identity. Introjected regulation, identified regulation, intrinsic motivation and the needs for competence and relatedness were associated with the exercise beliefs part of exercise identity. **Discussion:** The findings support the relevance of SDT in better understanding the processes related to the assimilation of an exercise identity to the self and support future experimental research in this domain.

Presenter: Vlachopoulos, Symeon P., Department of Physical Education and Sport Science at Serres, Aristotle University of Thessaloniki

Author: Kaperoni, Maria, Department of Physical Education and Sport Science at Serres, Aristotle University of Thessaloniki

Author: Moustaka, Frederiki C., Department of Physical Education and Sport Science at Serres, Aristotle University of Thessaloniki

#### **Antecedents of an exercise identity: A theory of planned behaviour perspective**

**Background:** A positive exercise identity is related to stronger exercise motivation and behaviour, but little is known about modifiable determinants that facilitate developing a positive exercise identity. **Methods:** Prospective data were gathered in undergraduate students ( $n=412$ , mean age = 21.5, 73.4% female) using validated self-administered questionnaires on theory of planned behaviour measures, exercise behaviour and identity with a 2-week interval. Data were analysed using structural equation modelling employing an iterative elimination of nonsignificant structural paths. **Findings:** The initial structural model provided adequate fit to the data, but contained three nonsignificant structural paths for T1 intention, subjective norms and exercise behaviour. Deletion of these paths led to the final structural model, in which T2 exercise identity was significantly predicted by T1 identity ( $\beta=0.59$ ), self-efficacy ( $\beta=0.11$ ) and affective attitude ( $\beta=0.16$ ). **Discussion:** Findings suggest that particularly emphasising self-efficacy and affective evaluations of exercise behaviour facilitate the development of positive exercise identities.

Presenter: De Bruijn, Gert-Jan, Amsterdam School of Communication Research. University of Amsterdam, the Netherlands

Author: Verkooijen, Kirsten, Health and Society, Wageningen University, the Netherlands

Author: Van den Putte, Bas, Amsterdam School of Communication Research. University of Amsterdam, the Netherlands

#### **Socioeconomic disparities in dietary intake: the role of food choice motives**

**Background:** It remains unclear why individuals with low socioeconomic status (SES) consume unhealthier diets than those better-off. We examined whether the relative importance of six food choice motives (health, pleasure, convenience, price, familiarity, ethicality) contributed to the educational and income gradient in dietary intake. **Methods:** A cross-sectional data of Finnish men and women aged 25–64-year-old ( $n=3750$ ) from the FINRISK Study were analysed. This study included a validated 132-item Food Frequency Questionnaire and shortened Food Choice Questionnaire. **Findings:** Higher education and income were related to lower importance of food price and familiarity and greater importance of health considerations in the daily food choices. These relative motives partly mediated the effects of SES on vegetable/fruit and energy-dense food intake ( $p<0.001$  for all indirect effects). **Discussion:** Food choice motives may play a role in producing SES disparities in diet and this should be taken into account when planning strategies to reduce these inequalities.

Presenter: Konttinen, Hanna, University of Helsinki, Finland

Author: Sarlio-Lähteenkorva, Sirpa, University of Helsinki, Finland

Author: Silventoinen, Karri, University of Helsinki, Finland

Author: Männistö, Satu, National Institute for Health and WelfareNational Institute for Health and Welfare, Finland

Author: Haukkala, Ari, University of Helsinki, Finland

### Stages of health behaviour change and mindsets: A bottom-up approach

**Background:** Stage Theories of health behaviour are increasingly popular. However, the crucial assumption of qualitative differences in mindsets between people in different stages is rarely examined. This study uses a bottom-up approach inferring homogeneous subgroups of individuals according to mindsets in order to validate stage assumptions. **Methods:** 2220 adults completed a web-based questionnaire assessing social-cognitive variables and fruit and vegetable consumption. Latent class analysis was used to identify distinct groups of individuals sharing patterns of the social-cognitive predictors of behaviour, thereby identifying qualitatively different mindsets. **Findings:** Four latent classes were identified that can be matched unto the stages defined by most stage theories. **Discussion:** The methodological approach used in this study overcomes problems of currently used confirmatory procedures. Subsequently, this study could reveal more information about the actual mindsets of individuals in different stages of health behaviour change.

Presenter: Richert, Jana, Freie Universität Berlin, Germany

Author: Schüz, Natalie, Freie Universität Berlin, Germany

Author: Schüz, Benjamin, Benjamin.Schuez@dza.de

### Not everybody eats more under stress: Differential effects of social stress on eating

Experimental studies suggest that people eat more during acute stress episodes. In contrast, survey studies showed that people differ greatly in the (self-reported) habitual effect of stress on the amount of eating. In the present study, both research lines were combined in order to examine the diverging. **Results:** Using an experimental design ( $N=164$ ), the amount of ice cream consumed was measured after either being socially excluded (stress condition) or after being not excluded (control condition). The results showed that social stress did not increase ice cream consumption as compared to the non-stress condition. However, people with a habitual tendency to eat more under stress actually ate more ice cream,  $F(2, 158)=4.86$ ,  $p=0.009$ . The reverse pattern emerged for participants reporting to eat less when stressed. Overall, consideration of habitual stress response may be an important factor to understand the relationship of acute social stress on eating behaviour.

Presenter: Sproesser, Gudrun, University of Konstanz, Germany

Author: Strohbach, Stefanie, University of Konstanz, Germany

Author: Schupp, Harald, University of Konstanz, Germany

Author: Renner, Britta, University of Konstanz, Germany

### Minority talks: The influence of descriptive social norms on fruit intake

**Background:** Norms describing a majority's behaviour strongly influence people's eating behaviour. The effects of minority norms (e.g. 'only few people use sunscreen') on behaviour are under-researched, constituting an important gap in the literature which the current studies addressed. **Methods:** Students received minority or majority norm information regarding a referent group's behaviour and reported intended (Study 1,  $n=102$ ) or actual (Study 2,

*n* = 119) fruit intake. **Findings:** When identification with the referent group was high, minority norms had a strong negative effect on fruit intake compared to majority norms (difference of 0.60 portions daily). Moreover, compared to a no-norm control condition, minority norm participants ate 0.30 portions of fruit less daily, and majority norm participants 0.30 portions more. **Discussion:** Minority norms are often communicated to the public. The current findings indicate that, given their potential ironic effects on behaviour, such 'normative facts' must be communicated carefully.

Presenter: Stok, Marijn F., Utrecht University, the Netherlands

Author: de Ridder, Denise T.D., Utrecht University, the Netherlands

Author: de Vet, Emely, Utrecht University, the Netherlands

Author: de Wit, John B.F., Utrecht University, the Netherlands