STAR 2010

31ST WORLD CONFERENCE ON STRESS AND ANXIETY RESEARCH

Galway, Ireland

Book of Abstracts

Edited by:

Siobhán Howard & Brian M. Hughes

4th – 6th August
Centre for Research on Occupational and Life Stress
National University of Ireland, Galway
Ireland
STAR 2010: 31st World Conference on Stress and Anxiety Research

Galway, Ireland

Conference Scientific Committee

Siobhán Howard, Scientific Committee Chair (Ireland)
Petra Buchwald (Germany)          Jian Li (China)
Emine Erktin (Turkey)             Emilia Lucio-Gómez (Mexico)
Erica Frydenberg (Australia)      Aleksandra Luszczynska (USA)
Brian Hughes (Ireland)            Kate Moore (Australia)
Moshe Israelashvili (Israel)     Tobias Ringeisen (Germany)
Juhani Julkunen (Finland)         Sonja Rohrmann (Germany)
Krys Kaniasty (USA)               Joachim Stoebber (UK)
Nina Knoll (Germany)              Eleni Vassilaki (Greece)
Susanna Kola (UK)                 Diarmuid Verrier (Ireland)

Conference Organizing Committee

Brian Hughes, Conference Chair
Ann-Marie Creaven                 Lorraine McDonagh
Niamh Higgins                     Éanna O’Leary
Siobhán Howard                    Agnes Tully
Eimear Lee                        Diarmuid Verrier

Conference Secretariat

Kym O’Reilly
Conference Office
National University of Ireland, Galway
University Road
Galway
Ireland

Conference website: http://star2010.wordpress.com
# TABLE OF CONTENTS

**Plenary Sessions**

- President’s Address: Kate A. Moore ............................................................... 2
- Early Career Award Address: Jian Li ............................................................. 3
- Keynote Address: Daniel W. Russell .............................................................. 4
- Distinguished Spielberger Address: Michael W. Eysenck ............................ 5
- Keynote Address: Charles D. Spielberger ..................................................... 6
- Keynote Address: Jack E. James .................................................................. 7
- Keynote Address: Douglas Carroll ............................................................... 8

**Workshops**

- Workshop 1: How to get published, $p < .05$ ............................................... 10
- Workshop 2: Mediation and moderation analysis ....................................... 11
- Workshop 3: Coping theory and interventions across the lifespan ............. 12

**Symposia**

- Symposium 1 ............................................................................................... 14
- Symposium 2 ............................................................................................... 20
- Symposium 3 ............................................................................................... 25
- Symposium 4 ............................................................................................... 29
- Symposium 5 ............................................................................................... 33
- Symposium 6 ............................................................................................... 37
- Symposium 7 ............................................................................................... 42
- Symposium 8 ............................................................................................... 48
- Symposium 9 ............................................................................................... 53
- Symposium 10 ............................................................................................. 59

**Oral Presentations** ..................................................................................... 65

**Poster Presentations** ................................................................................. 155

**Author Index** ............................................................................................ 197
PLENARY SESSIONS
STAR PRESIDENT’S ADDRESS

Kate Moore
Charles Darwin University, Australia

Kate Moore is Professor and Head of the Psychology Theme at Charles Darwin University in Australia. As well as serving as President of STAR, she is the President Elect of the Asian Psychological Association (APsyA) and a Member of the Board of Directors of the Australian Psychological Society (APS). Within APS she is member of the College of Health Psychologists and the College of Organisational Psychologists. Prior to commencing the study of psychology as a mature-age student, Kate worked as an accountant in several organisations, and served as Treasurer of the Australian National Association of Mental Health for some years. She is widely published in health and organizational psychology, as well as in a range of interdisciplinary and applied fields.

INFORMED CONSENT: WHAT DOES THIS REALLY MEAN?

Informed consent is an integral part of the health care process yet my research and clinical practice, especially since moving to the Northern Territory of Australia, has highlighted controversial issues around the concept of informed consent. From an ethical and legal perspective the researcher or health care professional must ‘take account of the circumstances of the participant/patient…and ensure that they provide them with adequate information’ on which to base their decision to participate in either research or treatment. But is this sufficient? Is the concept of informed consent one that the general public really understand: in other words is consent really free and really informed? How do Indigenous Australians understand consent, who makes decisions for them around consent, for children, for those with limited second language skills, or a cognitive disability? Questions around these and issues related to resuscitation especially among elderly will be posed.
STAR EARLY CAREER AWARD ADDRESS

Jian Li
University of Wuppertal, Germany

Jian Li obtained a PhD in Public Health from the Seoul National University, Republic of Korea, in 2005. He is currently working on his second doctorate, in occupational safety in health, at the University of Wuppertal in Germany. He has published 45 peer-reviewed papers in the areas of work stress and health, social epidemiology, and the health implications of aging and retirement. His work as appeared in such high-level journals as Social Science & Medicine, Journal of Epidemiology, Scandinavian Journal of Public Health, and International Archives of Occupational and Environmental Health.

Jian Li is the recipient of STAR’s 2010 Early Career Achievement Award. The Award was established by STAR in 1999 in order to honor early career achievement in the science of stress research.

PSYCHOSOCIAL FACTORS AT WORK AND HEALTH: EMPIRICAL EVIDENCE FROM CHINA

As a developing country with rapid industrialization, China is undergoing dramatic transformation of the economic globalization. The public have shown increasing concerns about psychosocial factors and work-related stress, and the consequent outcomes, such as health and organizational well-being. This presentation reviews research findings during the past 15 years regarding the measurement of psychosocial work environment and work stress, and its association with health effects in China. Based on our official surveillance data, the unemployment rate and working hour are kept increasing in the past years. And 39.1% working men and 28.6% working women reported they had high or very high work stress according to our recent survey. The measurement of psychosocial work environment is generally relied on theoretical models of stress, well-established questionnaires of work stress have been introduced into China with satisfactory psychometric properties, and these questionnaires have been extensively used in recent epidemiologic studies. The empirical evidence from China indicates that a wide range of psychosocial factors in workplace (for example, psychological demands, emotional demands, job control, social support, reward from work, organizational justice, social capital at work, etc) have significant association with cardiovascular diseases (hypertension, metabolic syndrome, and coronary heart disease), mental illness (psychological distress, depression, burnout, and health functioning), reproductive dysfunction in women (menstrual disorders and low birth weight), as well as musculoskeletal disorders. It also shows that psychosocial stress at work can cause job dissatisfaction, turnover, and further productivity loss. However, most studies were designed as cross-sectional. In future, research on work stress and health in China should focus more on a prospective study design, disadvantaged working populations (such as women and precarious employees), and cultural differences. In additional, well-designed intervention studies of worksite stress reduction are expected.
KEYNOTE ADDRESS

Daniel W. Russell
Institute for Social and Behavioral Research, Iowa State University, USA

Daniel Russell completed a B.S. at the University of Tulsa (1975) and a PhD at the University of California, Los Angeles (1980), after which he worked at the College of Medicine at the University of Iowa. He is currently Professor at the Department of Human Development & Family Studies and the Institute for Social and Behavioral Research at Iowa State University. His research interests include social support, loneliness, and health, as well as causal attributions in perceptions of social support. Among the key psychometric instruments he and colleagues have developed are the Social Provisions Scale and the UCLA Loneliness Scale.

He has over 100 peer-reviewed publications, and has been the recipient of several high-profile research grants. Currently, he is currently working (with Carolyn Cutrona) on a four-year project on vulnerability and resilience in African-American parents, for which he received a $2 million grant from the US National Institute of Mental Health.

STRESSFUL EFFECTS OF WHERE YOU LIVE:
STUDYING THE INFLUENCE OF NEIGHBORHOOD CONTEXT OVER TIME

Based on the pioneering work of Robert Sampson and his colleagues, a large number of studies have been conducted examining the relationship between stressful characteristics of neighborhoods, such as poverty and crime, and dimensions of physical and mental health. Much of this research has been cross-sectional; very few studies have examined these relationships over time. Using data from the Family and Community Health Study (FACHS), a large investigation of over 900 African American families we have been conducting since 1997, I will discuss issues that arise in longitudinal studies of neighborhood effects. One issue concerns the effect of moving from one neighborhood to another; for example, how does leaving a neighborhood with high levels of poverty or crime for a less stressful neighborhood affect the health and well-being of the individual? A second issue concerns the effects of changes in the neighborhood; does improvement or decline in neighborhood characteristics impact the health and well-being of the neighborhood resident? Finally, I will discuss factors that may serve to moderate the effects of neighborhood characteristics on feelings of distress.
DISTINGUISHED SPIELBERGER ADDRESS

Michael W. Eysenck  
Royal Holloway, University of London & Roehampton University, UK

Michael W. Eysenck graduated from University College London. He then moved immediately to Birkbeck University of London as a lecturer, where he completed his Ph.D. on the von Restorff and “release” memory effects. His research focuses mainly on cognitive factors associated with anxiety in normal and clinical populations. He has recently developed two new theories. First, there is attentional control theory (with Nazanin Derakshan, Rita Santos, and Manuel Calvo), which provides a cognitive account of the effects of anxiety on performance. Second, there is vigilance-avoidance theory (with Nazanin Derakshan and Lynn Myers), which provides a detailed theory of repressive coping. His current research with collaborators is designed to test these two theories in detail.

He has published 40 books in psychology (many relating to human memory), including two research monographs on anxiety and cognition. He has been in “Who’s Who” since 1989.

HOW DOES ANXIETY AFFECT COGNITION?

It is well established that anxiety often impairs performance, but it is less clear why and how this happens. According to attentional control theory (Eysenck et al., 2007), anxiety impairs attentional control. As a result, anxious individuals find it difficult to inhibit task-irrelevant processing. They also have difficulty in switching attention optimally within and between tasks. Brain-imaging research indicates that anxious individuals use additional processing resources to prevent anxiety from impairing performance. Recent theoretical developments are discussed and evaluated.
KEYNOTE ADDRESS

Charles D. Spielberger
Center for Research in Behavioral Medicine & Health Psychology, University of South Florida, USA

Charles D. Spielberger is Distinguished Research Professor of Psychology and Director of the Center for Research in Behavioral Medicine and Health Psychology at the University of South Florida, where he has been a faculty member since 1972. He previously directed the USF Doctoral Program in Clinical Psychology, and was a tenured faculty member at Duke University (1955-62), Vanderbilt University (1962-66), and at Florida State University (1967-72) where he was also Director of Clinical Training.

Author, co-author or editor of more than 400 professional publications, Spielbergers’s current research focuses on: anxiety, curiosity, depression, and the experience, expression and control of anger; behavioral medicine and health psychology; job stress and stress management; and the effects of stress, emotions and lifestyle factors on the etiology of hypertension, cardiovascular disorders and cancer.

Spielberger’s State-Trait Anxiety Inventory (1970, 1983), with translations in 58 languages and dialects, has become a standard international measure of anxiety. He is also author of the State-Trait Anxiety Inventory for Children (1973), the Test Anxiety Inventory (1980), the State-Trait Anger EXpression Inventory (1988, 1999), and the Job Stress Survey (1995, 1999). During 1991-1992, Spielberger served as the 100th President of the American Psychological Association.

THE MEASUREMENT OF EMOTIONS

Practical considerations in the psychological assessment of emotions are guided by theories of personality and psychopathology that identify fundamental emotional states and personality traits, and combinations of these dimensions that define major diagnostic syndromes. The nature of anxiety, anger, depression, and curiosity as emotional states and personality traits, and the assessment procedures employed in measuring these constructs with the State-Trait Anxiety Inventory (STAI), State-Trait Anger Expression Inventory (STAXI-2), and State-Trait Personality Inventory (STPI) will be briefly reviewed. The historical background and theoretical concepts that guided the test construction of these measures will also be described. Anxiety, anger and depression, and the absence of curiosity are emotional vital signs of psychological distress and well-being that should be carefully assessed and continuously monitored in diagnostic evaluation, psychotherapy, and studies of treatment outcome.
KEYNOTE ADDRESS

Jack E. James
National University of Ireland, Galway

Jack James graduated from the University of New South Wales with First Class Honours in the BSc (Applied Psychology) degree, after which he completed a Masters degree in clinical psychology at the same University. He subsequently attended the University of Western Australia, where he completed a PhD on the clinical management of chronic stuttering. He worked in clinical and community settings as a clinical psychologist before pursuing an academic career. Over time, his teaching and research activities broadened to include health psychology and behavioural medicine. In 1991, he was appointed Foundation Professor of Behavioural Health Sciences at La Trobe University, Melbourne. Subsequently, he was elected to the position of Founding National Chair of the College of Health Psychologists (a College of the Australian Psychological Society).

He moved to Ireland in 1998 to take up the position of Professor of Psychology and Head of Department at NUI Galway. His main research interests are in the fields of cardiovascular behavioural health, and the psychophysiological correlates of stress. He has a major interest in the implications of dietary caffeine for human health and well-being (cognitive performance and mood), and also has interests in applied behaviour analysis.

HEMODYNAMIC PROFILE AS A METHOD FOR CHARACTERISING BLOOD PRESSURE RESPONSES TO STRESS

Blood pressure reactivity has long been a focus of attention for research concerned with the biobehavioural study of stress. This talk will focus on findings from reactivity studies conducted at NUI Galway. In addition to more standard laboratory-based reactivity studies that use analogues such as time-pressured cognitive performance, less-well studied, yet common, sources of psychophysiological stress will be considered, including pharmacological challenge, drawing on aspects of our work on caffeine, and sleep loss. A main aim of the talk will be to describe hemodynamic profile as a method for characterising key determinants of blood pressure responses to stress.
KEYNOTE ADDRESS

Douglas Carroll

School of Sport and Exercise Sciences, University of Birmingham, UK

Following a BSc in Psychology at the University of Edinburgh, Douglas Carroll completed his PhD at the Australian National University in Canberra. He was then a research fellow, lecturer and senior lecturer in the School of Psychology at the University of Birmingham. In 1990, he left to become Professor of Psychology and Head of the Department of Psychology at Glasgow Caledonian University, returning in 1995 to Birmingham to become Professor of Applied Psychology in the School. His major research interests are in Health Psychology and Cardiovascular Psychophysiology.

In 2002, he received worldwide media attention following the publication of his research in the British Medical Journal showing that England’s participation in a penalty shoot-out at the 1998 World Cup triggered a 25% increase in hospital admissions for myocardial infarction. He has authored or edited five books, including Health Psychology: Stress, Behaviour and Disease, The Health Psychology of Women (with Professor Catherine Niven), and Psychology and Social Issues (with Professor Ray Cochrane), and has published over 150 journal articles and book chapters. Professor Carroll was the Editor of the British Journal of Health Psychology and also serves on the editorial board of Psychophysiology. He is a Fellow of the British Psychological Society and the Society of Behavioural Medicine (USA).

CHRONIC AND ACUTE STRESS: THEIR VARYING EFFECTS ON INFLAMMATORY AND INFECTIOUS DISEASE

There is abundant evidence that chronic psychological stress exposure has wide-ranging adverse health consequences. For example, such exposures are associated with increased susceptibility to both inflammatory cardiovascular disease and infectious disease. Acute psychological stress exposure and how we react to it biologically would appear to have much more variable effects on health. For example, exaggerated cardiovascular reactions to acute stress are predictive of elevated blood pressure, markers of systemic atherosclerosis, and left ventricular mass. Acute stress exposure and exaggerated reactivity, however, are also related to an enhanced antibody response to medical vaccination, suggesting better host defense. Further, there is emerging evidence that blunted, not exaggerated, cardiovascular reactions to acute stress are related to poorer self-reported health, obesity, and depression. Finally, blunted cardiovascular and cortisol reactions to acute stress would appear to be characteristic of people with an alcohol or a tobacco dependence, as well as being typical of those are at risk of becoming dependent. Clearly, we need a new and more complex conceptualisation of acute stress, our reactions to it, and their implications for behaviour and health.
WORKSHOPS
Workshop 1

HOW TO GET PUBLISHED, p < .05

Joachim Stoeber
University of Kent, UK

The workshop addresses conference participants who want to broaden their knowledge and improve their skills to increase their chances of getting published in international peer-reviewed journals. Whereas the workshop is particularly well suited for conference participants who are early in their scientific career and have little (or no) experience of getting published, participants who have an established publication record may profit too—either for their own benefit or for that of the PhD students and younger colleagues they are supervising, supporting, and mentoring.

The workshop program will cover the following topics:

- Why publish?
- Writing the empirical journal paper
- Writing a review
- Preparing and submitting manuscripts
- Tips for better writing
- How to read (and respond to) editorial letters
- Revise, revise, and resubmit
- Acceptance
- Reviewing manuscript submissions
- Extra: How to improve your conference paper presentation

Selected References


Workshop 2

MEDIATION AND MODERATION ANALYSIS

Changiz Mohiyeddini
Roehampton University, UK

The workshop is aimed at conference participants who wish to deepen their knowledge and improve their skills in performing Mediation and Moderation analysis. The purpose of the workshop is to distinguish between the properties of moderator and mediator variables and to provide a comprehensive description of mediator and moderator analysis and their differences. Following a non-technical approach, issues related to study design, analysis, discussion, interpretation and limitation of results will be introduced step by step.

The workshop program will cover the following topics:

- Description of Mediator and Moderator analysis
- The difference between Mediator and Moderator analysis
- Performing Mediator analysis
- How to test Mediation Effects in Multiple Regression?
- Which study designs are suitable for Mediator Analysis?
- Choosing Mediator Variables
- Predictor–Outcome Relation
- Establishing Causation
- Calculating Power
- Interpreting the Results
- Performing Moderator analysis
- How to test Moderator Effects in Multiple Regression?
- Which study designs are suitable for Moderator Analysis?
- Testing the Significance of the Moderator Effect
- Power of Tests of Interactions
- Interpreting the results
- Examining Multiple Moderator Effects
- Examining Higher Order Interactions

Selected References
COPING THEORY AND INTERVENTIONS ACROSS THE LIFESPAN

Erica Frydenberg
University of Melbourne, Australia

This workshop will make the links between theory and practice. It will review the major theories and language that can be used to both describe the way we cope but also to enhance our coping skills. Measurement tools such as the Adolescent Coping Scale and the Coping Scale for Adults along with recent research in assessing early years coping will be utilised to help identify concepts and constructs which can subsequently be used for behavioural change. The second half of the workshop will focus on programs to teach coping. Three approaches will be considered, namely, the self-help book, Coping for Capable Kids, written for young people, their teachers and their parents, the self-paced Coping for Success CD-Rom program, the Best of Coping, a pencil and paper coping skills program that can be used in individual or group settings or the recently published, Thinking Positively: A Program to Develop Coping Skills in Adolescents, Applications will be outlined along with evaluations of the programs will be considered.

This workshop is designed to help participants:
- Identify and understand key theories in the field of coping
- Develop a nomenclature of coping
- Assess coping skills in adolescents
- Consider coping across the lifespan
- Apply coping concepts to professional practice
- Utilise a coping skills program

Selected References
SYMPOSIA
DYADIC COPING AND ADAPTATION IN TIMES OF DISTRESS

Chairs: Nathalie Meuwly, University of Zurich, Switzerland  
Nina Knoll, Charité-Universitätsmedizin Berlin, Germany

Symposium Panel
Tobias Ringeisen, Federal University of Applied Sciences, Germany
Janine Germann, University of Zurich, Switzerland
Nathalie Meuwly, University of Zurich, Switzerland
Nina Knoll, Charité-Universitätsmedizin Berlin, Germany
Beate Ditzen, University of Zurich, Switzerland

Abstract
Social support and dyadic coping are important predictors of individuals’ and dyads’ adaptation in times of distress. Our symposium comprises studies investigating different stress contexts (exam, standardized psychosocial stress, couples conflict, and couples adapting to prostate cancer) with rich research methods (experimental data, diary data, psychophysiological stress measures, observed behavior, questionnaires) to identify significant predictors of support provision as well as to examine biological reactions to stress and coping in couples. Ringeisen and Knoll investigated relational self-concept as a moderator of the association between stress and mobilization of support from close others in a diary design with students one week before an important exam. Germann and Meuwly present data of an experimental study examining stress reaction and the process of dyadic coping in couples. Germann and colleagues discuss gender differences in autonomic and endocrine stress response to a laboratory stressor in light of disease prevalence. Meuwly and colleagues include attachment style as a predictor of seeking and providing support. Knoll and colleagues investigated predictor domains of spousal support provision in a longitudinal study with patients adapting to incontinence following prostatectomy and their partners. Predictor domains of support provision included stress -, recipient -, provider -, and relationship factors. Ditzen and colleagues compared psychophysiological reactions to a stressor external to the couple (standard psychological stress test) with reactions to couple’s conflict. Authors show reduced cortisol levels during couple’s conflict after a Couples Relationship Enhancement Program (CRE). CRE did not alter psychophysiological reactions to a standard psychological stress test.
Symposium Title: *Dyadic coping and adaptation in times of distress*

**BALANCING SUPPORT EXCHANGE ACROSS CLOSE OTHERS: THE RELATIONAL SELF AND DYADIC COPING**

Tobias Ringeisen, Federal University of Applied Sciences, Germany
Nina Knoll, Charité-Universitätsmedizin Berlin, Germany

**Abstract**

*Purpose of the study.* In case of pronounced stress, people with a high relational self initiate more support exchange with close others than low relationals. Despite buffering effects of such support dyads, high relationals face a greater risk of mutual stress contagion (e.g., Cross et al., 2003; Ringeisen & Buchwald, 2006; Ringeisen, 2008). To specify the underlying mechanisms, the current study unravelled benefits and costs of support exchange with a longitudinal design. *Methods.* Prior to an upcoming important exam, 104 students completed diaries over the course of six days. Each day, they reported stress levels for themselves and their closest other, as well as the use of different social coping strategies by means of a Definitional Coping Inventory (Stone & Neale, 1984). Hierarchical modeling was used for data analysis. *Results.* Independent of their own stress levels, high relationals consistently engaged in cautious action with regard to their closest dyad. Low relationals only treated their closest other cautiously when they felt stressed themselves. With increasing individual stress, both groups shifted mobilisation of informational support from the closest dyad to others, though such effect was stronger for high relationals. *Conclusions.* To deal with their own stress and prevent its contagion, high and low relationals obviously employ different strategies. Low relationals limit social coping efforts to their closest dyad(s) while high relationals share their stress also with others. The latter strategy protects the closest dyad from stress contagion while less stressed others may serve as an alternative source of support.
Symposium Title: *Dyadic coping and adaptation in times of distress*

**EFFECTS OF SOCIAL SUPPORT ON AUTONOMIC AND ENDOCRINE STRESS RESPONSES IN COUPLES**

Janine Germann, University of Zurich, Switzerland  
Nathalie Meuwly, University of Zurich, Switzerland  
Guy Bodenmann, University of Zurich, Switzerland  
Beate Ditzen, University of Zurich, Switzerland  
Julian Thayer, Ohio State University, USA  
Markus Heinrichs, University of Freiburg, Germany

**Abstract**

*Objectives.* Despite the present knowledge of sex differences in social interaction and hypothalamic-pituitary-adrenal and cardiovascular stress responses, the underlying mechanisms are still unclear. As close relationships play a significant role in support mechanisms with sex-specific benefits of social support, we conducted a study to investigate the effects of couple interaction on stress responsiveness.  

*Methods.* 198 couples (age 20-45 yrs) in a stable partnership for at least 1 year were randomly assigned to one of the following group conditions: 1) women stressed only, 2) men stressed only, 3) both partners stressed (parallel single stress exposure). The Trier Social Stress Test was conducted to induce psychosocial stress between two 8-min scenes in which both partners had the possibility to interact. Salivary free cortisol was repeatedly measured and heart rate measures were recorded.  

*Results.* Data analysis reveal gender-specific effects of dyadic coping components on salivary free cortisol responses and heart rate reactivity. While stressed women seem to benefit from a partner with similar coping strategies, stressed men show a generally greater physiological stress reaction. These findings do not appear in the group where both partners experience the same stressor.  

*Conclusions.* Research on differences in social support in couples and on gender effects concerning autonomic and endocrine responses may help to reveal the sex-related differences in the prevalence of several diseases and to develop more specific intervention programs.
Symposium Title: *Dyadic coping and adaptation in times of distress*

**DYADIC COPING AFTER A COUPLES’ EXTERNAL STRESS: THE ROLE OF ATTACHMENT**

Nathalie Meuwly, University of Zurich, Switzerland
Guy Bodenmann, University of Zurich, Switzerland
Janine Germann, University of Zurich, Switzerland
Thomas N. Bradbury, University of California, USA
Markus Heinrichs, University of Freiburg, Germany

**Abstract**

**Objectives.** There is empirical evidence, that seeking and providing support is associated with one’s attachment style. Under standardized conditions the process of overt dyadic coping (circular sequence in which partner A’s communication of stress is perceived, decoded, and evaluated by partner B, who subsequently responds with his/her dyadic coping reactions) after a couples’ external stress experience is observed and the role of attachment is examined. **Methods.** 198 couples were randomly assigned to experimental conditions: Either 1) the woman, 2) the man, or 3) both partners, were stressed by means of the Trier Social Stress Test (TSST) which is predestined to induce psychosocial stress independently in each partner. After the stress induction couples were videotaped and their dyadic coping efforts were coded. **Results.** Men and women did not differ in their self-reported stress level or supporting behavior. When one partner was stressed, women communicated significantly more stress after the TSST than men while male partners’ avoidance was reducing their positive and increasing their negative supporting behavior (no effect for female partners). When both partners were stressed, less dyadic coping was observed although partners reported a similar stress level. For this experimental group, anxiety was the relevant dimension for dyadic coping: men’s anxiety reduced their communication of stress while women’s anxiety was associated with poorer supporting behavior. **Conclusions.** The situation where both partners were stressed might be a different and may be more threatening event for the relationship comparing to only one stressed partner. Results are discussed regarding prevention of relationship distress.
CORRELATES OF SPOUSAL SUPPORT PROVISION:
A STUDY WITH COUPLES ADAPTING TO INCONTINENCE FOLLOWING PROSTATECTOMY

Nina Knoll, Charité–Universitätsmedizin Berlin, Germany
Silke Burkert, Charité–Universitätsmedizin Berlin, Germany
Aleksandra Luszczynska, University of Colorado at Colorado Springs, USA
Jan Roigas, Vivantes Klinikum am Urban, Berlin, Germany
Oliver Gralla, University Hospital of Cologne, Germany

Abstract

Objectives. Four domains of predictors of provision of spousal support were tested in an illness-related stress context i.e., rehabilitation from radical prostatectomy. Predictor domains of partners’ support provision to patients adapting to incontinence following prostatectomy included stress -, recipient -, provider -, and relationship factors. Partners’ reciprocal support provision (relationship factor) was assumed to vary in predictive strength over the course of patients’ rehabilitation. Method. 109 prostatectomy patients and partners were enrolled in the study. Couples provided data on five measurement occasions from 2 weeks to 1 year postsurgery. Predictors included patient's incontinence (stress factor), patient's support mobilization and affect (recipient factors), partner's affect (provider factors), both partners' relationship satisfaction and partner's received support from patient (as an indicator of reciprocal support; relationship factors). Results. Findings from multilevel models showed that except for provider factors, variables from all other predictor domains were related with partners' support provision. Partners’ reciprocal support provision that is, associations between their own support receipt and provision of supports, increased over time. Conclusions. Findings on predictor domains of spousal support provision resembled those of other couple studies that used non-illness-related stress contexts. Exchange motivations in spousal support provision may vary during the adaptation to illness-related distress.
Symposium Title: *Dyadic coping and adaptation in times of distress*

**EFFECTS OF A COUPLES RELATIONSHIP ENHANCEMENT PROGRAM (CRE) ON CORTISOL LEVELS DURING PSYCHOLOGICAL STRESS AND DURING COUPLE CONFLICT**

Beate Ditzen, University of Zurich, Switzerland  
Kurt Hahlweg, Technical University of Braunschweig, Germany  
Gabriele Fehm-Wolfsdorf, Institute for Behavioral Medicine, Germany  
Don Baucom, University of North Carolina, USA

**Abstract**

*Objectives.* Couple conflict in unhappy marriages is suggested to impair individual health via chronic psychophysiological stress reactions in couples’ everyday lives. As a consequence, we hypothesized that standard couples relationship education (CRE) would decrease psychophysiological stress, namely salivary cortisol levels, during couple conflict in the laboratory as compared to a standard psychological stress paradigm. *Methods.* The CRE which was chosen in this study, “Ein Partnerschaftliches Lernprogramm, EPL” focused on communication and problem solving skills, as well as the expression of feelings. Salivary cortisol was repeatedly investigated in 61 couples during a) a standard psychological stress test, and b) a standard instructed couple conflict in the laboratory before and after CRE. In addition, increases in self-reported marital quality were analyzed with regard to their influence on salivary cortisol. Data were analyzed using multilevel modeling. *Results.* Cortisol responses to psychological stress were unaffected by CRE ($T = -0.689; p = .491$), but specifically, cortisol responses to the couple conflict session were significantly reduced following CRE compared to pre-intervention levels ($T = -2.306; p = .022$). This effect was associated with increases in self-reported marital quality following CRE ($T = -2.201; p = .029$). *Conclusions.* These data suggest that CRE reduces cortisol levels during couple conflict and thus might improve individual health.
EMOTION REGULATION, HEALTH AND PERFORMANCE

Chair: Changiz Mohiyeddini, Roehampton University, UK
      Andy M. Lane, University of Wolverhampton, UK

Symposium panel
Changiz Mohiyeddini, Roehampton University, UK
Paul A. Davis, University of Wolverhampton, UK
Charlotte Leonie Stewart, Roehampton University, UK
Andy M. Lane, University of Wolverhampton, UK

Abstract
Objectives. This symposium focuses on responses to emotion regulation and relationships to health and performance. Four studies are presented; two studies focus on emotional suppression and biological responses and two studies focus on emotion regulation, emotional states, and performance. Mohiyeddini et al. investigated the biological responses to emotional suppression in a sample of 88 men who were randomly allocated to one of two experimental (suppression vs. nonsuppression) conditions. Eight salivary cortisol samples were collected before and after the stress. Results indicate emotional suppression associated with higher cortisol reactivity. Stewart et al. investigated relationships between emotional suppression and rumination in a sample of 45 adults, specifically examining whether a combination of emotional suppression and (high levels of) rumination associate with higher physiological and biological responses to acute social stress. Results suggest that rumination is a mechanism through which emotional suppression influences endocriological stress. Davis et al. examine the notion that emotion regulation strategies are driven by discrepancies between current and ideal emotions among a sample of 285 volunteer athletes. They found that large discrepancies between recent and ideal unpleasant emotions were associated with using strategies intended to worsen emotion and dysfunctional strategies. Lane et al. investigated the effectiveness of five intervention strategies used to enhance running performance through emotional control among a sample of 1102 volunteer runners. Results lend support to the notion that emotional control can be enhanced through guided training. Collectively, the results of these studies underline the impact of emotion regulation on health and performance.
EMOTIONAL SUPPRESSION AND STRESS HORMONE REACTIVITY TO MENTAL STRESS

Changiz Mohiyeddini, Roehampton University, UK
Aminah Jaber, Roehampton University, UK
Jolanta Opacka-Juffry, Roehampton University, UK

Abstract

Objective. There is strong evidence for a physiological hyperreactivity to stress in individuals high in emotional suppression. However, previous research has neglected the associated stress hormone reactivity. Thus, the impact of emotional suppression of endocrinological and physiological stress reactivity was investigated. Method. In a cross-sectional study using a quasiexperimental design participant underwent an acute standardized psychosocial stress task combining public speaking and mental arithmetic in front of an audience. Subjects included 88 men which were randomly allocated to one of the two experimental conditions (suppression vs. nonsuppression). Furthermore the emotional suppression was measured using “Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), salivary cortisol was measured before and after stress and several times (-10, -1, +1, +10, +20, +30, +40, +50, +60) as well as blood pressure and heart rate. Results. Cortisol reactivity and systolic and diastolic blood pressure were highest in individuals high in trait emotional suppression in the suppression condition. Conclusions. Emotional suppression is associated with elevated stress hormone reactivity.
Symposium Title: *Emotional suppression, health and performance*

EMOTION REGULATION, EMOTIONAL INTELLIGENCE SELF-EFFICACY AND META-EMOTIONS IN RELATION TO OPTIMAL PERFORMANCE

Paul A. Davis, University of Wolverhampton, UK  
Andrew M. Lane, University of Wolverhampton, UK  
Tracey J. Devonport, University of Wolverhampton, UK  
H. J. Lane, University of Wolverhampton, UK

Abstract

*Objectives.* Evidence suggests competing in sport is associated with intense emotions and that emotional control is central to success. The present study tests the notion that emotion regulation strategies are driven by discrepancies between current and ideal emotions (Hanin, 2003) and that emotional intelligence self-efficacy influences this process. *Methods.* Volunteer athletes (*N* = 258; Male, *n* = 107, Female, *n* = 151) completed an online survey assessing emotional states before recent competition and ideal emotional states required for optimal performance. Emotion regulation strategies (Niven et al., 2010) and emotional intelligence self-efficacy (Kirk et al., 2009) were also assessed. *Results.* Significant differences between recent and ideal emotions indicate athletes sought to attenuate low-activation unpleasant emotions whilst amplifying pleasant emotions and high-activation unpleasant emotions (e.g., anger and anxiety). Large discrepancies between recent and ideal unpleasant emotions were associated with using strategies intended to worsen emotion and dysfunctional strategies. Using strategies intended to worsen emotion is possibly based on a belief that increases in anxiety or anger would enhance performance. Low emotional intelligence self-efficacy was associated with the use of strategies to worsen emotions. *Conclusion.* Findings lend support to the notion that emotion regulation strategies are activated by discrepancies between recent and ideal emotional states. Although results suggest that athletes believe unpleasant emotions associated with high arousal facilitate performance, using strategies aimed at worsening emotions appears counter-productive particularly among athletes with low self-efficacy perceptions of emotional intelligence.
Symposium Title: Emotional suppression, health and performance

IS THE LINK BETWEEN EMOTIONAL SUPPRESSION AND BIOLOGICAL RESPONSES TO STRESS MEDIATED BY RUMINATION?

Charlotte Leonie Stewart, Roehampton University, UK
Jolanta Opacka-Juffry, Roehampton University, UK
Changiz Mohiyeddini, Roehampton University, UK

Abstract

Objective. Elevated levels of cortisol are a risk factor for both health problems and well-being. Previous research has shown that both emotional suppression and rumination are associated with cardiovascular reactivity. However, previous research has devoted less attention to the link between emotional suppression and rumination and their endocrinological responses to stress. The aim of this study was to identify whether the link between emotional suppression and biological responses to acute stress are mediated by rumination. It was hypothesised that both emotional suppression and rumination would be associated with higher physiological and endocrinological stress reactivity and that rumination as mediator would reduce the impact of emotional suppression on endocrinological stress reactivity. Method. In a cross-sectional study using a quasi-experimental design participants (N = 45) were exposed to a standardised psychosocial stressor including a mock job interview and mental arithmetic task in front of a panel. Participants completed the 3- Dimensional Rumination Scale (Mohiyeddini, 2003) which measures depressiverumination, anger-rumination and self-related-rumination and emotional suppression (ERQ, Gross & John, 2002). Eight salivary cortisol samples were collected several times both before and after the stress response was activated (-10, -1, +1, +10, +20, +30, +40, +50, +60). In addition, blood pressure and heart rate were measured each time a cortisol sample was taken. Results. The mediation hypothesis was supported. Accordingly, emotional suppression increased the amount of rumination which in turn reduced the impact of emotional suppression on cortisol reactivity. Conclusion. These findings suggest that rumination is a mechanism through which emotional suppression influences endocrinological stress.
Abstract

Objectives. The pursuit of personally meaningful goals produces intense emotional responses, the control of which is important for success. The present study investigates the effectiveness of five intervention strategies used to enhance running performance through emotional control. Methods. Volunteer runners \((N = 1102)\) registered online to participate in a three-stage study. During stage-one, participants reported their emotional intelligence self-efficacy and use of psychological skills. In stage-two, participants attempted to attain a personally important running goal, a goal which they sought to repeat at stage 3. During stage-three, participants were randomly assigned to one of five interventions: 1) If-then planning; 2) Goal-setting; 3) Self-regulation; 4) Self-selected music; and 5) AudioFuel music compositions designed specifically to assist running to a beat. Participants’ perceptions of emotions and emotion regulation strategies used before and during running were reported during stages two and three. Results. Preliminary analysis revealed no gender and age differences between intervention groups, and no significant differences in emotion states between groups at baseline. Post-intervention results showed significant improvements in performance and emotional states before and during running for all intervention groups. Further analysis revealed emotional intelligence self-efficacy and use of psychological skills significantly associated with enhanced emotions during running. Conclusions. Findings lend support to the notion that emotional control can be enhanced through guided training. We contend that confidence in being able to control emotions (i.e., emotional intelligence self-efficacy) is likely to influence commitment to psychological skills usage.
SUCCESSFUL COPING WITH SHARED TRAUMA RESTS ON COLLECTIVE ACTION

Chair: Krys Kaniasty, Indiana University of Pennsylvania, USA and Opole University, Poland
Discussant: Daniel Russell, Iowa State University, USA

Symposium Panel
Fran Norris, National Center for Posttraumatic Stress Disorder and Dartmouth Medical School, USA
Krys Kaniasty, Indiana University of Pennsylvania, USA, and Opole University, Poland
Charles Benight, University of Colorado at Colorado Springs, USA

Abstract
The capacity of a collective to triumph over shared adversities is based on maintaining and augmenting perceptions of being supported, of social cohesion, cooperation, and of a sense of belonging to a valued social group and community. Empirical work with survivors of disasters and mass catastrophes strongly suggests that individuals’ functioning in aftermath of such events does not only depend on their own resources and losses, but on the resources and losses of their community. The general thesis of this symposium is that the essence of coping with collective stressors is the dynamic interplay of individual and community experiences. Fran Norris (National Center for Posttraumatic Stress Disorder and Dartmouth Medical School, USA) will discuss the construct of community resilience that may help to identify communal features of effective preparedness for, and recovery from, terrorist attacks and other collective stressors (“Defining and Assessing the Resilience of Communities and Societies”). Krys Kaniasty (Indiana University of Pennsylvania, USA, and Opole University) will review empirical research investigating the influence of disasters on families and their psychological functioning (“Understanding the Consequences and Complexities of the Impact of Disasters and Catastrophes on Family Functioning”). Charles Benight (University of Colorado at Colorado Springs, USA) will introduce a web-based intervention program enhancing coping self-efficacy, social support, and collective efficacy of survivors of mass traumas and disasters (“Individual and Collective Efficacy Through Web-based Interventions for Disasters”). Daniel Russell (Iowa State University, USA), one of the STAR 2010 keynote speakers, will serve as a Discussant.
Symposium title: *Successful coping with shared trauma rests on collective action*

**DEFINING AND ASSESSING THE RESILIENCE OF COMMUNITIES AND SOCIETIES**

Fran Norris, National Center for Posttraumatic Stress Disorder and Dartmouth Medical School, USA

**Abstract**

Communities have the potential to function effectively and adapt successfully in the aftermath of terrorist attacks and other collective stressors. “Community resilience” is becoming an increasingly important concept in disaster management, but it is not yet fully understood. The purpose of this talk is to outline current thinking in the field about how community resilience can be defined and assessed. It is proposed that resilience at the community or society level emerges from four primary sets of adaptive capacities: economic development, social capital, information resources, and community competence. Results from a pilot study that used archival data to measure the components of the model across all counties in the States of Mississippi and Florida in the USA will be presented. Combined with data on disaster risk, the method can identify communities that should be targeted in capacity-building interventions.
Symposium title: *Successful coping with shared trauma rests on collective action*

**UNDERSTANDING THE CONSEQUENCES AND COMPLEXITIES OF THE IMPACT OF DISASTERS AND CATASTROPHES ON FAMILY FUNCTIONING**

Krys Kaniasty, Indiana University of Pennsylvania, USA and Opole University, Poland

**Abstract**

Disaster victims primarily rely on their indigenous support networks. Researchers observing public reactions to natural disasters and other collective catastrophes term this immediate reliance on assistance within primary groups as an “informal mass assault.” The image evoked by this metaphor is a large scale convergence (as in an attack) of indigenous helpers and mobilization of collective coping resources. Of course, families are at the forefront of this movement, and empirical research has strongly documented the pivotal importance of kin support in coping with collective traumas. Yet there is an inherent irony in the label “mass assault” because, more often than not, it is the family that is also at the frontal position for the victimization exposure to the forces of disasters. This presentation will review empirical research investigating the influence of disasters on family relations and coping. The first part of the review will consider family variables as outcomes, and will present evidence for both deleterious and (potentially) positive impact of collective stressors on family cohesion and functioning in the aftermath. The second part of the review will consider family stress reactions and functioning as mediators or moderators of the impact of disasters on psychological well-being of their members.
Symposium title: *Successful coping with shared trauma rests on collective action*

**INDIVIDUAL AND COLLECTIVE EFFICACY THROUGH WEB-BASED INTERVENTIONS FOR DISASTERS**

Charles Benight, University of Colorado at Colorado Springs, USA

**Abstract**

Disasters result in major disruptions to the social fabric of the effected community and challenge individual capacity to adapt. Empirical research has demonstrated the importance of self-regulatory beliefs (i.e., coping self-efficacy perceptions) in recovery from mass trauma/disasters. Recent advances through the Internet and Smart Phone technologies provide a unique platform to develop novel interventions that bridge the individual and collective. Indeed, cutting edge web-based interventions for disaster recovery can provide the unique opportunity to apply the motivational principles of social cognitive theory linking interactivity between individual coping processes and social support mechanisms. Such interventions can be designed to enhance an individual level of coping skill, individual’s social capital and collective efficacy (i.e., the perceived capability of the community to manage post-disaster recovery). This paper will introduce *Journey to Disaster Recovery*™, an interactive self-help system for disaster recovery. The primary components of the website that Integrate the key principles of Social Cognitive Theory will be explained. The system uses multi-media and other interactive features that render to the individual user to enhance coping self-efficacy and social support. Initial randomized controlled trial results with Hurricane Ike survivors will be presented. In addition, the possible utilization of social media within this system will be discussed and how it might assist in enhancing collective efficacy.
PERSONAL UNCERTAINTY, SECURITY, AND WELL-BEING
IN THE NEW MILLENNIUM

Chair: Catherine Oleson, Reed College, USA
Discussant: Robert Arkin, The Ohio State University, USA

Symposium Panel
Timothy Richie, University of Limerick, Ireland
Patrick J. Carroll, The Ohio State University, USA
Aaron Wichman, Western Kentucky University, USA

Abstract
The topic of personal security is one of increasing importance given the dramatically increasing pace of change and instability in today’s world. The symposium aims to advance current perspectives on “Psychological Security, Uncertainty, and Well-Being in the New Millennium” that represented a dominant theme of the recently published Handbook of The Uncertain Self and the Special Issue of Basic and Applied Social Psychology that we co-edited on “Psychological Security in the Aftermath of 9-11”. This symposium features talks by leading scholars within the psychological sciences united by their common focus on the role of psychological certainty and uncertainty in regulating basic psychological security needs. Tim Ritchie presents his research on fading affect biases and mnemonic neglect processes as protective factors that maintain well-being against the harsh impact of daily evaluative threats. Next, Aaron Wichman presents his research on the potentially beneficial effects of meta-cognitive self-doubt as a mechanism for changing overly negative self-views at the cognitive level. Patrick Carroll then presents research on the contextual effects of changes in event valence and prior trauma in shaping the relative importance of security over enhancement needs. Robert Arkin closes by discussing the broader implications and directions for future research on the complex links among psychological security, uncertainty, and well-being in modern life.
Symposium Title: *Personal uncertainty, security, and well-being in the new millennium*

**AUTOBIOGRAPHICAL MEMORY PHENOMENA THAT PROMOTE SELF-SECURITY AND SUBJECTIVE WELL-BEING: MNEMIC NEGLECT AND THE FADING AFFECT BIAS**

Timothy Ritchie, University of Limerick, Ireland

**Abstract**

Research from two independent programs suggests that memory maintains subjective self-security. One line of memorial defence is Mnemic Neglect, which refers to disproportionately poor recall for threatening versus non-threatening information that refers to the self than another person. The present talk summarizes the results of a series of studies that evince mnemic neglect in autobiographical memory. A second line of memorial defence is the Fading Affect Bias (FAB): the intensity of emotions associated with pleasant life events fades more slowly than the intensity of emotions associated with unpleasant life events. Over a decade of research has established the reliability and validity of the FAB, and recent research has revealed some of its moderators. The present talk summarizes results from a series of studies that implicate self-securing mediators of the FAB. Collectively, these findings implicate the self as motivated to remember, about the self, more good than bad and to retain more good emotion than bad emotion when recalling affectively-toned events. These phenomena are assumed to promote self-security and subjective well-being.
Symposium Title: *Personal Uncertainty, Security, and Well-being In the New Millennium*

**THE RELATIVE IMPORTANCE OF NEEDS WITHIN TRAUMATIZED AND CONTROL SAMPLES**

Patrick J. Carroll, The Ohio State University-Lima, USA

**Abstract**

Typically, people rate enhancement needs as more important than security needs to their well-being. Two studies tested whether event valence and prior trauma moderate relative need importance. Traumatized (hurricane survivors) and non-traumatized (control) participants recalled the most *distressing* (security-relevant) or *satisfying* (enhancement-relevant) event they had recently experienced and rated the importance of 10 needs in defining the event. In both studies, event valence moderated relative need importance on explicit (salience) and implicit (affect) measures as enhancement needs were more important for enhancement-relevant (satisfying) events whereas security needs were more important for security-relevant (distressing) events. However, results also suggest that differences in traumatic experience across samples moderated the effect of event valence on relative need importance. Unlike nontraumatized (control) participants, traumatized (hurricane survivors) participants did not reassign greater importance to enhancement over security needs when event valence shifted to enhancement-relevant (satisfying) memories. This work reveals the importance of contextual differences in event valence and prior trauma in shaping the relative importance of security over enhancement needs for mental health and well-being.
Symposium Title: *Personal Uncertainty, Security, and Well-being in the New Millennium*

**ON DOUBTING ONE’S DOUBT**

Aaron Wichman, Western Kentucky University, USA

**Abstract**

People do not like to doubt themselves, and their attempts to mitigate the undesirable implications of self-doubt can have undesirable consequences themselves. For example, phenomena such as self-handicapping, procrastination, overachievement, and defensive pessimism all have been linked to self-doubt. Doubt can signal that failure is likely, and to the extent that the domain of failure would have significant negative consequences for the self, people may try to protect themselves using such behavioral strategies as self-handicapping or procrastination. These behaviors presumably follow when doubt weakens perceived self-competence cognitions upon which self-worth is based. In general, doubt is thought to weaken whatever cognitions it applies to. This general principle suggests a new perspective on managing self-defeating cognitions. If doubt weakens whatever it comes in contact with, what are the limits of its influence? The present research examines the extent to which doubt can apply to self-relevant cognitions. When these cognitions are positive (as in self-competence beliefs), doubt has negative effects. When these cognitions are negative, doubt paradoxically can lead to more positive cognitions. Any cognition potentially can be subject to doubt—even doubt itself.
YOUTH AND ADOLESCENTS LIVING IN A CONFLICTUAL VIOLENT AREA: 
COPING RESOURCES AND EMOTIONAL DISTRESS

Chair: Shifra Sagy, Ben-Gurion University of the Negev, Israel

Symposium Panel
Shifra Sagy, Ben-Gurion University of the Negev, Israel
Orna Braun-Lewensohn, Ben-Gurion University of the Negev, Israel
Shoshana Steinberg, Kaye College and Ben-Gurion University of the Negev, Israel

Abstract
The unfortunate conflictual violent situation in the Middle East serves as a “national laboratory” for investigation of stress reactions, coping resources and intervention programs among youth and adolescents. Employing the salutogenic approach (Antonovsky, 1987) which has sought to explain successful coping with stress, the two first presentations will describe studies among adolescents under rocket fire. The first study (Prof. Shifra Sagy) compared coping resources and stress reactions of adolescents living in chronic stress situations in the area of southern Israel (Sderot), which has been exposed to frequent rocket attacks for eight years, with a sample of adolescents living in northern Israel in the midst of an acute situation of rocket attacks (August, 2006). Sense of Coherence (SOC), as well as other coping resources, were investigated as potential explanatory factors in reducing emotional distress. The overall magnitude of variance explanation was found to be different in each situation: relatively high amount of explained variance of stress reactions was found in the chronic situation but not in the acute state. These results support the value of developing a model that differentiates stress situations with the aim of understanding patterns of significant resources in moderating stress reactions in each state. The second study (Dr. Orna Braun-Lewensohn) aimed to explore coping resources as explanatory factors in reducing emotional distress by comparing two ethnic groups living in southern Israel- Jewish and Arab-Bedouins- during intensive missile attacks in January 2009. The variance explanation of the stress reactions was found to be different in the two ethnic groups. While SOC made major contribution in explaining stress reactions among Jewish adolescents, hope index explained stress reactions only for the Arab group. The last lecture (Dr. Shoshana Steinberg) will describe a peace education program which was conducted at Ben-Gurion University. The research describes the impact of the violent political conflict on the discourse characteristics in Jewish-Arab encounters. The findings give a new understanding of the coping resource of small intergroup meetings between the two “enemy” groups against the background of the violent reality of an intractable conflict.
Symposium Title: **Youth and adolescents living in a conflictual violent area: Coping resources and emotional distress**

**ADOLESCENTS UNDER ROCKET FIRE:**
**WHEN ARE COPING RESOURCES SIGNIFICANT IN REDUCING EMOTIONAL DISTRESS?**

Shifra Sagy, Ben-Gurion University of the Negev, Israel
Orna Braun-Lewensohn, Ben-Gurion University of the Negev, Israel

**Abstract**

Stress reactions and coping resources of adolescents in chronic and acute situations evoked by missile fire were examined. Data were gathered during August 2006 (Second Lebanon War) on a sample of 303 Israeli adolescents living in northern Israel (acute state) and 114 youths from Sderot and the Negev, an area which has been exposed to frequent rocket attacks in the last seven years (chronic state). State anxiety and psychological distress were measured as stress reactions. Sense of coherence, family sense of coherence, sense of community and level of exposure were investigated as potential explanatory factors in reducing emotional distress. The overall magnitude of variance explanation was found to be different at each state: a relatively high amount explained variance of stress reactions was found in the chronic stress situation, but not in the acute state. These data support the value of developing a model that differentiates stress situations with the aim of understanding patterns of significant resources in moderating stress reactions in each state.
Symposium title: Youth and adolescents living in a conflictual violent area: Coping resources and emotional distress

COPING STRATEGIES AS MEDIATORS OF THE RELATIONSHIP BETWEEN SENSE OF COHERIENCE AND STRESS REACTIONS: ISRAELI ADOLESCENTS UNDER MISSILE ATTACKS

Orna Braun-Lewensohn, Ben-Gurion University of the Negev, Israel
Shifra Sagy, Ben-Gurion University of the Negev, Israel

Abstract
This study aimed to explore the relationships between sense of coherence (SOC) and stress reactions as mediated by cognitive appraisal and coping strategies among adolescents facing the acute stressful situation of missile attacks. Employing the salutogenic model (Antonovsky, 1987) and the interactionist approach to coping (Lazarus & Folkman, 1984), we asked what the roles of situational factors like coping strategies and cognitive appraisal are in mediating the relationship between SOC and stress reactions. Data were gathered during January 2009 when hundreds of missiles fell in southern Israel. Adolescents filled out self-reported questionnaires dealing with SOC, cognitive appraisal (endangerment feelings), adolescent coping scale (ACS), state anxiety, state anger and psychological distress. Overall, our model explained 55% of the variance in stress reactions. SOC had the strongest total direct and indirect effects. Previous findings have indicated SOC as playing only a limited role in explaining stress reactions in acute stress situations. The results of this study highlight the potential of SOC as a powerful resilience factor even in an acute situation, through mediation of situational factors.
Symposium title: *Youth and adolescents living in a conflictual violent area: Coping resources and emotional distress*

THE IMPACT OF THE POLITICAL CONTEXT ON DISCOURSE CHARACTERISTICS IN JEWISH-ARAB ENCOUNTERS IN ISRAEL: BETWEEN PEACE TALKS AND VIOLENT EVENTS

Shoshana Steinberg, Kaye Academic College of Education, Israel

**Abstract**

The lecture will describe a peace education program which was conducted at Ben Gurion University of the Negev. We examined the impact of the social-political context on the characteristics of two encounters in which Jewish and Arab Israeli students met to deal with the Israeli-Arab political conflict. The workshops took place during two completely different political contexts. The first workshop was carried on at the time of peace talks, following the Oslo Accords (1996/7), and the second, during the “al-Aksa Intifada” (2001/2002), in the midst of politically violent events. The discussions were recorded and fully transcribed. The two workshops were compared using a typology for classification of the developmental process of discourse between groups. The analysis revealed that during the peace talks "ethnocentric discourse" was the dominant speech category, characterized by two monologues that did not meet. In the second workshop, dialogic categories characterized by sharing of feelings, listening to the "other" and making an effort to understand how reality looked from his/her perspective, were salient. The research findings are discussed in regard to the paradoxical impact of the political-social context on the discourse in the small group. The findings give new understanding of the role of small intergroup meetings as intervention aimed at easing feelings of anxiety and stress against the background of the violent reality of an intractable conflict.
CURRENT ISSUES IN REPRESSIVE COPING AND HEALTH

Chair: Lynn B. Myers, Brunel University, UK
Discussant: Michael Eysenck, Royal Holloway, University of London & Roehampton University, UK

Symposium Panel
Brian M. Hughes, National University of Ireland, Galway, Ireland
Lynn B. Myers, Brunel University, UK [Paper 2 and Paper 4]
James Erskine, St George’s, University of London, UK

Abstract
It is over 30 years since Weinberger, Schwartz & Davidson (1979) in their seminal paper identified a group of individuals who possess a repressive coping style (repressors). Since then, there had been a growing body of research on different facets of repressive coping style. Numerous studies have found that repressors dissociate their somatic reactions from their perceptions of distress, with repressors in potentially stressful situations reporting low levels of distress but exhibiting high levels of physiological activity (e.g. Weinberger et al., 1979, Derakshan & Eysenck, 1997). It has been though that not attending to bodily signs of distress such as anxiety can be detrimental to health. Repressive coping has been linked with poor physical health including cardiovascular disease, cancer and poor immune functioning (see Myers, 2000; 2010). It is postulated that this association is due to repressors not attending to somatic information (Schwartz, 1977; 1983; 1990). In addition, repressors constitute a significant proportion of the general population, ranging from 10-20% (e.g. Myers and Vetere, 1997; Phipps and Srivastava, 1997), and therefore are an important group to study. The speakers in this symposium report latest findings on repressive coping and a wide-range of health-related issues: cardiovascular response to stress (Hughes); response to health messages (Ayers); repressive coping and health in the elderly (Erskine); and the relationship between repressive coping and alexithymia – another construct associated with poor physical health (Myers). The symposium discussant will be Michael Eysenck.
Symposium Title: *Current issues in repressive coping and health*

**REPRESSIVE COPING AND CARDIOVASCULAR RESPONSE TO STRESS:**
**SHORT-TERM GAIN, BUT LONG-TERM LOSS**

Brian M. Hughes, National University of Ireland, Galway, Ireland
Siobhán Howard, National University of Ireland, Galway, Ireland

**Abstract**

*Objectives.* Repressors tend to report less negative emotion and to describe challenges as less stressful. This may facilitate their engagement in positive health behaviours during ongoing stressors. However, repressors also tend to exhibit higher rates of cardiovascular disease, which is typically seen as indicative of stress susceptibility. We sought to establish whether repressors differed from sensitizers in their cardiovascular stress responses, thus elucidating the impact of repressive coping on primary disease mechanisms. *Methods.* 30 repressors and 32 sensitizers chosen from a screening sample of 105 healthy female students were submitted to standardized assessments of cardiovascular reactivity to laboratory-based stress. In order to examine adjustment to stress over time all participants were exposed to two consecutive stress tasks, with analyses based on comparisons of consecutive stress responses. Cardiovascular responses were examined in terms of reciprocal balancing of cardiac output (CO) against total peripheral resistance (TPR). *Results.* MANOVA demonstrated significant group differences for cardiovascular responses to the first stress exposure ($p = .042$), with repressors demonstrating greater CO increases ($p = .026$) and TPR decreases ($p = .046$) than sensitizers. This CO-TPR compensation pattern implies less negative impact of stress on cardiovascular response among repressors. However, the effect disappeared during the second stress exposure ($p = .316$). Instead, over time, repressors exhibited higher heart rates than sensitizers ($p = .020$). *Conclusions.* These findings provide evidence for the assertion that repressors experience advantages in terms of adaptive short-term responses to stress, but disadvantages in terms of longer-term impacts of stress on cardiovascular health.
Symposium Title: Current issues in repressive coping and health

REPRESSIVE COPING:
READING AND RECALL OF HEALTH MESSAGES

Beverley N. Ayers, Institute of Psychiatry, UK
Lynn B. Myers, Brunel University, UK
Naz Derakshan, Birkbeck College, University of London, UK

Abstract

Objectives. A large body of research links repressive coping with poor physical health. One of the mechanisms for repressors (R) poor physical health may be through avoiding health messages they label as threatening. The current experiment investigated this possibility. Methods. Participants were 56 undergraduate students from a UK University aged between 18 and 30 years chosen from 245 screened for extreme scores on the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964), and the Bendig short form of the Taylor Manifest Anxiety Scale (Bendig, 1956). This resulted in 15 R, 13 low anxious (LA), 14 high anxious (HA) and 14 defensive high anxious (DHA) participants in the study. Four health messages were presented on a pc. Time taken to read and recall each message was recorded. In a surprise recall task, participants had to recall the 4 health messages. Results. Data were analysed using MANOVA, ANOVA and paired t-tests. R compared to all control groups (LA, HA, DHA) took significantly (a) longer to read health messages, (b) less time to recall health messages (c) recalled less information and (d) made more recall errors (false positives). Conclusions. These results suggest that R do not process health messages effectively and although vigilant initially when reading the information later they avoided this information. This avoidance of health messages may be one mechanism associated with R poor physical health.
Symposium Title: *Current issues in repressive coping and health*

**A LONGITUDINAL INVESTIGATION OF REPRESSIVE COPING IN OLDER ADULTS**

James Erskine, St George's, University of London, UK  
L. Kvavilashvili, University of Hertfordshire, UK  
Lynn Myers, Brunel University, UK  
S. Leggett, University of Hertfordshire, UK  
S. Davies, University of Hertfordshire, UK  
S. Hiskey, University of London, UK

**Abstract**

*Objectives.* To investigate the prevalence of repressive coping in a community dwelling sample of older and younger adults (Study 1). In addition to re-examine the prevalence of repressive coping in a sample of older adults (all over 70 years) followed for a 7 year period. *Methods.* Study 1 had older (mean age 74 years) and younger (mean age 26 years) adults complete a number of indices of psychological health and well being and measures of repressive coping. In order to examine both the prevalence of repressive coping and its relationship to health. Study 2 a cohort of older adults followed for 7 years filled out a series of health scales completed 7 years earlier in order to examine how the prevalence of repressive coping changed over time and its relation to health. *Results.* Study 1 - older adults were both psychologically healthier (lower general health questionnaire scores and use of thought suppression) and had a reliably higher prevalence of repressive coping (30%) than younger adults (12%). Study 2 - The prevalence of repressive coping increased reliably (*p* = .05) from 34% at the first time of testing (in 2002) to 51% at the second testing interval (in 2009). *Conclusions.* These findings suggest that the increased prevalence of repressive coping in older adults may be a developmental rather than a cohort effect. Furthermore, this increase in repressive coping with age appears to be psychologically protective resulting in better well-being in those older adults that become repressive wpm.
Symposium Title: Current issues in repressive coping and health

IS THERE A RELATIONSHIP BETWEEN REPRESSIVE COPING AND ALEXITHYMIA?

Lynn B. Myers, Brunel University, UK

Abstract

Background. It has been hypothesized that repressive coping and alexithymia, two variables which involve problems of expressing emotions, and are related to physical illness, may be similar constructs. Yet, questionnaire studies have found that repressors (R) score low on alexithymia - significantly lower than "truly" low anxious participants (low-anxious, LA). However, evidence suggests that R answer questionnaires in a positive fashion, due to avoidance of negative affect, which may be bypassed by using measures which allow independent raters to judge participants responses. Therefore, the current study investigated alexithymia in R using an observer-rated scale and a questionnaire. Methods. 13 R and 13 LA participants completed a questionnaire measure of alexithymia, the TAS-20 (Taylor, Bagby & Parker, 1992). Two independent raters completed the Observer Alexithymia Scale (OAS; Haviland, Warren & Riggs, 2000) after listening to a recorded interview of participants' romantic adult experiences. Results. Analyses were independent sample t tests. As hypothesized, R compared with LA were rated significantly higher on alexithymia for overall OAS and subscales (overall score $t(24) = 3.78, p < .001$, distant, $t(24) = 3.43, p < .005$; uninsightful, $t(24) = 2.07, p < .05$; humourless, $t(24) = 4.05, p < .001$; rigid, $t(24) = 3.31, p < .005$), but scored significantly lower on the TAS-20, $t(24) = 3.78, p < .0010$. Conclusions. These findings suggest that repressive coping and alexithymia may be similar constructs and highlights the importance of using methods to bypass R avoidance of negative affect.
STRESS AT SCHOOL – PART 1

Chair: Petra Buchwald, University of Wuppertal, Germany
Discussant: Tobias Ringeisen, Federal University of Applied Sciences, Germany

Symposium Panel
Moshe Israelashvili, Tel Aviv University, Israel
Kate Moore, Charles Darwin University, Australia
Emilia Lucio-Gómez, Universidad Nacional Autónoma de México, Mexico
Eleni Vasilaki, University of Crete, Greece
Stefanie Pfeiffer, University of Wuppertal, Germany

Abstract
One of the most difficult results of school is school stress. As educational requirements get more stringent in all levels of education, students and teachers everywhere experience considerable school stress. School stress is not only brought on by exams, homework, problems to solve, and the persistent need to keep up with significant others but also by coping with life. The intention of this symposium is to discuss the effects of stress on students and their teachers. What kind of complex mechanisms are working when enhancing or reducing feelings of stress and burnout will be analysed in five different studies. These studies are focussing on the exposure to stress of students living in Israel (Israelashvili & Kakunda-Mualem) and of students leaving school and commencing university in Australia (Moore), on school-based intervention programs for students at risk of suicide in Mexico (Lucio-Gomez & Arenas) and for students at primary school suffering from school anxiety in Greece (Vasilaki, Mavridaki, & Papadaki-Michailidi). Another study was conducted to identify the relationship between reported levels of stress, social support and burnout among primary school teachers in Germany (Buchwald & Pfeiffer). With our symposium we would like to contribute to school health research and broaden our understanding about educating students and teachers by providing information and skills to cope with school stress.
Symposium Title: Stress at School - Part 1

SCHOOL GRADERS EXPOSURE TO STRESSFUL LIFE EVENTS
– DOES IT MATTER WHERE?

Moshe Israelashvili, Tel Aviv University, Israel
Helen Kakunda-Mualem, Tel Aviv University, Israel

Abstract

Objectives. To check whether student's level of exposure to stressful life events (SLE) within the school setting – in comparison to exposure to other SLEs outside of the school setting - has a singular impact on student's current adjustment and future expectations. Methods. The sample (N = 391) consisted of adolescents (60% females) who are (equally) studying in either Jewish, Christen or Muslim high-schools in various parts of the state of Israel. Participants completed a questionnaire addressing the issues of: amount of exposure to stressful life events, several of them related to the school setting while others related to other settings or aspects; Adolescent adjustment Screening Inventory (RAASI; Reynolds, 2001); and Future expectations (Wyman, Cowen, Work, & Kerley, 1993). Results. Data analyses yielded significant difference in level of exposure to SLEs, with Muslim adolescents being exposed to more SLEs than Christen adolescents and Jewish adolescents' level of exposure was in between the other two groups. Generally speaking, the correlations among the various study variables were positive and significant. However, multiple regression analyses indicated that the comprehensive level of general exposure to stressful life events, computed by either the additive sum of both types of SLEs or by their multiplications, was the major predicting variable of adolescents' current adjustment as well as their future expectations. Conclusions. Adolescents' general level of exposure to SLEs, rather than stressful events within the school settings only, is important for better understanding the adolescent's current well-being as well his/her future perceptions and positive behavior. Implications for school settings will be discussed.
Symposium Title: *Stress at School - Part 1*

**STRESSORS, SHIFTS, SUPPORT, AND COPING STYLES INVOLVED IN COMMENCING UNIVERSITY: ONE AUSTRALIAN PERSPECTIVE**

Kate A. Moore, Charles Darwin University, Australia

**Abstract**

The negative impact of major life events and their cumulative impact has been confirmed. As such, the effect of leaving school, commencing university and shifting house can be highly stressful to young adults commencing university. It was the aim of this study to investigate the effect of these variables upon students' stress and anxiety levels; the coping strategies employed by them and their amount of and perceived satisfaction with, social support. Five hundred and fifty-one commencing students (Mean age 19.37 years, \(SD\) 4.34) from across five campuses and a range of awards agreed to participate in this study. Survey data revealed most students (97.3%) reported some level of stress associated with commencing university and nearly 30% of students were required to move house in order to commence studies. Approximately half of these students received no government living allowance being supported either entirely or partially by family or their own employment. Students ratings of their financial and living conditions varied according to their residential status and this in turn impacted upon mood. Generally students employed high levels of solution-based and consultative coping strategies but for those students with high anxiety over commencing university or over leaving home, there was a greater use of affective coping style. This last may well be, as Moore suggested, an indicator of their level of distress. The impact of these findings upon students' future well being and scholastic performance is not known and the authors are presently engaged in the collection of data in a larger cohort to be followed-up over three years.
Symposium Title: *Stress at School – Part 1*

SCHOOL-BASED PROGRAM FOR ADOLESCENTS AT RISK OF SUICIDE BEHAVIOUR

Emilia Lucio-Gómez, Universidad Nacional Autónoma de México, Mexico
Paulina Arenas-Landgrave, Universidad Nacional Autónoma de México, Mexico

Abstract

Nowadays, one of the main health problems with respect to adolescents is self-inflicted violence. Due to this fact, the prevalence of suicide intent and consumption has raised dramatically in many countries during the last years. The need to prevent and reduce self-inflicted violence is an important concern, considering that self-harm behaviour may be potentially life-threatening and it can also be related to coping and stress in adolescents. The objective of this study was to design and implement an intervention program in the school context among adolescents with stressful life events and risk of suicide. Participants assessed were 1,083 high school adolescents with an age range from 14 to 18 years old ($M = 16.1$, $SD = 1.03$). From this sample, 112 students identified at risk were invited to participate in the intervention program. Students meet for 13 to 15 small group sessions of 2 hours each for 7 consecutive weeks. Based on a collaborative approach (Finn, 1996), the group focus was on evaluating student’s coping strategies in relation to three main topics: sexuality, substance abuse and suicidal risk. Group leaders were highly active and directive in presenting themes for each session and used role play exercises to help students internalize and apply the concepts presented. Emphasis was placed on activity exercises and group-directed discussion. Jacobson and Truax’s index was used to assess the reliability of change in the students; significant changes were observed. Discussion of the results is aimed at the importance of implementing preventive programs in adolescents within school-based interventions.
Symposium Title: *Stress at School – Part 1*

**AN INTERVENTION PROGRAM FOR ANXIETY REDUCTION IN PRIMARY SCHOOLS BASED ON EMOTIONAL DISCLOSURE AND BIBLIOTHERAPY**

Eleni Vassilaki, University of Crete, Greece  
Kalliopi Mavridaki, Psychologist  
Michailidi E. Papadaki, University of Crete, Greece

**Abstract**

A consistent finding throughout the research literature is the inverse relationship between anxiety and performance. It’s important to find ways to effectively minimize children’s anxiety in schools so they can achieve the highest possible performance. 214 children participated in an experimental study were we applied an intervention program to minimize anxiety and cognitive interference based on Emotional Disclosure and Bibliotherapy. The sample consisted of 106 girls (50.7%) and 108 boys (49.3%) of the 5th and 6th grade in primary schools. Two groups were used, the experimental and the control group. The procedure consisted of the following stages: Measurement of children's anxiety levels and cognitive interference before and after intervention (we used the STAI & CIQ Inventories), reading of an anxiety related story, spontaneous thought writing related to anxiety inducing events at school, teacher's completion of an evaluation form related to performance of each student individually. Intervention lasted three consecutive days. Children's anxiety levels and cognitive interference were recorded one and two months after intervention. The analysis showed that before intervention, children had high levels of anxiety and cognitive interference. After intervention there was a reduction in the recorded state anxiety and cognitive interference which maintained low until the end of the school year. Overall, the analysis has shown that our intervention was successful in reducing children's anxiety, proving that bibliotherapy and emotional disclosure are effective tools for minimizing anxiety and prevention. These two approaches haven't been widely applied in school settings, are cost effective and don’t require a lot of time from the teachers.
Symposium Title: *Stress at School – Part 1*

**SOCIAL SUPPORT AND COPING AS PREDICTORS OF JOB BURNOUT AMONG TEACHERS**

Stefanie Pfeiffer, University of Wuppertal, Germany
Petra Buchwald, University of Wuppertal, Germany

**Abstract**
The study investigated whether work-related social support, and coping strategies predicted burnout among teachers in elementary schools \((N = 151)\). It was hypothesized that coping and social support coming from different sources would predict burnout. Teachers completed the German version of the UCLA-SSI (Schwarzer, 2000) measuring received social support, the Maslach Burnout Inventory (Maslach et al., 1996) and the German version of the Strategic Approach to Coping Scale (SACS) (Schwarzer, Starke & Buchwald, 2003). Results of a Wilcoxon-test showed that teachers received social support from close colleagues and their partners. Multiple regression analyses revealed that social support from partners is a significant predictor of emotional exhaustion for female teachers whereas social support from close colleagues predicts emotional exhaustion of male teachers. Further it will be analyzed whether effects of social support on burnout indices were mediated by active-prosocial coping strategies. *Conclusions.* For implementing adequate support systems it is important to realize that male and female teachers receive their support from different sources. For enhancing well-being at elementary schools teachers’ knowledge of strategies to mobilize social support seems to be of major importance. Implications for school settings will be discussed.
POSITIVE GROWTH AND DEVELOPMENT: 
FROM DISTRESS TO COPING ACROSS THE LIFE-SPAN

Chair: Erica Frydenberg, University of Melbourne, Australia
Discussant: Krys Kaniasty, Indiana University of Pennsylvania, USA and Opole University, Poland

Symposium Panel
Erica Frydenberg, University of Melbourne, Australia
Barbara Jones, Australian Catholic University, Melbourne, Australia
Esther Greenglass, York University, Toronto, Canada
Kate Moore, Charles Darwin University, Australia

Abstract
This symposium will explore how we can enhance positive development, by enabling young people to move from distress to coping from early childhood through to adulthood. The first (Frydenberg) paper reports on a three-phase study that explored how young people articulate their coping strategies and these strategies can be meaningfully grouped. Additionally, the different ways in which parents and teachers perceive a child’s coping was considered. Having identified coping strategies used by 4-5 year olds it is possible to integrate coping related activities into the curriculum. The second paper (Jones) explores the coping strategies used by 9-10 year olds who are experiencing anxiety and the ways in which it is possible to develop helpful coping in anxious children. The third paper (Greenglass) explores how reframing of an event, either positive or negative, is related to subsequent threat appraisal in an Internet study. Results showed that, to the extent that individuals use proactive coping, and they focus on the event’s benefits to them, they are less likely to appraise the event as a threat in the future. There are clear implications for the benefits of proactive coping and the ways in which it can be used to reduce the appraisal of a threat. The final paper (Moore) explored the relationship between depression and chronic back pain sufferers. It was found that generally these adults had better coping resources when managing their chronic pain than when dealing with their life circumstances. The implication is that adults need to be assisted to use their helpful coping resources in everyday stress-related situations. Collectively the papers highlight the possibilities of utilizing the coping construct for positive growth and development at any stage in the life-span.
Symposium Title: *Positive growth and development: From distress to coping across the life-span*

**COPING COMPETENCIES IN THE EARLY YEARS:**
**IDENTIFYING THE STRATEGIES THAT PRESCHOOLERS USE**

Erica Frydenberg, University of Melbourne, Australia
Jan Deans, University of Melbourne, Australia

**Abstract**

The three-phase exploration sought to identify the coping actions of four-five year olds and explored how parents’ descriptions concur and amplify those of teachers. The Phase 1 sample consisted of 19 four to five year old (M = 4.6 years) inner-city Australian children and their parents. The parent survey related specifically to Separation, Communicative Problem Solving, Independent Problem Solving, Social Skills, and Adaptability. Parents were provided with a list of 27 coping strategies and asked to rate whether their child used each strategy. Both the child and parent responses were grouped into Active, Passive and Relational coping. Children spontaneously provided more coping strategies than those listed in the parent survey. Children report using more active coping than passive coping. Parent survey responses reported the identification of more ‘passive coping’ strategies than were reported during the child interviews Phase 2 asked 46 four-year-old children to describe their coping strategies when dealing with seven age-appropriate challenging situations. The results again indicated that preschoolers could articulate coping strategies that were then most clearly clustered into productive and non-productive coping styles. In Phase 3 parents and teachers completed 112 surveys for 46 children relating to their coping. Mothers reported more passive coping for their children than did the teachers. Overall there are indications that there are a wide range of coping strategies that young children commonly adopt that are not widely recognized in current literature. Parents’ perceptions of their children’s coping vary from that of teachers and children themselves.
Symposium Title: *Positive growth and development: From distress to coping across the life-span*

**CHILDHOOD COPING:**
**THE ANXIETY CHALLENGE**

Barbara Jones, Australian Catholic University, Australia

**Abstract**
How children cope with challenging and stressful situations or events is impacted by a range of factors including the extent of fear, anxiety and distress they experience. Generally children face the challenges rather than merely relinquishing control of the situation by surrendering or simply declaring an inability to cope. Additionally, throughout childhood, coping capacities constantly change in accordance with cognitive and emotional development. This offers encouragement and optimism for those working with anxious children as well as, and more particularly for the anxious child. Being able to cope effectively could be a buffer to anxiety, and may in fact reduce anxiety. Data from 455 children (241 males and 214 females) with a mean age of 9.68 years ($SD = 1.23$) completed the A-Trait scale of the State Trait Anxiety Inventory for Children (Spielberger, 1973); the Childhood Anxiety Sensitivity Index (Silverman et al., 1991); and the Coping Scale for Children (Frydenberg & Lewis, 1993). Results indicated that it is often the case that anxious children overestimate threat and underestimate their coping resources; and they rely mostly on coping strategies associated with non-productive and reference to others coping styles. One of the principal themes underlying children’s coping is that coping strategies and a sense of competence or belief in one’s capacity needs to be developed.
Symposium Title: *Positive growth and development: From distress to coping across the life-span*

**EVENT APPRAISAL, PROACTIVE COPING AND DISTRESS**

Esther Greenglass, York University, Canada

**Abstract**

Previous research has shown that primary appraisal of events as a threat or a challenge have distinct psychological consequences for the experience of stress. For example, threat appraisal, in which an event is seen in terms of its potential for harm or loss, is associated with increased physiological reactions to stress. To the extent that threat appraisal can be lessened, stressful reactions should also decrease. According to research, threat appraisal decreases with an increase in coping strategies based on control. Also, to the extent that the event is seen in terms of its potential gains rather than its losses, threat appraisal should also decrease. We tested these ideas in a 2 x 2 experiment conducted over the Internet with 452 university participants who were randomly assigned to one of four experimental conditions. In the first manipulation, participants were asked to recall and write about a significant past event, either positive or negative. In the second manipulation they were asked to focus and write about either the benefits of the event (positive focus) or the harm done by the event (negative focus). This was followed by self-reported evaluation of how threatening the event was. Coping was assessed using the Proactive Coping Subscale of the PCI which involves goal setting and having efficacious beliefs; it is associated with perceptions of challenge and control and therefore would lessen threat appraisal. We hypothesized that threat appraisal of the event will be lower in the positive focus condition than in the negative focus condition, and that threat appraisal should decrease with increased proactive coping. A list wise regression was conducted with event (positive or negative), focus (positive or negative), proactive coping and their interactions, as predictors and perceived threat of the event as the criterion. Results showed that there was a significant two-way interaction between focus and proactive coping -- as proactive coping increased, perceived threat associated with the event decreased but only in the positive focus condition. Thus, to the extent that individuals employ coping strategies that comprise efficacious beliefs, and they focus on an event’s benefits to them, they are less likely to appraise that event as a threat in the future. These findings have implications for interventions that can be used to lessen perceptions of threat and thereby reduce perceived stressfulness associated with significant life events.
Symposium Title: *Positive growth and development: From distress to coping across the life-span*

**COPING WITH CHRONIC PAIN: THE IMPACT OF DEPRESSION AND LIFE EVENTS**

Kate A. Moore, Charles Darwin University, Australia

**Abstract**

This study was designed to test the hypothesis that depressed mood and a greater number of life events, rather than pain alone, would account for the differences in coping styles between pain patients. It was expected that depressed chronic lower back pain (CLBP) patients would report more pain intensity, more life event changes and a greater proportion of affective strategy responses (avoidance) and less solution-oriented coping strategy responses (challenge, appraisal and resources) than non-depressed CLBP patients and controls. Forty-one people with chronic back pain, 20 depressed and 21 non-depressed, and 27 control participants completed ratings of pain intensity/duration, the depression scale of the Profile of Mood States, the Deakin Coping Scale and a Life Events Questionnaire. Depressed CLBP patients reported greater pain intensity, more stressful life events, and endorsed more avoidant coping strategies than non-depressed CLBP patients and controls across two stressor conditions (pain stressor vs. general life stressor). All three groups indicated greater use of affective coping in response to pain than in response to general life stress. The magnitude of group differences in coping varied across conditions; in the pain and general life conditions, both the controls and non-depressed CLBP similarly reported using more appraisal and use of challenge coping strategies and less avoidance, than the depressed CLBP group. Also in the pain condition, controls reported using more resources than non-depressed CLBP and depressed CLBP groups, while in the general life condition the groups did not differ on their use of resources. It was concluded that (1) CLBP patients may employ different coping strategies when attempting to manage pain, than when confronting more general life stressors and (2) an increased rate of avoidance responses is associated with the combination of CLBP and concurrent depressed mood, rather than with CLBP alone. These results suggest that although some patients may selectively employ avoidant styles in response to pain, an over-reliance on avoidant activities is not characteristic of all CLBP patients but is more likely a function of depressed mood.
STRESS AT SCHOOL – PART 2

Chair: Tobias Ringeisen, Federal University of Applied Sciences, Germany
Discussant: Christine Schwarzer, Heinrich Heine-University of Düsseldorf, Germany

Symposium Panel
Emine Erktin, Boğaziçi University, Istanbul, Turkey
Vivian Ng, National University of Singapore, Singapore
Sonja Rohrmann, University of Frankfurt, Germany
Jian Li, University of Wuppertal, Germany
Nicola K. Schorn, Heinrich-Heine-Universität Düsseldorf, Germany

Abstract
Everywhere in the world, students and teachers experience considerable levels of school stress. The sources are not limited to educational requirements like exams and homework. They rather represent multi-faceted determinants when school demands, psycho-social events and daily routines build up. The symposium comprises five studies which investigate antecedents and consequences of various stressors on students, teachers, and their support networks. Erktin presents an overview of different studies on high stakes exams in Turkey. Her data show that both students and their support networks were highly affected by demanding exams with stress responses and coping efforts being quite similar in students, their parents and teachers. Ng investigated the association between diurnal salivary cortisol patterns and the nature of stressors that undergraduate students may experience at the beginning of the semester and before the final examination. At both time points, the majority of students exhibited a regular cortisol pattern. Based on a modified version of the German Test Anxiety Inventory (TAI-G), Rohrmann and Hodapp investigated the congruence between self-reported test anxiety in students, and respective teacher ratings. According to their results, there was a medium correlation between both ratings, which varied with age and gender of the students. Li and Meng conducted a comprehensive literature review to identify the state-of-the-art in research on job stress and burnout in Chinese teachers. Based on those studies, they provided multiple evidence for the differential relationships between job characteristics, psychological well-being and health. Finally, Schorn and Buchwald examined resource gains and losses in German school teachers and trainee teachers. Their results show that quality and quantity of resource changes differed depending on demographic characteristics of the samples. Gains were negatively and losses were positively related to indicators of burnout. With the two-parted symposium on “Stress at school”, we hope to enrich school health research and provide suggestions how to foster students’ and teachers’ skills to adequately cope with sources of school stress.
Symposium Title: *Stress at School – Part 2*

**HIGH-STAKES TESTS IN TURKEY**

Emine Erktin, Boğaziçi University, Turkey

**Abstract**

In Turkey, highly competitive entrance examinations are required to place students in competitive high schools and universities. These exams are not only a major burden for the students but also for the teachers and the students’ parents as they require thorough preparation periods and a lot of resources. Turkey is a developing country with a very young population. Educating the youth and integrating young adults into the system thus poses problems with the current possibilities of education. Test anxiety has been investigated as both an antecedent and an outcome of this so called painful period in many studies from the students' perspective. There are not as many studies investigating the stress felt by the parents and the teachers, who are directly involved in the process of test preparation. In response, we have been doing research on the stress levels and coping strategies of teachers and parents within the process of high stakes as their children/students prepare and take the tests (Erktin& Ural, 2002; Ural& Erktin, 2001, 2007). This paper will be an overview of the findings from several studies investigating the stress experienced by the students, their parents and the teachers as they prepare for and when faced with high stakes tests. The findings of these studies led to both the development of various measuring instruments and stimulated some interesting discussion on how parallel the stress patterns of children, teachers and parents could be.
Symposium Title: *Stress at School – Part 2*

**DIURNAL PATTERN OF SALIVARY CORTISOL AMONG UNIVERSITY UNDERGRADUATES DURING TWO DIFFERENT STRESSFUL PERIODS**

Vivian Ng, National University of Singapore, Singapore  
David Koh, National University of Singapore, Singapore  
Agus Salim, National University of Singapore, Singapore  
De-Yun Wang, National University of Singapore, Singapore

**Abstract**

*Objective.* To examine cortisol diurnal patterns of undergraduates during two different stressful periods.  

*Methods.* We surveyed 113 1st year science undergraduates aged 18-23 years on two occasions— at the beginning of the semester (T1) and one week before the final examination (T2). Questionnaires administered were: 32-item “Modified Dental Environmental Stress (MDES)” and 10-item Perceived Stress Scale (PSS). The MDES was used to investigate students’ stressors in the academic environment and PSS was to assess self-perceived stress level. Saliva samples were collected on awakening (AW), and 30-min, 2.5-hr, 8-hr, and 12-hr post-AW and before bedtime on two consecutive days.  

*Results.* At T2, undergraduates rated higher scores on all items in MDES. The 5 top ranked stressors remained as “Examinations and grades”, “Competition for grades”, “Difficulty of class work”, “amount of assigned classwork”, and “lack of time to do assigned classwork”. They also had statistically significant higher PSS total score at T2 (22.93 ±4.79) compared to T1 (19.71±5.47). A normal diurnal pattern of salivary cortisol was seen in 45.1% (N = 51) of students at T1 and 61% (N = 69) at T2 (p = .02); 35.4% (N = 40) had an inconsistent cycle at T1 and 24.8% (N = 28) at T2 (p = .08), and 19.5% (N = 22) had a flat cycle at T1 compared to 14.2% (N = 16) at T2 (p = .29). 25 students who had an inconsistent cycle at T1 had normal cycles at T2.  

*Conclusion.* Science undergraduates perceived higher scores in stressors and self-perceived stress before the final examination. A higher proportion of them had normal cortisol cycle before their examination.
TEST ANXIETY IN HIGH-SCHOOL STUDENTS: SELF-REPORT AND STUDENT-TEACHER AGREEMENT

Sonja Rohrmann, Goethe Universität Frankfurt am Main, Germany
Volker Hodapp, Goethe Universität Frankfurt am Main, Germany

Abstract
Based on the two-component conceptualization and new directions in test anxiety research, an extended and modified version of the German Test Anxiety Inventory (TAI-G, Hodapp, 1991) was developed, distinguishing four components of test anxiety: “emotionality”, “worry”, “lack of confidence”, and “interference”. This study aimed at validating the questionnaire and analyzing the correlation of TAI-G self-reports (N = 122 high school students) and teacher ratings of students’ test-anxiety. There was a medium correlation (r = .32) between students’ self-reports and teacher ratings. This effect was moderated by teachers’ age. Correlations were higher among younger teachers. In line with previous research girls in comparison to boys had higher total scores in test anxiety; additionally, they scored higher on the two subscales “emotionality” and “worry”. Notably these gender differences based on self-reports were confirmed by teacher ratings. Vice versa and in contrast to students’ self-reports, teachers rated boys higher in “interference”. Implications are discussed with regard to teachers’ ability to recognize students’ test anxiety.
Symposium Title: Stress at School – Part 2

REVIEW OF JOB STRESS AND BURNOUT IN CHINESE TEACHERS

Jian Li, University of Wuppertal, Germany
Heng Meng, University of Science and Technology, China

Abstract

Objectives. Teachers are the high risk population of getting stressed and burnt out. So far, little evidence is available from China. The aim of the paper was to present the current state of stress and burnout research in Chinese teachers, and to highlight directions for future research. Methods. A literature search from January 2000 to December 2009 was conducted using the key words stress, strain, pressure, burnout, teachers, China, and Chinese to identify the existing publications. Results. Occupational Stress Inventory Revised Edition (OSI-R) and Maslach Burnout Inventory (MBI) were mainly used to measure job stress and burnout among Chinese teachers. However, most studies were limited to cross-sectional design, and only one intervention study was reported. 50-60% teachers perceived they had high or very high work stress, and the main work-related stressors were job demand, low reward, role ambiguity, and students’ school behaviors. The level of teachers’ burnout was moderate, and burnout was significantly associated with teaching tenure (particularly 10 years), stressors in workplace, and social support. The findings also revealed the impact of stress and burnout on teachers’ well-being, including job dissatisfaction, turnover intention, mental illness (such as depressive symptom), and physical diseases (such as menstrual disorder). Conclusions. This review highlights that further research in Chinese teachers need to develop instruments for measuring stress and burnout, and more prospective and longitudinal studies are expected. The long-term goal is to reduce the level of stress and burnout and to improve teachers’ well-being in China.
Symposium Title: *Stress at School – Part 2*

**LOSSES AND GAINS OF RESOURCES IN TEACHERS AND TRAINEE TEACHERS**

Nicola K. Schorn, Heinrich-Heine-Universität Düsseldorf, Germany  
Petra Buchwald, Bergische Universität Wuppertal, Germany

**Abstract**

According to the conservation of resources theory (COR; Hobfoll, 1998) permanent losses of resources might cause burnout, whereas gains of resources could restrain the burnout process. In this study we analysed losses and gains of resources, namely personal, career, energy and classroom management resources, in \( N = 100 \) teachers and \( N = 135 \) trainee teachers. Furthermore, we examined if losses and gains correlate with burnout. On the basis of the Conservation of Resources Evaluation List (COR-E; Hobfoll & Lilly, 1993) a German list was developed for teachers and trainee teachers specifically (COR-E-LK; Buchwald, in prep.). The sample reported to what extent they lost or gained resources in the previous year and filled in the subscale Emotional Exhaustion of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986). Analysis showed that the amount of resource losses and gains differ significantly between teachers and trainee teachers as well as between younger and older teachers. Emotional Exhaustion correlates negatively with the categories of gain and positively with the categories of loss, respectively. The findings of the current study support the resource based model of burnout (Hobfoll & Shirom, 2000; Buchwald & Hobfoll, 2004) and the assumption that burnout could be caused by a slow depletion of resources.
PERFECTIONISM AND POSITIVE AND NEGATIVE OUTCOMES: 
STRESS AND COPING PROCESSES AS MEDIATORS AND MODERATORS

Chairs: David M. Dunkley, SMBD Jewish General Hospital and McGill University, Canada
Joachim Stoeber, University of Kent, UK

Symposium Panel
Joachim Stoeber, University of Kent, UK
Andrew P. Hill, York St. John University, UK (Paper 2 and Paper 3)
Clarissa Edge, University of Florida, USA
David M. Dunkley, SMBD Jewish General Hospital and McGill University, Canada

Abstract
Over the past 20 years, an impressive body of research on perfectionism has accumulated indicating that perfectionism plays an important role in stress, anxiety, and depression (see Flett & Hewitt, 2002 for a review). One of the major developments is that perfectionism has become viewed as a multidimensional construct, with certain dimensions of perfectionism having both adaptive and maladaptive aspects and certain dimensions being primarily maladaptive. The overall aim of our symposium is to examine stress and coping processes that may play a mediating and/or moderating role in associations between perfectionism dimensions and negative and positive outcomes. The present paper symposium addresses current issues of perfectionism research with five paper presentations investigating (1) daily coping as a moderator in the relation between perfectionistic concerns and daily satisfaction, (2) ruminative perfectionistic cognitions as a moderator in the relation between perfectionism dimensions and athlete burnout symptoms, (3) motivational regulation as a mediator in the relation between perfectionism dimensions and athlete burnout, (4) differences between adaptive and maladaptive perfectionism in emotion regulation and physiological stress reactivity, and (5) daily stress and avoidant coping as mediators and moderators of the relation between perfectionism dimensions and depressive and anxious symptoms over 3 years. Findings will be discussed with regard to their implications for future research on perfectionism and how it relates to adjustment and maladjustment.
PERFECTIONISM AND DAILY COPING WITH NONACHIEVEMENTS:  
POSITIVE REFRAMING SAVES THE DAY

Joachim Stoeber, University of Kent, UK  
Dirk P. Janssen, University of Kent, UK

Abstract

Research on perfectionism has shown that it is important to differentiate between two dimensions of perfectionism—perfectionistic strivings and perfectionistic concerns—when investigating how perfectionism is related to coping and well-being. Using a diary method, the present study examined how the two dimensions of perfectionism predicted what coping strategies people used when dealing with stressful non-achievements, and how perfectionism and coping influenced people’s satisfaction. Over 7 to 14 days, 136 university students completed daily reports on non-achievements, coping, and satisfaction at the end of the day. Multilevel regression analyses showed that higher levels of perfectionistic strivings predicted higher levels of problem-focused coping and higher satisfaction, whereas higher levels of perfectionistic concerns predicted higher levels of avoidant coping and lower satisfaction. However, problem-focused coping moderated the negative relationship between perfectionistic concerns and satisfaction. The effect was particularly pronounced for positive reframing: if students high in perfectionistic concerns used more positive-reframing coping, they felt more satisfied at the end of the day. The findings suggest that, while people high in perfectionistic concerns have a tendency to use avoidance coping after non-achievements and be dissatisfied with their day, those who use problem-focused coping and reframe the events in a positive way achieve a sense of feeling good at the end of the day.
Symposium Title: *Perfectionism and positive and negative outcomes: Stress and coping processes as mediators and moderators*

**DO PERFECTIONISTIC COGNITIONS MODERATE THE RELATIONSHIP BETWEEN MULTIDIMENSIONAL PERFECTIONISM AND SYMPTOMS OF ATHLETE BURNOUT?**

Andrew P. Hill, York St. John University, UK  
Howard K. Hall, York St. John University, UK  
Paul R. Appleton, Birmingham University, UK

**Abstract**

Research has begun to examine the relationship between multidimensional perfectionism and symptoms of athlete burnout. This research suggests that while some dimensions of perfectionism appear to render athletes vulnerable to elevated symptoms of burnout, others may provide resiliency against its symptoms. This pattern of results is particularly evident when considering the relationship between socially prescribed and self-oriented perfectionism and burnout. As Flett and Hewitt (Flett et al., 1998) have identified perfectionistic cognitions as an important additional variable when considering the potential consequences of these dimensions of perfectionism, the purpose of the current study was to extend research in this area by examining whether the relationship between these dimensions of perfectionism and symptoms of athlete burnout are moderated by the frequency of ruminative perfectionistic cognitions. One-hundred and seventy male rugby players recruited from the academies of rugby union clubs completed the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991), Perfectionism Cognitions Inventory (Flett et al., 1998), and Athlete Burnout Questionnaire (Raedeke & Smith, 2001). A series of hierarchical regression analyses revealed that socially prescribed perfectionism interacted with perfectionistic cognitions to predict higher levels of all three burnout symptoms. In contrast, no significant interactions between self-oriented perfectionism and perfectionistic cognitions were observed. The findings suggest that targeting the experience of ruminative cognitions focused on the attainment of perfection may be one strategy that may ameliorate the experience of burnout amongst athletes who exhibit higher levels of socially prescribed perfectionism but not those who exhibit higher levels of self-oriented perfectionism.
PERFECTIONISM AND BURNOUT IN ELITE JUNIOR ATHLETES: 
THE MEDIATING INFLUENCE OF MOTIVATIONAL REGULATION

Paul R. Appleton, University of Birmingham, UK
Andrew P. Hill, York St. John University, UK
Howard K. Hall, York St. John University, UK

Abstract
Recent advances in the perfectionism literature have established the mediating processes within the relationship between self-oriented perfectionism (SOP), socially prescribed perfectionism, (SPP) and athlete burnout (Hill et al., 2008, 2010). The purpose of the current study was to extend previous research by examining the mediating role of motivational regulation within this relationship. It was hypothesized that controlled forms of regulation (e.g., introjected, external) would mediate the effects of SOP and SPP. In addition, it was also proposed that autonomous forms of regulation (e.g., intrinsic motivation) would mediate the inverse relationship between SOP and burnout. Two hundred twenty-nine elite junior athletes completed the Child and Adolescence Perfectionism Scale (Flett, Hewitt, Boucher, Davidson, & Munro, 1997), the Sport Motivation Scale (Pelletier, Fortier, Vallerand, Tuson, Brière, & Blas, 1995), and the Athlete Burnout Questionnaire (Raedeke & Smith, 2004). As hypothesized, structural equation modelling revealed that the negative relationship between SOP and burnout was partially mediated by intrinsic motivation and amotivation, while the positive relationship between SPP and burnout was partially mediated by amotivation. In addition, both SOP and SPP were also associated with controlled forms of regulation. The findings suggest that the relationship between SOP and both autonomous and controlled forms of motivation provides one explanation as to why this perfectionism dimension is associated with both psychological well-and ill-being. In contrast, the relationship between SPP and controlled regulation reveals the maladaptive motivational processes that mediate the harmful effects of this perfectionism dimension in sport.
Symposium Title: *Perfectionism and positive and negative outcomes: stress and coping processes as mediators and moderators*

**PERFECTIONISM, EMOTION REGULATION, AND PHYSIOLOGICAL STRESS REACTIVITY**

Clarissa Edge, University of Florida, USA  
Kenneth G. Rice, University of Florida, USA  
Darragh Devine, University of Florida, USA

**Abstract**

We examined the relationship between perfectionism, emotion regulation, and stress reactivity. Past research indicates that perfectionists have problematic emotion regulation and physiological stress reactivity (Aldea & Rice, 2006; Wirtz et al, 2007). We are testing whether adaptive perfectionism buffers, and maladaptive perfectionism exacerbates, stress reactivity. From a random sample of 1000 18-19 year old college students, 257 responded to a survey assessing perfectionism and exclusion criteria relevant to cortisol research. Thirty-six eligible participants were selected to equally represent gender and three groups of perfectionists (adaptive, maladaptive, and non-perfectionists). Students completed self-report questionnaires measuring personality and emotion regulation one week prior to the Trier Social Stress Test (TSST; Kirschbaum, et al., 1993) and immediately after the TSST. Nine salivary cortisol samples were taken during the TSST to measure physiological stress reactivity. At present, 16 participants (8 men, 8 women) have participated in this ongoing study; 20 more participants are scheduled and will be completed by mid-April 2010. Preliminary analyses of available data indicate that maladaptive perfectionists self-report more problematic emotion regulation after stress. After study completion, more rigorous inferential analyses will be undertaken to determine whether these preliminary results are consistent with full-sample questionnaire and physiological data, and specifically to test whether the pattern of physiological stress reactivity differs for the three groups of perfectionists. Arguments for differentiating adaptive from maladaptive perfectionism would be strengthened with supported hypotheses, and could support physiological reactivity as an indicator of perfectionism treatment effects.
Abstract
Over the past two decades, perfectionism has received increasing empirical attention as a cognitive-personality factor that increases vulnerability to depression and anxiety. This three-wave, longitudinal study examined daily stress and avoidant coping as mediators and moderators of the relation between self-criticism (SC) and personal standards (PS) dimensions of perfectionism and depressive and anxious symptoms over three years. Community adults (44 men, 86 women) completed measures of perfectionism and depressive and anxious symptoms at Time 1, then six months later completed questionnaires assessing daily stress and coping at the end of the day for 14 consecutive days, and then completed measures of depressive and anxious symptoms three years later. Hierarchical multiple regression results showed that, in contrast to PS, Time 1 SC predicted increases in depressive and anxious symptoms over 3 years. Path analyses results indicated that Month 6 aggregated daily hassles and avoidant coping mediated the relation between Time 1 SC and increases in depressive symptoms and anxious symptoms, respectively, over 3 years. Hierarchical multiple regression analyses showed that, contrary to PS, Time 1 SC interacted with Month 6 aggregated daily stress to predict greater increases in anxious arousal over 3 years. The findings suggest that possessing high personal standards is not in and of itself maladaptive. Rather, the psychological problems associated with perfectionism appear to be more closely associated with self-criticism. The results suggest that daily stress and avoidant coping might be targeted in intervention efforts designed to alleviate depressive and anxious symptoms in self-critical individuals.
ORAL PRESENTATIONS
PERSONALITY AND COPING STRATEGIES
OF A SAMPLE OF UNIVERSITY STUDENTS

Salwa Abdel Baki, Helwan University, Egypt
Noha Abdel Rahman, Helwan University, Egypt

Abstract
This research is an extension of a previous one titled: "Coping Strategies and Personality Characteristics" presented at the Star Conference, 2008. Findings of that previous study revealed that there were no significant differences between the styles of coping and the characteristics of personality. This result suggests further investigation and analysis. This is done in the present study. Investigation is expanded to deal with youth strategies that they generally use in their life, trying to find a relation between such strategies and personality characteristics. A sample of 500 students from Helwan University was used as a source of data. The average age is 21-22 years. Included in the sample are males and females from all economic and social levels. Eysenck Personality Questionnaire (EPQ) was applied. This includes scales of Psychoticism and Neuroticism, Introversion and Extraversion and their subscales; Activity –Risk-taking-Expressiveness-sociability-Impulsiveness Reflectiveness and Responsibility. Eysenck Personality Scale 2 which consists of Self –Esteem, Happiness, Anxiety, Obsessiveness, Autonomy, Hypochondriasis and Guilt, was also applied. Data was collected by a questionnaire designed by the researchers. It includes the three styles of coping, (solving problems - avoidance - support seeking). For purposes of the analysis non-parametric statistics as well as parametric statistics are used. Findings will be interpreted according to psychological and social theories.
REATIONS TO CAREGIVING FOR FRAIL OLDER PEOPLE
PREDICT ANXIETY AND DEPRESSION

Christina Aggar, The University of Sydney, Australia
Susan Ronaldson, The University of Sydney, Australia
Ian Cameron, The University of Sydney, Australia

Abstract

Objective. Depression is a major health problem for carers of frail older people. Carer depression is also a predictor of the early discontinuation of care for frail older community living people. This paper presents the findings from a longitudinal study that examines the relationship between reactions to caregiving and anxiety and depression during a community intervention. Method. A cohort of carers (n = 115) of community-living people (≥70 years) enrolled in a randomised controlled trial investigating frailty completed postal questionnaires. Reactions to caregiving were evaluated using the Caregiver Reaction Assessment (CRA). Anxiety and depression levels were measured using the Hospital Anxiety and Depression Scale (HADS). Results. At baseline 15% of carers reported borderline depression and 10% abnormal depressive symptoms, anxiety symptoms were slightly greater at 24% and 12% respectively. Multiple regression indicates that the impact of caregiving on daily schedule (β = 1.419, p = 0.001; β = 1.162, p = 0.025) and health (β = 1.509, p = 0.007; β = 1.850, p = 0.006) explains 49% of the variance in depressive symptoms (p < 0.001) and 42% of variance in anxiety of the carers (p < 0.001) respectively. The longitudinal data is also being analysed. Conclusion. The baseline findings of this study suggest that carers experiencing a disruption to their daily schedule and health problems as a result of their caregiving role are highly susceptible to depression and anxiety. Regular carer support services and targeted health care initiatives may alleviate or lessen negative reactions associated with caregiving depression and anxiety.
PERSONALITY TRAITS AS FACTOR OF COPING RESPONSES AMONG SUBSTANCE ADDICTS SUFFERING FROM HIV/AIDS

Uzma Ali, University of Karachi, Pakistan
Azra Shaheen, University of Karachi, Pakistan

Abstract

Objectives. The objective of the present study was to investigate the relationship between personality traits and coping responses among substance addicts (recovered) suffering from HIV/AIDS (human immune deficiency virus). After detailed literature review following hypotheses were formulated (a) There would be positive correlation between Extraversion and Problem-focused coping in individual with HIV/AIDS. (b) There would be positive correlation between Neuroticism and Emotion-focused coping in individual with HIV/AIDS.

Method. This study is based on coo relational research design. The sample of the present research consisted of 60 participants, selected from different organizations and hospitals that deal with HIV/AIDS patients. As in Karachi (Pakistan) most of the identified HIV/AIDS cases were substance addicts, hence the entire sample was of male substance addicts was selected in order to study the phenomenon from their perspective. The age range of the sample was from 18 to 50 years (mean age = 32 years; SD = 8.4). After taking the consent from the participants, the NEO Five Factor Inventory (NEO- FFI; Costa & Mc Crae, 1992, Urdu translation) and the Coping Responses Inventory- Adult Form (CRI-Adult; Moos, 1993, Urdu translation) were administered to measure personality traits and coping responses respectively. Prior to the administration of test permission for urdu translation was taken from the publishers.

Results. To obtain the results Pearson Product Moment co-efficient of correlation was calculated. It was found that there is a significant positive relationship between extraversion and problem-focused coping ($r = .420$, $p < .001$), however there was an insignificant relation ship between neuroticism and emotion-focused coping responses among substance addicts suffering from HIV/AIDS ($r = .065$, $p > .05$).

Conclusion. Research findings from the present study showed that those substance addicts who have extraversion personality traits are more likely to use problem focused coping in order to cope with their disease. Further research should focus on the effectiveness of these strategies among substance addicts suffering from HIV/AIDS thereby to enhance the adherence to the treatment of this serious disease.
AN EXPERIMENTAL STUDY TO PROMOTE PSYCHOLOGICAL RESILIENCE TO STRESS IN FIREFIGHTERS

Rui Pedro Ângelo, Lisbon University, Portugal
Maria José Chambel, Lisbon University, Portugal

Abstract
This research has positive occupational psychology as a paradigm, and the Job Demands-Resources Model (Bakker & Demerouti, 2007) as a reference model. The main goal of the project is to evaluate the impact of an experimental intervention directed to middle firefighter's supervisors. The intervention consisted in a training course about stress management and psychological resilience, and lasted 21 hours, spread over 3 days. Participants are firefighters from a Portuguese elite organization. Participants units were randomly divided in an experimental and control group. Study participants filled out a questionnaire on their work situation and well-being, before the program started (Time 1- training period) and 5 months later (Time 2- summer fire season). Results of Wilcoxon non-parametric test showed that middle supervisors in the experimental group maintained their engagement levels in time 2 unlike the control group. Concerning the indirect impact of the training course in the firefighters led by the participants, the experimental group maintained their support levels in time 2 unlike the control group who decreased the colleagues support. Discussion focused on the importance of understanding the process underpinning change in occupational stress management interventions. The conclusions of the study contribute to the reflection about the development of organizational interventions based on the JD-R Model. Regarding supervisor intervention studies in the future, we recommend that qualitative and quantitative methods be combined in the training evaluation, and that a coaching phase to supervisors be included in order to expand the change in occupational health to persons leaded by them.
MENTAL-HEALTH PROFESSIONALS: 
WHEN DISASTER HITS THEIR OWN COMMUNITY

Nehami Baum, Bar-Ilan University, Israel

Abstract

Objectives. Most of our knowledge about the consequences of professionals’ double exposure – as professionals and as individuals – to disasters in the communities in which they live and work comes from studies following a single terror attack or a one-time natural disaster. Findings indicate that they experience high conflict between their family and professional obligations. These studies focus, however, on one-time catastrophic events. They thus leave open the question of what happens to professionals who must cope with communal disasters in which the threat of injury and death continues over an extended period of time. This study addresses this question by examining the impact on helping professionals of exposure to Qassam missiles from Gaza during Israel's Cast Lead Operation (January 2009). Methods. 15 helping professionals were interviewed. Located through purposive sampling, they included those who lived in communities that were hit by Qassams and thus doubly exposed at work and at home. The interviews were analyzed using thematic content analysis techniques. Results. The doubly exposed used the oxymoronic term "emergency routine" to convey their sense that over the entire period, both at work and at home, their daily lives were filled with unremitting fear, tension, and hyper-vigilance that placed them in a constant "state of alert". They also reported that the demand that they function as professionals whatever their fears and whatever their parental obligations created enormous stress over the entire period. Conclusions. Special efforts must be made to alleviate the intense cross-pressures that doubly exposed professionals experience in ongoing communal disasters.
SELF-CONTROL STRENGTH AS MODERATOR OF THE RELATION BETWEEN ANXIETY AND COGNITIVE PERFORMANCE

Alex Bertrams, University of Mannheim, Germany
Chris Englert, University of Mannheim, Germany
Oliver Dickhäuser, University of Mannheim, Germany

Abstract

The empirical evidence on the relationship between anxiety and cognitive performance is inconsistent: Studies have revealed negative relationships, no relationships, or even positive relationships between anxiety and cognitive performance, indicating that additional variables moderate the anxiety-performance relationship. We examined whether the present level of self-control strength—a determinant of success in volitional efforts such as attention regulation—is such a moderating variable. We assumed that anxious people whose self-control strength is not depleted should be able to deliberately direct their attention away from distracting worries about their performance and toward the cognitive task at hand; therefore, they are not supposed to experience decrements in cognitive performance. However, anxious people with depleted self-control strength are supposed to be impaired in deliberately directing their attention away from distracting worries, resulting in weak cognitive performance. In a laboratory experiment, participants' \((N = 96)\) self-control strength was either depleted or not. Afterwards, participants' momentary anxiety level was assessed using the State-Trait Anxiety Inventory. Finally, we measured cognitive performance by the number of math problems solved mentally (e.g., \(773 \times 2\)). In a second experiment \((N = 131)\), we measured cognitive performance by the number of senseless syllables (e.g., VAW) participants were able to recall after a short learning phase. Multiple regression analyses revealed the expected interaction in both experiments: Only for depleted participants, anxiety was negatively related to cognitive performance. The results suggest that strategies to overcome self-control depletion which have been identified by research may help to avoid anxiety-related performance decrements.
“A BAND OF BROTHERS… A FRATERNITY OF FATHERS”:
AN EXAMINATION OF FATHERS’ EXPERIENCES OF ACCESSING SOCIAL SUPPORT ONLINE

Ellen Brady, University College Dublin, Ireland
Suzanne Guerin, University College Dublin, Ireland

Abstract
Support groups in online communities provide an anonymous place to exchange information and advice. Previous research has suggested that, for groups such as new mothers, they offer a safe, non-judgmental forum in which to share experiences and interact anonymously, and may offer a viable solution to the decreasing social networks created by modern society. Little research has been conducted into the specific use of online support by fathers, despite indications that the birth of a child is a life changing experience for both parents. Semi-structured interviews with male users of parenting websites and professionals involved in parenting research and dialogue were conducted in order to examine the social support networks of fathers, and to investigate how parenting forums fit into and enhance existing social networks. The interviews with professionals revealed that there is a need for services aimed at fathers, both to address the specific needs of fathers, and to increase the sense of importance around fatherhood. The themes uncovered during the interviews with fathers will be discussed, along with the implications of online support for fathers, and barriers to accessing this support. Webbased support could provide a convenient support network for working fathers, while an online community could offer a sense of empowerment and identity.
WORKING MEMORY CAPACITY AND DIMENSIONS OF ANXIETY AND DEPRESSION

Keith Bredemeier, University of Illinois at Urbana-Champaign, USA
Howard Berenbaum, University of Illinois at Urbana-Champaign, USA

Abstract
Both anxiety and depression have been found to be associated with working memory deficits (e.g., Darke, 1988; Derakshan & Eysenck, 1998; Harvey et al., 2004; Rose & Ebmeier, 2006). Nevertheless, the precise nature of these deficits remains unclear (e.g., Fossati et al., 1999; Ikeda et al., 1996; Lavric et al., 2003; Weiland-Fiedler et al., 2004), and some researchers have obtained null findings (e.g., Santos & Eysenck, 2005; Purcell et al., 1997). More importantly, most of this research has utilized self-report measures which largely tap general distress (Watson & Clark, 1984), as opposed to unique aspects of anxiety or depression. In an ongoing study in which individuals with elevated levels of anxiety and depression are being intentionally oversampled (current n = 165), we are examining the relations between general working memory capacity and four dimensions of anxiety and depression: neuroticism, anhedonic depression, anxious arousal, and anxious apprehension. Working memory capacity is being measured using an automated version of the operation span (OSPAN) task, which is one of the most well validated measures of this construct (Conway et al., 2005; Unsworth et al., 2005). Analyses of those participants tested to date revealed that OSPAN scores are significantly negatively associated with anxious apprehension. This suggests that reduced working memory capacity is associated with increased worry about future negative outcomes.
YOU’VE GOT MAIL: EXAMINING THE IMPACT OF EMAIL COMMUNICATION ON STRESS APPRAISALS AND WORK-RELATED OUTCOMES

Rowena Brown, The University of Queensland, Australia
Julie Duck, The University of Queensland, Australia
Nerina Jimmieson, The University of Queensland, Australia

Abstract
Email is a ubiquitous workplace tool, however there is limited research investigating how the medium may act as a potential workplace stressor. Drawing on the Cognitive Phenomenological Model of Stress (Lazarus & Folkman, 1984), the purpose of this paper is to examine, experimentally, the effects of three potential email stressors – email quantity (amount received over time and initial inbox size), email climate (normative pressure to respond promptly), and email quality (message emotionality) – on stress appraisals and work-related outcomes. Participants received focal and nonfocal email while completing a scheduling task and a series of between-groups ANOVA’s were conducted. In studies 1 and 2 (N = 148), email quantity (amount received and inbox size) and normative pressure were manipulated. Email quantity contributed to overload appraisals and negatively impacted work outcomes including task satisfaction, performance, and burnout. Further, appraisals of overload explained the positive association between quantity and burnout. Contrary to predictions, normative pressure affected burnout independent of appraised stress. In study 3 (N = 97), both quantity (amount received) and quality (message emotionality) features were manipulated. Email quantity affected burnout via appraised overload. In addition, receipt of emotionally-driven emails contributed to frustration appraisals which, in turn, explained anticipated workplace friction. Taken together, results revealed that email can act as a technological stressor, with email quantity and quality impacting on work outcomes through two empirically distinct stress appraisals – email overload and frustration. This email/work paradigm offers a novel and theoretically-based approach to understanding the impact of specific email features on stress and work outcomes.
RELATIONSHIP BETWEEN PARENTING STRESS AND PARENTING STYLES:
SIMILARITIES AND DIFFERENCES BETWEEN PERCEPTIONS
OF PRESCHOOLERS’ MOTHERS AND FATHERS

Elsa Carapito, Lisbon University, Portugal
Maria Teresa Ribeiro, Lisbon University, Portugal

Abstract
Objectives. The purposes of this research were to analyze the parenting stress and parenting styles perceived by mothers and fathers of preschoolers and also to examine the effects of parenting stress on the three Baumrind’s parenting styles: authoritative, authoritarian and permissive. Methods. 559 mothers and 509 fathers completed Parenting Stress Index-Short Form (PSI-SF) and Parenting Styles and Dimensions Questionnaire-Short Version (PSDQ). Their children’s age ranged from 3 to 6 years. Portuguese families were randomly selected through child’s private and public preschools. Results. Most of the findings from this study were statistically significant and informative. In relation to parenting stress, independent-samples t-test revealed that fathers reported significantly higher levels than mothers (p < .05). Concerning self-report of parenting styles, mothers perceived themselves to be more authoritative than fathers (p < .001). No significant differences were found between mothers’ and fathers’ self-reports of their authoritarian and permissive styles. Hierarchical regressions revealed that perceived parenting stress is a significant predictor of all parenting styles (p < .001), even after controlling for demographic variables as child age, child gender and parents gender. Conclusions. The findings support the literature indicating that parenting stress affects the ways in which parents actually parent their children. It seems that parenting stress leads to an increased risk for parenting across preschool years. This study also contributes to the debate on the role of fathers in childcare, which still appears neglected in several researches.
AN INTEGRATIVE MODEL FOR ACADEMIC ANXIETY

Jerrell Cassady, Ball State University, USA

Abstract
Academic Anxiety is not a common term in the literature, but one that I believe will begin to gain acceptance as a unifying formulation for the collection of anxieties learners experience while in schools. In essence, learners’ appraisals of specific contextual cues within the academic setting that lead to the development of an academic anxiety interfere with their ability to meet maximal success in that specific area of achievement (as well as residual effects that influence related domains). While there is parsimony to this view, it is imperative to recognize the distinct individual and contextual differences demonstrated in each case of academic anxiety. That is, while the primary intervening experience of math and reading anxiety may very well function similarly to test anxiety, the underlying operations of interference, distraction, or motivational drive will vary significantly across individuals and settings. This presentation will draw from work created and published in the recent book “Anxiety in Schools” and draw together perspectives from the field addressing the impact of anxiety on learners. Specifically, the topics of interest will include reading anxiety, math anxiety, cognitive test anxiety, and conditions that lend themselves toward coping with these academic stressors. In addition to highlighting current views on academic anxieties, the presentation is intended to engage the research community in the ongoing development of an integrated model for academic anxiety.
COPING WITH COGNITIVE TEST ANXIETY: EFFICACY DIFFERENCES FOR DIVERSE LEARNERS

Jerrell Cassady, Ball State University, USA
Kathryn Fletcher, Ball State University, USA
Athena Dacanay, Ball State University, USA

Abstract

Cognitive test anxiety has been demonstrated to hold predictive power over student performance in a variety of academic domains. However, like other views of evaluation anxiety, test anxiety, or academic anxiety, there is a growing recognition that there is not a single “profile” for cognitive test anxious learners. Our data have been demonstrating that there are a few different “types” of cognitive test anxious learners in that the manifestation of their cognitive test anxiety varies predictably. Using measures of cognitive test anxiety, perceived test threat, emotional intelligence, perfectionism, study skills and habits, and coping strategies, we have been examining the differential tendencies toward coping processes for learners with differential test anxious tendencies. Data collected from over 500 undergraduate learners on these self-report measures will be presented to identify the preferred coping strategies for learners with different “types” of test anxiety. This advancement in the manner of thinking about test anxiety from a multidimensional framework is intended to promote greater precision in providing intervention for learners with anxiety – targeting their specific test anxious tendencies directly – overcoming the tendency to have limited impact for a broad group of learners with various different forms of test anxiety. In addition to presenting a series of regression models and profile analyses, the presentation will focus on the practice of identifying specific academic anxiety “triggers” and using the “academic anxiety profile” to remediate these troublesome factors for learners from diverse learning backgrounds.
SCHEMA ACTIVATION OF SOCIAL SUPPORT: EFFECTS ON CARDIOVASCULAR RESPONSE TO STRESS FOR PROVIDERS AND RECIPIENTS

Ann-Marie Creaven, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract

Much research documents the links between social support and cardiovascular health, in terms of reactivity to and recovery from stress. Schema activation of social support is one such conceptualization of social support that affects cardiovascular reactivity to a laboratory stressor (e.g., Ratnasingam & Bishop, 2007). The current data examine the effects of directional social support schemas, i.e., giving or receiving support schemas, on responses to an asocial stressor, a mental arithmetic task. The results indicate different patterns of response between groups recalling incidences of either providing or receiving support from a friend or partner, in a sample of young healthy female adults (n = 67). Specifically, significant differences in trend in SBP were found across time during schema activation (p = .038). Support recipients exhibited lower SBP response to task commencement in comparison to providers or controls. Providers exhibited higher SBP responses to the task, and sustained high SBP during the task. However, DBP responses did not exhibit different trends across schema activation. The results are explored in the context of the benefits of support receipt and provision in attenuating cardiovascular responses to stress.
CHILD MALTREATMENT AS A PREDICTOR OF PHYSIOLOGICAL CONGRUENCE
IN MOTHER-CHILD INTERACTIONS

Ann-Marie Creaven, National University of Ireland, Galway, Ireland
Elizabeth A. Skowron, Penn State University, USA
Siobhán Howard, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract

Introduction. While much previous research has suggested adverse cardiovascular functioning in chronic stress groups and in persons with maladaptive social relationships, very little has examined cardiovascular function in dyads. Considerable research has suggested that healthful social relationships are typified by interactive synchrony. Such effects are believed to be especially important to healthful intra-family dynamics. The present study sought to test this supposition in at-risk mother-child dyads. Methods: 54 mother-child dyads participated in the study, 25 of whom were identified by child protection services as having maltreated a child. All dyads viewed child-friendly video in a quiet room for 5 minutes. Both mother’s and child’s heart rate (HR) were monitored throughout. Results. Congruence of HR between mothers and children was compared using mixed factorial analysis of variance. The analyses revealed a significant group by time interaction, suggestive of a difference in HR fluctuations across groups ($p = .024$). Among controls, mothers and children exhibited non-congruence of HR: increases in mothers’ HR were accompanied by decreases in children’s HR, and vice versa. However, the opposite pattern was observed in the maltreatment group, where mothers’ HR effectively mirrored that of their children. Further preliminary analyses of cardiovascular data in an extended sample shed some light on the directionality of this congruence. Conclusions. The findings suggest that maltreating mothers demonstrate adverse cardiovascular stress responding, elevating their risk of long-term ill-health. Furthermore, at-risk mothers appear to be more susceptible to child influences during mother-child interactions, demonstrating less independence in their own physiological regulation. During interactions with their children, high-risk mothers are less likely to maintain physiological homeostasis.
THE FEAR FACTOR: COGNITIVE AND PHYSIOLOGICAL COMPONENTS OF TEST ANXIETY AND PERFORMANCE IN A-LEVEL MOCK EXAMS

Anthony Daly, Assessment and Qualifications Alliance, UK
Suzanne Chamberlain, Assessment and Qualifications Alliance, UK
Victoria Spalding, Assessment and Qualifications Alliance, UK

Abstract

Objectives. Test anxiety can be potentially serious when it leads to high levels of distress and poor academic performance in students. While it is generally agreed that a small degree of anxiety can act as a motivator, debilitating test anxiety can disrupt mental processes, especially when the task is demanding, as is the case in formal academic assessment. This paper describes a pilot study that was conducted to explore the relationship between test anxiety and performance in a sample of UK students undertaking a mock A-level French Speaking test. Method. A sample of 39 17-year-old students was recruited. Test anxiety was measured with a self-report scale, in conjunction with a physiological measure of state anxiety based on average heart rate (beats per minute). Heart rate was measured at baseline and during a mock A-level French Speaking test. Thirty-five participants were split into two groups: 20 were examined by their French teacher and 15 by an external examiner unknown to the students. Results. The study found no significant differences in test anxiety levels or performance between the teacher examiner and external examiner groups. Heart rate during the mock exam was positively correlated with exam score, but there was no significant relationship between test anxiety and performance. Conclusions. Although this pilot study found no direct link between test anxiety and performance, test anxiety is a source of construct irrelevant variance that threatens assessment validity. A deeper exploration of test anxiety in a high-stakes applied setting is a worthy, although methodologically problematic, endeavour.
EMOTIONS AND EMOTION REGULATION: A CASE STUDY WITH A SAME SEX COUPLE UNDERGOING ASSISTED REPRODUCTION TREATMENT

Tracey Devonport, University of Wolverhampton, UK
Andrew Lane, University of Wolverhampton, UK

Abstract

Objectives. It is well documented that IVF is associated with intense emotions that can be transmitted between partners (Knoll et al., 2009). Given the potential role in stress management, we explored the emotions and emotion regulation strategies of a same-sex couple undergoing IVF. Methods. Quantitative and qualitative data were gathered from partner 1 (aged 32 years) and partner 2 (undergoing treatment, aged 38) for 3-months using the Emotion Regulation of Others and Self scale (Niven et al., 2010) and open-ended questions. Results. Qualitative and quantitative results report similar conclusions. Intense unpleasant emotions increased during important stages in IVF treatment in both partners. Comparing self versus other’s rating of daily emotions, partner 1 over-estimated, whereas partner 2 under-estimated how well their partner felt. Partner 1 engaged more strategies intended to enhance own and partner’s emotions, activated by her own emotions. She observed, “I need to find a way of disassociating myself from the stress so it doesn’t transfer to me” suggesting that managing own negative emotions was a primary goal when seeking to manage emotions of others. By contrast, the use of emotion regulation strategies by partner 2 was triggered by her own and her partner’s emotions. Conclusions. We found estimation errors and individual differences in identifying others’ emotions and use of emotion regulation strategies. Future research should explore emotion regulation strategies intended for others and self, and their emotional impact on both partners.
Does self-hypnosis increase the effectiveness of a standard, cognitive-behavioral intervention against test anxiety?

Ingrid Dundas, University of Bergen, Norway
Knut A. Hagtvet, University of Oslo, Norway
Bjørn Wormnes, University of Bergen, Norway
Helge Hauge, University of Bergen, Norway

Abstract

Objectives. To test whether self-hypnosis increases the effects of a standard cognitive behavioural intervention against test anxiety. Methods. Students seeking help against test anxiety (N = 74) were randomised to a standard intervention with a self-hypnosis component and without a self-hypnosis component, respectively, and compared to students who had not sought help (N = 89). Measures of test anxiety, state and trait anxiety, general and academic self esteem and general self-efficacy were administered at three months (recruitment) and three days before exams. Change across time as a function of treatment were analyzed by a forced stepwise regression analysis taking into count baseline level and gender beyond treatment conditions and interaction parameters. Results. Major findings indicated that standard treatment outperformed the self hypnosis treatment consistently across five out of seven anxiety measures in addition to the general self-esteem. Treatment of any kind did not influence change in academic self esteem. Higher baseline levels of anxiety measures and lower levels of the self-oriented measures increased chances of benefiting from the intervention regardless of type of intervention. Conclusions. Regardless of intervention, students with more problems at baseline benefited the most. Contrary to expectations, adding a self-hypnosis component did not increase the benefit of the standard intervention.
EXISTENTIAL CONCERNS IN CVD POINT-OF-CARE TESTING AMONG OLDER AND MIDDLE-AGED ADULTS

Simon Dunne, Dublin City University, Ireland
P. Gallagher, Dublin City University, Ireland
A. Matthews, Dublin City University, Ireland

Abstract

Aims. This study seeks to investigate if unconscious existential anxiety acts as a barrier to the uptake of a novel diagnostic device to indicate an individual’s risk of developing Cardiovascular Disease (called the “CVD Risk Biochip”). Method. Two phases of the study use an experimental questionnaire methodology derived from Terror Management Theory (TMT) literature. 78 males and females over 55 years of age participated in the first phase. Recruitment for the second phase is ongoing for the same sample size aged 40-55. Both phases involve completing a questionnaire where participants initially write down their gut-level reactions towards encounters with death, a heart attack or dental pain. This is followed by a distracter task, information regarding the device, a measure of attitudes towards the device and two measures of intentions to use the device. Results. Results of the first phase indicated that over 55s primed with unconscious existential anxiety (either mortality or heart attack salience) did not elicit more avoidant responses towards the device than controls ($p > .05$ in both cases). In contradistinction, it is predicted that participants in the second phase aged 40-55 that are primed with unconscious existential anxiety will exhibit more avoidant responses towards the device than controls. Conclusions. Unconscious existential anxiety may not constitute a barrier to disease detection behaviours for individuals over 55 years of age due to a moderating effect of existential anxiety with advancing age. However, they may act as a barrier to a group aged 40-55 years of age.
THE COMBINED EFFECT OF ANXIETY AND SELF-CONTROL CAPACITY ON COPING STYLE

Chris Englert, University of Mannheim, Germany
Alex Bertrams, University of Mannheim, Germany
Oliver Dickhäuser, University of Mannheim, Germany

Abstract

In the present study, the authors investigated a new approach to explain dispositional differences in coping styles. Many studies have shown that in stressful situations anxiety is associated with less use of positive coping strategies (e.g., distraction) and stronger use of maladaptive coping strategies (e.g. resignation). Since self-control is often crucial for adapting one's behavior in a positive way, we assume that dispositional differences in the capacity to exert self-control play an important part in the relation between anxiety and coping styles. We predicted that for participants with higher anxiety levels, higher levels of self-control capacity are associated with an increased use of positive coping strategies and a decreased use of negative coping strategies; meaning self-control serves as a buffer against the adverse coping style associated with higher anxiety. To test this assumption, we assessed participants' (N = 98) dispositional anxiety level using the State-Trait Anxiety Inventory, as well as their dispositional self-control capacity using the Self-Control Scale. Dispositional coping strategies were assessed using the short version of the German Coping Questionnaire SVF-78 (German: Stressverarbeitungsfragebogen). Multiple regression analyses revealed mixed results: As expected, for participants with higher levels of anxiety, higher self-control capacity was associated with an increased use of positive coping strategies. However, for participants with higher levels of anxiety higher self-control capacity was not associated with a reduced use of negative coping strategies. The results suggest that it may be useful to take a closer look on the role of self-control in the anxiety-coping relationship.
COPING MODES OF ZEFAT CITIZENS DURING THE SECOND LEBANON WAR

Yovav Eshet, Western Galilee College, Israel

Abstract
During the Second Lebanon War the populations in the Northern Israel suffered from the falling rockets sent from Lebanese territory. This research’s first objective is to examine what stress coping modes were used by the Zefat citizens, who stayed in the bombarded city at the time of the war. Its second interest is to investigate the level of familiarity and practice of the participants in the learned techniques of coping with stress. The coping strategies were taken from the Lahad’s model of BASIC-Ph (Lahad & Cohen, 1997), which consist of six basic coping modes, and in addition to Lahad’s model, a seven’s mode was used – positive reinterpretation, taken from the questionnaire by Carver et al. (1989). The participants were 450 Zefat citizens, above age of 18 that stayed at their homes during the war. The results show that the dominant coping mode was belief and the configuration of coping was belief, cognition and positive reinterpretation. Approximately half of the participants, who continued working, used the affect mode less than those that weren’t working. Those whose houses were damaged by the rocket, used the cognitive coping mode more, and those that didn’t experience the damage practiced more the mode of belief.
BODY IMAGE IN DIABETES MELLITUS:
PERSONAL INVESTMENT & SELF-IDEAL DISCREPANCY
AS MEDIATORS OF PSYCHOLOGICAL DISTRESS & QOL

Sarah Eskandari, University of Sydney, Australia
Louise Sharpe, University of Sydney, Australia
Alex Biasczcynski, University of Sydney, Australia

Abstract

Objectives. Research indicates that negative body image (BI) is associated with psychological distress for individuals with Diabetes Mellitus (DM). Using a theoretical model of BI the present study aimed to examine the predictive nature of these relationships. It was hypothesized that individuals with negative BI would report more psychological distress (depression, anxiety and lowered quality of life (QOL)), and that these relationships would be mediated by the individual’s personal investment (PI) and self-ideal discrepancy (S/I-D).

Methods. Seventy-seven individuals with DM from a local community organisation completed measures of BI (BIDQ), PI (ASI-R), S/I-D (BIQ), depression and anxiety (HADS), and QOL (WHOQOL- BREF). Results. Hierarchical regression analyses were conducted to examine the role of PI and S/I-D in mediating the relationship between BI and psychological distress. In accordance with previous research, the proportion of individuals reporting clinical levels of depression, anxiety, and poor QOL ranged between 10-20 %. Results indicated that negative BI, maladaptive PI and larger S/I-D were significantly associated with depression, anxiety and lower QOL. As hypothesized, PI mediated the relationships between BI and depression, and BI and QOL.

Conclusions. These results draw attention to the significant roles that body image and personal investment hold in predicting the psychological well-being of individuals with diabetes mellitus. Moreover, these findings highlight important targets for future psychological interventions for these individuals. Prospectively designed research investigating the predictive role of body image for treatment adherence in diabetes mellitus is currently underway.
THE DIFFERENTIAL IMPACT OF PREFERRED COGNITIVE COPING STYLE
ON THE EFFECTIVENESS OF INTERVENTIONS TO REDUCE
PAIN AND ANXIETY IN CHRONIC PAIN PATIENTS

Lisa Fox, National University of Ireland, Galway, Ireland
Jane Walsh, National University of Ireland, Galway, Ireland
David O’Gorman, National University of Ireland, Galway and University College Hospital, Galway, Ireland
Nancy Ruane, National University of Ireland, Galway and University College Hospital, Galway, Ireland
John J. Carey, National University of Ireland, Galway and University College Hospital, Galway, Ireland
Robert Coughlan, National University of Ireland, Galway and University College Hospital, Galway, Ireland
Brian E. McGuire, National University of Ireland, Galway, Ireland

Abstract
Objectives. To examine whether matching an individual’s preferred coping style (monitor or blunter) with the appropriate cognitive coping strategy (sensation-focused or distraction) would be effective in reducing pain intensity and situational anxiety in a chronic pain sample. Methods. Chronic pain patients \( (N = 43) \) were classified as monitors \( (n = 21) \) or blunters \( (n = 22) \) and asked to complete questionnaires assessing pain intensity, self-efficacy, pain-related anxiety, and trait anxiety. Patients participated in two interventions (sensation-focused and distraction) consecutively, with the order of presentation counterbalanced. Pain and anxiety were measured at five time points (baseline, during sensation-focused task, after sensation-focused task, during distraction task, immediately after distraction task). Results. A significant interaction was observed between coping style across the time points on anxiety \( (F(4,164) = 3.82, \ p = 0.005, \eta^2 = .085) \). Post-hoc analyses showed that monitors’ level of anxiety was significantly less than that of blunters both during \( (t = 2.74, df = 41, p = 0.009) \) and after \( (t = 3.39, df = 41, p = 0.002) \) the sensation-focused task. A significant interaction between coping style and time on pain was also observed \( (F(4,164) = 2.52, \ p = 0.04, \eta^2 = .058) \). Monitors experienced significantly less pain than blunters during the sensation-focused task \( (t = 2.42, df = 41, p = 0.02) \) and immediately after the sensation-focused task \( (t = 2.02, df = 41, p = 0.05) \). Conclusions. Tailoring pain management coping strategies to match an individual’s preferred coping style may enhance the benefit of psychological approaches to managing pain and associated anxiety in chronic pain patients.
IS THERE AN INTERPRETATION BIAS IN ANXIETY AND AN OPPOSITIONAL INTERPRETATION BIAS IN REPRESSORS?

Claudia Gebhardt, Friedrich Schiller University of Jena, Germany  
Kristin Mitte, Friedrich Schiller University of Jena, Germany

Abstract

Anxious persons have been shown to interpret ambiguous stimuli in a threatening way and less positive than non-anxious persons. The present two studies aim to extend these findings by including defensiveness as an additional aspect. Thus, neither high anxious nor low anxious persons are a homogeneous group but they can be divided into four categories: low anxious persons, repressors, sensitizers, and defensive high-anxious persons. In both studies we expected repressors in particular to interpret ambiguous stimuli as non-threatening or even as positive. In study one \( (N = 100) \) participants were presented with a number of pictorial stimuli (persons who differed in their emotional facial expressions from critical to happy) and were required to rate these stimuli. An additional goal of the study was to investigate whether defensive persons respond in a socially desirable way. Therefore we instructed the participants in a special way to activate socially desirable behaviour. In study two \( (N = 72) \) participants were presented with a number of facial stimuli (which also differed from angry to happy). Additionally we instructed some participants in a special way to trigger defensive behavior. Besides the rating task participants in this study were also asked to judge how the person on the picture would rate them. So we investigated an additional aspect which is of particular relevance for repressive behavior. Findings will be discussed concerning research on the interpretation bias in anxiety and repression and possible implications for cognitive models.
PSYCHOLOGICAL DETERMINANTS OF BREAST CANCER WORRY IN HEALTHY WOMEN

Andrea Gibbons, National University of Ireland, Galway, Ireland
AnnMarie Groarke, National University of Ireland, Galway, Ireland
Ruth Curtis, National University of Ireland, Galway, Ireland
Anne Marie Keane, National University of Ireland, Galway, Ireland

Abstract

Much research has been conducted with risk perceptions and their ability to predict breast cancer worry; however very little research has examined the influence of other psychological variables. The present study examined the combined influence of risk perceptions, optimism and illness perceptions in breast cancer worry in healthy women. Women from the general population (N = 378) completed measures of illness perceptions (Revised Illness Perceptions Questionnaire; IPQ-R), dispositional optimism (Life Orientation Test; LOT), anxiety, depression (Hospital Anxiety and Depression Scale; HADS; State-Trait Anxiety Inventory; STAI), risk perceptions, breast cancer worry and family history of breast cancer. Hierarchical regression analyses were conducted to determine the role of risk perceptions, illness perceptions and optimism in predicting breast cancer worry. Controlling for age and family history of breast cancer, risk perceptions and illness perceptions predicted 37% of the variance in breast cancer worry. Holding high perceptions of risk (β = 0.16, p < .001), a strong sense of illness coherence (β = 0.15, p < .01), negative emotional representations (β = 0.42, p < .001) and a low level of personal control (β = -0.11, p < .05) predicted greater cancer worry. Contrary to previous research, optimism failed to account for any variance in breast cancer worry. Although optimism can predict general distress, risk perceptions and illness perceptions were the best predictors of breast cancer worry. Results highlight the importance of including both perceptions of risk and illness in order to gain a full understanding of the determinants of breast cancer worry.
PSYCHOLOGICAL AND PHYSICAL HEALTH AFTER CORONARY ARTERY BYPASS GRAFT SURGERY: COMMON FACTORS AND THE ROLE OF POSITIVE CHANGES

Hatice Gunes, Sabancı University, Turkey
Nesrin H. Sahin, Başkent University, Turkey

Abstract
Recently the concept of positive psychological consequences arising as a result of coping with traumatic experiences such as life-threatening illness, has gained more attention in the stress and health literature. This study examined two main objectives: the role of psychosocial factors which might play an important role in explaining psychological as well as physical health, and the effect of experiencing positive psychological changes on health (psychologically, physically). The study sample consisted of adults who have undergone coronary artery graft surgery approximately 1.5 year ago. Adults were interviewed personally after getting consent in the cardiac clinic by means of a questionnaire investigating demographic characteristics, previous traumatic experience, cognitive appraisal about surgery, coping strategies, positive psychological changes, psychological and physical adjustment after the procedure. According to regression analyses, having a previous traumatic experience, making stressful appraisals about surgery and using ineffective ways of coping, emerged as important risk factors for both psychological and physical health. On the other hand, using effective ways of coping such as engaging in problem solving efforts and experiencing changes in life philosophy in a positive manner, played protective roles with regard to health (psychologically and physically). The protective role of experiencing positive psychological changes was also confirmed by variance analysis. Participants who reported such changes were found to be significantly healthier (both psychologically and physically) than adults who did not report positive changes. The findings of the current study revealed that some common factors are at issue in explaining psychological and physical health and people who suffer from health problems may also benefit from their struggle with difficulties.
DISPOSITIONAL OPTIMISM AND SENSE OF COHERENCE AS PREDICTORS OF CANCER COUPLES’ DISTRESS

M. Gustavsson-Lilius, University of Helsinki, Finland

Juhani Julkunen, University of Helsinki & Rehabilitation Foundation, Finland

P. Keskivaara, University of Helsinki, Finland

J. Lipsanen, University of Helsinki, Finland

P. Hietanen, Finnish Medical Journal, Finland

Abstract

Objectives. The aim of this study was to clarify the associations between sense of coherence (SOC), dispositional optimism, and distress (i.e. anxiety and depression) in cancer patients and their partners.

Methods. The associations between SOC, dispositional optimism (LOT-R), depression (BDI-14) and anxiety (EMAS-State) were studied in 147 cancer couples. The data were collected with self-report questionnaires at the time of diagnosis (2 months) and six months later. Path analysis was used to analyse the predictors of couples’ long-term distress, and crossover effects between optimism and distress in the longitudinal data.

Results. Patients and partners having optimistic explanations of the future and strong SOC reported fewer symptoms of depression and anxiety than patients and partners with less optimism and weaker SOC. Optimism explained partially the effect of SOC on distress and SOC seemed to be a stronger factor in predicting distress. Patient and partner distress symptoms at baseline and at 8-month follow-up correlated positively. In addition, a trend of crossover was found. High partner optimism at baseline seemed to predict low patient anxiety at follow-up.

Conclusions. The beneficial effects of SOC seem to include also other elements beyond optimism. In clinical practice, enhancing optimistic expectations of the future and promoting SOC could be expected to reduce distress in cancer patients and their partners.
CHECKING REDUCES PERFORMANCE IN A SIMPLE WORKING MEMORY TASK

Ben Harkin, University of Glasgow, UK
Klaus Kessler, University of Glasgow, UK

Abstract

Objectives. Checking is reported by up to 81% of patients with OCD (Antony et al., 1998). This paper presents data (Harkin & Kessler, 2009; 2010) supporting the hypothesis (Shimamura, 2000) that compulsive checking negatively influences the content of working memory. Method. We employed a delayed-match-to-sample task. Four letters (e.g., D, T, J, B) had to be remembered in their correct locations. Critically, we introduced an intermediate probe designed to induce frustrating and unnecessary checking where no correct answer was possible, that is, a misleading trial. In three experiments this intermediate probe questioned three different features of the encoding-set letters: (1) identity, (2) color, and (3) location. Experiment four recorded eye movements to determine if checkers do indeed check more in the presence of a misleading distractor. Results. Conforming to our expectations, high-checkers’ performance was: (Exp 1) poorer for misleading (p < 0.034) but not for resolvable and baseline trials (p = 0.175, p = 0.745, respectively), (Exp 2) poorer for misleading compared to resolvable trials (p < 0.012) specific to match but not mismatch trials and (Exp 3) poorer overall (main effect of group: p < 0.02) compared to low-checkers. Eye-tracking (Exp 4) revealed that specific to misleading trials high-checkers made significantly more (p < 0.02) and longer fixations (p < 0.004). Conclusions: We explain the results in the context of detrimental checking and poor executive suppression as a way of weakening fragile bindings within the episodic buffer of Baddeley’s (2000) model. Clinical implications, limitations and future research are considered.
LEVEL OF STRESS AND DEPRESSION AMONG MOTHERS OF CHILDREN SUFFERING FROM CANCER

Shazia Hasan, COMSATS Institute of Information Technology, Lahore, Pakistan
Waseem Fatima, University of Karachi, Pakistan

Abstract

Objectives: The aim of the present research was to investigate the psychological effects of cancer in mothers of children suffering from this disease. After reviewing the literature the following hypotheses were formulated. (a) Stress level will be high in the mother of children with cancer as compared to the mother of children with out cancer; (b) Depression would be high in the mothers of children with cancer as compared to mothers of children with out cancer. Method: A sample of 45 children and their mothers was selected through purposive sampling techniques from different hospitals and areas of Karachi-Pakistan during the year 2008. The entire sample (both of mother and children) divided into two groups considering the independent group design, in which 20 children were suffering from cancer and 25 children were with out cancer (or control group) (of both gender). Their age ranged between 6 to 12 years. For children with cancer duration of physical illness was at least 1 to 2 years. While the educational level of mothers was at least metric and their socioeconomic level was middle class. After taking the informed consent the demographic sheet and The Parental Stress Index Scale (Abidin, 1995) were administered to assess the psychological effects on mothers. Results: In order to interpret the results in statistical terminology, t- test and descriptive statistics was computed. Results indicate that there was a significant difference between level of stress and depression among mothers of children with and without cancer ($t = 4.66$, $df = 43$, $p < .000$; $t = 2.369$, $df = 43$, $p < .02$, respectively). Conclusion. The findings from present research suggest that mothers of children suffering from cancer are more likely to have high level of stress and depression as compared to mother of normal children.
INDIVIDUAL DIFFERENCES IN THE IMPACT OF ATTENTIONAL BIAS INTERVENTIONS ON PSYCHOPHYSIOLOGICAL TOLERANCE OF ACUTE STRESS

Niamh M. Higgins, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract
Cognitive theories of anxiety suggest that the tendency to bias one’s attention towards negative stimuli in the environment is a causal factor in the experience of anxiety. Experimental studies show that training people to attend to negative stimuli makes them more likely to experience increased anxiety in response to subsequent stressors. This study sought to examine whether individual differences influence the impact of experimental protocols that train a negative attentional bias. Using the dot probe task, 34 participants underwent negative attentional bias training and 34 participants underwent neutral training. All participants then completed a stressful speech task during which cardiovascular reactivity was measured. The results indicate that participants exhibited acclimatisation to the procedures in terms of a dip in blood pressure following training, and a normal stress response in terms of elevated blood pressure during stress ($p = .049$). There were no overall differences between the neutral and negative groups in these patterns. However, consideration of participants’ scores for neuroticism/emotional-stability revealed important differences in how the attentional bias intervention impacted on blood pressure profiles. For more neurotic participants, there was no difference between the negative and neutral interventions in terms of their impact on blood pressure profiles. However, for more emotionally stable participants, the negative intervention was associated with elevated post-intervention blood pressure and higher blood pressure reactivity to stress. These findings provide experimental evidence of the causal impact of negative attentional bias on stress reactivity, as manifested physiologically.
RISK, STRESS AND RESILIENCE TO INEVITABLE RISK

Tim Hobbs, Dartington, UK
Sarah Blower, Dartington, UK

Abstract

Objectives. To establish the role that children’s psychological and physiological stress processes play over and above a range of risk and protective factors in explaining variation in school engagement outcomes during a period of inevitable risk. Methods. 70 children aged 11 years were followed over a period of 18 months in order to assess how outcomes vary during national academic examinations in England. Psychological appraisals of risk, coping strategies and cortisol functioning were assessed over this period in order to assess the relative contribution to variation in outcome. Results. Approximately 50% of children disengaged somewhat from school over the period of academic examination. Mean levels of disengagement were small but significant. However, 10% of children stayed equally engaged whilst 40% engaged further. Physiological stress processes were not implicated in this change. Risk and protective factors account for a conservative 12% of variation in outcome whilst psychological appraisal and coping accounted for additional 19% of the variation over and above this. Conclusions. Inevitable risks may be harmful for some yet present an opportunity for positive growth for others. This study suggests that children who psychologically appraise risk as a positive challenge, who have the perceived resources to cope, and that utilize assistance-seeking coping behaviours are more likely to benefit from risk. The implication is that, rather than seeking to reduce risk, services may better prepare children with the skills and resources required to actively engage with and utilise some risks to their advantage.
AN EXAMINATION OF GENDER DIFFERENCES IN FACTORS THAT IMPACT UPON
WORK HOURS, WORK-LIFE CONFLICT AND WELL BEING IN IRISH ACADEMICS

Victoria Hogan, National University of Ireland, Galway, Ireland

Abstract

The current study used multi-group structural equation modelling (SEM) to examine the relationship between job involvement, workaholism, having children, work intensity, organizational expectations, and organizational support on work hours, work-life conflict and general well-being in male and female academics working in the Irish University sector. Results indicated some commonalities and differences in the factors that influence work hours, work-life conflict and well-being in men and women. Specifically, in both men and women, lower organization expectations, higher job involvement, and higher work enjoyment predicted longer working hours; additional unique predictors of longer working hours in men were higher work intensity and having children. Longer work hours, higher work drive, a higher work intensity, and lower organization support predicted higher work-life conflict in men and women, with lower work enjoyment, higher job involvement, and lower supervisor support predicting work-life conflict in men only. Work life conflict and work drive predicted lower well-being in both men and women, and work enjoyment and work hours predicted higher well-being in men, but not women.
CARDIOVASCULAR REACTIVITY OF YOUNGER AND OLDER ADULTS TO POSITIVE, NEGATIVE, AND MIXED EMOTION

Michael Hogan, National University of Ireland, Galway, Ireland
Jack E. James, National University of Ireland, Galway, Ireland
Liam Kilmartin, National University of Ireland, Galway, Ireland
Siobhán Howard, National University of Ireland, Galway, Ireland

Abstract
Some research suggests that older adults possess a ‘positivity bias’ which impacts their attention and memory for positive relative to negative information. Evidence for the positivity bias is mixed and no studies have examined the effects of positive, negative, and mixed emotion processing on cardiovascular reactivity (CVR) and blood pressure flow complexity (BPFC) in older adults relative to younger adults. Older adults generally show elevated cardiovascular reactivity to psychological challenge and research suggests that elevated reactivity is a risk factor for cardiovascular disease. The current study examined the performance, CVR, and BPFC of younger and older adults across four task phases, that is, during the encoding and retrieval of positive, negative, mixed, and control word pairs. Results indicated that both younger and older adults took longer to respond to neutral words relative to positive, negative, and mixed emotion words during encoding. Memory for neutral words was also better than memory for both negative and mixed emotion words. Although both younger and older adults showed a trend for slightly better memory for positive emotion words relative to negative and mixed emotion words, these differences were not statistically significant. Younger adults had lower systolic reactivity and higher systolic blood pressure flow complexity than older adults. Older adults showed an increase in systolic blood pressure flow complexity from encoding to recognition, whereas younger adults showed no change. Older adults showed their highest level of diastolic blood pressure flow complexity during the processing of positive emotion and their lowest level during the processing of negative emotion. Results are discussed in light of the effects of age and emotion processing on performance and cardiovascular responses.
TYPE D PERSONALITY AND HEMODYNAMIC REACTIVITY TO LABORATORY STRESS IN WOMEN

Siobhán Howard, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland
Jack E. James, National University of Ireland, Galway, Ireland

Abstract
The Type D personality (identified by high levels of both negative affectivity and social inhibition) has been associated with negative health consequences in cardiac patients. To date, however, few studies have explored whether the Type D personality is associated with particular patterns of cardiovascular responses to stress. In the present study, cardiovascular reactivity to psychological stress (CVR) was examined as a possible mediating mechanism by which Type D personality may affect cardiovascular health, with specific focus on hemodynamic profile. Eighty-nine female university students completed a mental arithmetic stressor while undergoing hemodynamic monitoring. Blood pressure, heart rate, cardiac output, and total peripheral resistance in response to the stressor were examined. Type D personality was assessed using the 16-item Type D scale. Results indicated that there were no between-group differences in magnitude of blood pressure increase, with both Type D and non-Type D individuals demonstrating myocardial response profiles. However, Type D individuals were less “myocardial” than non-Type D individuals. This atypical response to a mental arithmetic stressor, usually associated with a clear myocardial response profile, may be indicative of hemodynamic maladaptation to stress. These findings implicate CVR as a possible mechanism involved in Type D-cardiovascular health associations.
TSA-RELATED ANTECEDENTS OF SUICIDAL IDEATION AMONG PEOPLE OF ETHIOPIAN ETHNICITY LIVING IN ISRAEL

Moshe Israelashvili, Tel Aviv University, Israel
Danny Mangisto, Tel Aviv University, Israel

Abstract

Objectives. Suicidal ideation among immigrant is not a rare phenomenon; this is especially true for Ethiopian immigrants to Israel. Using the Transitional Stress and Adjustment model (TSA; Israelashvili, 2009) as a general framework for measuring life perceptions, the current study tried to identify what might be the specific adjustment problem that might lead some of the Ethiopian immigrants to consider suicidal behavior as a legitimate escape from stress. Methods. Life perceptions, coping styles, readiness to seek help and perceptions of life were measured among four groups -males and females, who were born in Israel or in Ethiopia- of people of Ethiopian ethnicity (N = 80). Results. Multiple analyses indicated that, generally speaking, expressions of difficulties related to the TSA phases are more prevalent among females and among those who were born in Israel. In addition, multiple linear regression analysis showed respondents who express feelings of disorientation (i.e., phase 1 in the TSA) or difficulties in P-E fit (i.e., phase 2 of the TSA) are more vulnerable to suicidal ideation. This finding, especially relating to phase 2 of the TSA were significant also after controlling for personal characteristics (e.g., gender, birthplace, marital status, etc.), readiness to seek help and tendencies to use various coping styles. Conclusions. Based on these findings it is suggested to further explore the utility of the TSA as a general framework to differentiate among people who are at-risk for maladjustment.
ADOLESCENTS' FUTURE EXPECTATIONS IN THE COURSE OF A COMMUNITY CRISIS

Moshe Israelashvili, Tel Aviv University, Israel
Sigal Gilboa, Tel Aviv University, Israel

Abstract

Objective. The current study explored what are the determinants of adolescents' positive future expectation in the course of a community crisis. Methods. The study took place while several Israeli villages, settled in the Northern part of Israel, were informed that due to global political circumstances soon they'll might be evacuated permanently from their houses. In the study, two groups of adolescents (10th graders; 56% females) were compared – (1) 87 adolescents who are supposed to be evacuated, and (2) 43 adolescents, living in a near-by area that won't be evacuated. The study questionnaire was composed of several scales: Future expectations (Cowen, Work & Kerely, 1993); Ways of coping (COPE; Carver, Scheier & Weintraub, 1989); Family Acceptability and Cohesion (FACES; Olson, 1985); and School climate (Moos & Trickett, 1973). Results. MANOVA analyses yielded no main effect for the groups. However, gender main effects were found for several sub-scales of the school climate questionnaire. An exploration of the determinants of adolescents' future expectations indicated the positive and significant contribution of both adolescent's problem-focused way of coping as well as perceptions of family cohesion. These two variables explained 16% of the variance in adolescents' future expectations. Conclusions. Adolescents' future expectations in times of community crisis lean on their personal perception of the family as a cohesive unit along with their personal tendency to actively cope with stress encounters. These findings have significant implications for possible interventions before and during a community crisis.
THE SILHOUETTE DRAWINGS TECHNIQUE AS AN ASSESSMENT OF INTEROCEPTIVE AWARENESS

Nataša Jokić-Begić, University of Zagreb, Croatia
Lidija Arambašić, University of Zagreb, Croatia

Abstract

Objectives. Interoception is defined as the sense of the physiological condition of the body and has been suggested to play a key role in the aetiology and maintenance of state and trait anxiety, anxiety sensitivity (AS) and anxiety disorders. This study aimed to investigate whether the silhouette drawings technique could be a useful way to assess somatic stress reactions as a measure of interoceptive awareness. Methods. The study included a total of 623 adults aged 21 - 71 years. Women made up 57% of the sample. A drawing task was used, which allowed subjects to indicate parts of the body where stress was felt without the imposition of any preconceived ideas by the researcher. On a human body silhouette, subjects were asked to indicate the parts of the body where they felt bodily changes during a stressful situation. Associations between the total numbers of indicated body parts, anxiety sensitivity, trait anxiety and depression were assessed. Results. Overall, total numbers of indicated body parts significantly correlated with quantitative measures of anxiety sensitivity, anxiety and depression. Women indicated more body parts then men. In addition, total numbers of indicated body parts is a predictor of anxiety sensitivity above and beyond trait anxiety and depression. Conclusion. The silhouette drawings technique offers an additional way to assess peoples' experience of stress reactions and can improve our knowledge of interoception.
EVALUATION OF AN OUT-PATIENT REHABILITATION PROGRAMME FOR BREAST CANCER AND PROSTATE CANCER PATIENTS

Juhani Julkunen, University of Helsinki and Rehabilitation Foundation, Finland
T. Saarinen, Rehabilitation Foundation, Finland
E. Nilson-Niemi, Rehabilitation Foundation, Finland
H. Turunen, Rehabilitation Foundation, Finland

Abstract

Objectives. The objective of this study was to investigate the feasibility and effectiveness of a new kind of out-patient rehabilitation programme for breast cancer and prostate cancer patients. Methods. Design was an uncontrolled follow-up study. Indicators of effectiveness were assessed using self-report questionnaires in three steps: at the start of the intervention, at the end of the intervention (3 months) and during a follow-up day (after approx. 6 months). The indicators of effectiveness included assessment of psychological symptoms (anxiety and depression), functional capacity and quality of life (RAND-36), and mental resources (optimism, sense of coherence). Participants were 90 breast cancer patients and 22 prostate cancer patients. Results. Breast cancer patients demonstrated a clearly significant improvement in both physical functioning and psychological well-being. Positive development on behalf of prostate cancer patients could be observed on the same lines. Effect size statistics showed moderate effects on most of the indicators. Positive changes also remained well after the end of the programme up to the six months follow-up. There was a 10% increase in return to work rate after the intervention. Conclusions. The results support the feasibility and effectiveness of the new rehabilitation programme. Conclusions for prostate cancer patients are limited due to the very small number of patients in this group. Randomised studies are needed in future to confirm present results.
SOURCES AND MANIFESTATIONS OF CHILDHOOD STRESS

Tanja Jurin, University of Zagreb, Croatia
Ana Staničić, Centre for Clinical Psychology, Croatia

Abstract

Objective. To determine the sources of stress and its psychological and physical manifestations in school children. Methods. The study was conducted on a sample of 130 male and 139 female pupils, aged between 10 and 14, from a single elementary school in Zagreb. Sources of stress (estimated levels of stress in specific areas of pupils' life), physical manifestations of stress (a silhouette on which they indicated on which parts of the body they felt stress), psychological manifestations of stress (depression, trait anxiety, anxiety sensitivity and self-esteem) were examined. Results. The strongest source of stress for children of both genders was school. School and parents present higher sources of stress in children of 13 and 14 years of age in regard to younger children (10-12 year olds). Physical manifestations of stress are different in girls and boys. The overall intensity of a child's experienced stress was found to be associated with lower self-esteem, higher anxiety and depression. Conclusion. The results of this study indicate gender and age differences in the sources and manifestations of stress throughout childhood. Furthermore, these results suggest the need for prevention of psychological and physiological effects of stress from an early age.
TEST ANXIETY IN EDUCATION: POLICIES AND PRACTICES

Eirini Markella Kapetanaki, University of Manchester, UK

Abstract
The presence of test anxiety in education has been more profound in recent years after the introduction of the Every Child Matters policy and the revised National Curriculum. The Every Child Matters policy is a new approach set out by UK government to ensure the well-being of children and young people from birth to age 19. The Government's aim is for every child, whatever their background or their circumstances, to have the support they need to be healthy, stay safe, enjoy and achieve, make a positive contribution and achieve economic well-being. Much controversy surrounds the rigor and the validity of the testing regime required by the National Curriculum and the Every Child Matters act. Opponents of the testing regime argue that students are currently tested too much and that much of schooling has evolved into test preparation rather than educational learning. The present paper will analyze and discuss the presence of test anxiety in education, the current educational policies in the UK and their effect on the incidence of test anxiety among UK pupils. Additionally, it will examine the implications of the policy on educational practices and pupil well-being. On the other hand, current school policies and practices will be discussed in relation to the incidence and reduction of test anxiety in UK school pupils.
WHAT MAKES THE HEART SING? THE EFFECTS OF A GRATITUDE INTERVENTION ON HAPPINESS LEVELS AMONG IRISH UNIVERSITY STUDENTS

Grainne Kearney, University College Cork, Ireland
Zelda di Blasi, University College Cork, Ireland
Mike Murphy, University College Cork, Ireland
David O’Sullivan, University College Cork, Ireland

Abstract

Objectives. The therapeutic effect of gratitude is becoming increasingly evidence-based thanks to the rapidly growing field of positive psychology. This study examines the effects of a gratitude intervention on the levels of happiness, gratitude and stress in a sample of Irish students. Methods. Two groups of undergraduates from University College Cork were assigned to either a week long gratitude intervention, consisting of writing a daily gratitude diary ($n = 71$) or to a placebo control group, which involved writing a diary of daily activities ($n = 64$). Participants were administered the Oxford Happiness Questionnaire-Short form, a Gratitude Questionnaire and the Perceived Stress Scale at baseline and post-intervention. Results. Participants in the gratitude group were significantly happier and more grateful post intervention, while there were no significant changes in happiness, gratitude and stress levels pre and post in the control group. Because the control group reported being happier, more grateful and less stressed than the intervention group at baseline, we found no significant difference in any of our measures post-intervention between the two groups. Conclusions. Limitations, as well as directions for future research are discussed.
COMBAT-INDUCED PTSD AND TREATMENT TRENDS IN THE USMC:
THE GOOD, THE BAD, AND THE UGLY

Brock Kilbourne, El Camino Psychology Services, USA

Abstract
A discussion of Combat-Induced Posttraumatic Stress Disorder (CI-PTSD) and treatment trends in the United States Marine Corps (USMC) at Camp Pendleton, California, USA. These trends indicate a concerted effort by the USMC at Camp Pendleton to provide effective treatment to active duty military personnel with CI-PTSD and/or associated psychiatric disorders as well as their impacted families. Some of the news is good, some is bad, and some is ugly. The Good: The build up and mobilization of mental health resources; the implementation of empirically based medical and psychosocial treatments; and changing attitudes toward mental health and mental illness. The Bad: Despite the unprecedented increase in mental health services, a number of significant service delivery gaps are apparent in the current system of care. The Ugly: No one knows how long the tail is for CI-PTSD cases or the full range of costs to society; there is yet an undetermined number of active duty USMC personnel with CI-PTSD who will, in turn, become USMC Veterans with CI-PTSD and who will not recover from CI-PTSD. In conclusion, CI-PTSD treatment is discussed in relation to the current system of care, the opportunity to make major scientific advances, and the societal context of PTSD occurrence.
EFFICACY OF MINDFULNESS-BASED INTERVENTIONS ON DEPRESSIVE SYMPTOMS AMONG PEOPLE WITH MENTAL DISORDERS: A SYSTEMATIC REVIEW

Piyanee Klainin, National University of Singapore
Debra K. Creedy, National University of Singapore

Abstract

Objectives. Mindfulness training, one of the stress management interventions, has been integrated into treatments for various mental disorders. This paper presents results of a systematic review which examined empirical evidence concerning the efficacy of mindfulness-based interventions and tested relationships between effect sizes and methodological quality of studies. Methods. A comprehensive search strategy was undertaken to identify relevant published and unpublished studies conducted between 1999 and 2009. Eligible studies used experimental or quasi-experimental designs to test the efficacy of mindfulness-based interventions on depressive symptoms in adults with mental disorders. A Quality Rating Index (QRI) and Code Sheet for Randomized Controlled Trials (CS-RCT) were used to assess methodological quality and extract relevant information respectively. Descriptive statistics, correlational analyses, and multiple regression were performed to analyse extracted data. Effect sizes (d) were computed using SPSS 17.0. Results. Thirty-one studies conducted in eleven countries were included and 79 effect sizes were calculated. Most studies utilised single group pretest-posttest quasi-experimental designs, convenience sampling, and self-reported questionnaires. Zen Buddhist mindfulness appeared to be the most efficacious intervention (d = 1.96), followed by exposure-based cognitive therapy (d = 1.95), acceptance-based behaviour therapy (d = 1.85), dialectical behavioural therapy (d = .93), mindfulness-based stress reduction programme (d = .91), and mindfulness-based cognitive therapy (d = .79). Effect sizes were significantly correlated with reliability coefficients of research instruments but not associated with quality of research and sample size. Conclusion. Mindfulness-based interventions are efficacious for alleviating depressive symptoms in adults with mental disorders. The interventions could be used in conjunction with other treatments in clinical settings.
ATTENTION FOCUS, TRAIT ANXIETY AND PAIN PERCEPTION IN PATIENTS UNDERGOING COLPOSCOPY

Susanna Kola, University of Huddersfield, UK
Jane C. Walsh, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland
Siobhán Howard National University of Ireland, Galway, Ireland

Abstract

Objectives. Colposcopy, an invasive medical procedure aimed at identifying pre-cancerous lesions in the cervix, provokes both anxiety and pain in patients while allowing them little or no behavioural control. Using a multi-group experimental design, the present study sought to investigate how different types of attention-focus strategies impacted upon pain perception, state anxiety and affect in a sample of 123 colposcopy patients. Methods. Patients were randomly assigned to one of three groups: sensory focusing, active distraction, and undirected control. Psychometric measures of pre-colposcopy pain expectancy and trait anxiety were also obtained, to assess whether these factors further contributed to outcomes. Results. The results demonstrated that pain expectancy was positively related to experienced pain perception, whereas trait anxiety was not associated with pain perception. There was an observed association between pre-colposcopy state anxiety and overprediction of pain intensity, and pre-colposcopy negative affect was associated with overprediction of pain intensity and overprediction of pain unpleasantness. It was also demonstrated that heightened state anxiety following colposcopy is due to experienced pain and pain unpleasantness, rather than due to underprediction of pain. While controlling for pain expectancy and trait anxiety, manipulated attention focus did not affect self-reported ratings of pain intensity, sensory or affective pain. There were no significant differences between attention strategies on measures of state anxiety or affect. Conclusions. Attention-focused strategies did not influence patients’ self-reported ratings of pain, anxiety or affect. The results have implications for management of acute clinical pain.
PERFECTIONISM AND ANXIETY SENSITIVITY AS PREDICTORS OF TRAIT ANXIETY

Anita Lauri Korajlija, University of Zagreb, Croatia
Nataša Jokić-Begić, University of Zagreb, Croatia

Abstract

Objective. The aim of this study was to examine the hierarchical relationship between the general vulnerability factors of trait anxiety and the specific vulnerability factors of anxiety sensitivity and perfectionism as hypothesized in Integrative hierarchical model of anxiety. Methods. The study was conducted on the normative nonclinical sample of adults (N = 1475). Following measures were used: the State-trait Anxiety Inventory, the Positive and Negative Perfectionism Scale and Anxiety Sensitivity Index.

Results. The results showed that anxiety sensitivity and perfectionism were significant predictors of trait anxiety with significant gender differences. Dimensions of anxiety sensitivity and perfectionism together explained 54.3% of trait anxiety variance in female adults. Psychological concerns, negative perfectionism and interaction between physical concerns and positive perfectionism were risk factors, while positive perfectionism, interaction between positive and negative perfectionism and interaction between positive perfectionism and psychological concerns were protective factors. Dimensions of anxiety sensitivity and perfectionism together explained 46% of trait anxiety variance in adult men. Psychological concerns and negative perfectionism were risk factors while positive perfectionism was a protective factor.

Conclusion. Study results confirmed part of the Integrative model of anxiety and demonstrated that anxiety sensitivity and perfectionism were significant risk factors for trait anxiety. Question about different levels of risks they belong to was posed for future research. Significant interactions between dimensions of anxiety sensitivity and positive perfectionism indicate the complex nature of adaptive perfectionism which has significant theoretical and practical implications.
INTERACTIONISTIC TEMPERAMENAL QUESTIONNAIRE AS A MEASURE OF REVISED REINFORCEMENT SENSITIVITY THEORY CONSTRUCTS

Dino Krupić, University J.J. Strossmayer, Croatia
Valerija Križanić, University J.J. Strossmayer, Croatia

Abstract

Reinforcement Sensitivity Theory (Gray & McNaughton, 2000) is one of the prominent theories of anxiety. In an attempt to capture behavioral tendencies in anxiety provoking and incentive social context, Interactionistic Temperamental Questionnaire (ITQ) was constructed, following "bottom-up approach", which is typical for RST. ITQ consists of 8 subscales which form three separate general emotional-motivational mechanisms as proposed by the revised Reinforcement Sensitivity Theory (r-RST). These include Behavioral Activation System (BAS), Behavioral Inhibition System (BIS) and Fight-Flight-Freeze system (FFFS). The purpose of the first study was to examine construct validity of ITQ. ITQ was administered to 654 participants, as well as Jackson-5 (Jackson, 2009), another recently developed r-RST questionnaire. Results of exploratory factor analysis support construct validity of ITQ. Intercorrelations between ITQ subscales were consistent with the hypotheses based on r-RST. Convergent and divergent validity were reached for BAS and FFFS scales (correlating with Jackson-5 subscales in expected direction), but not for BIS scale. The aim of the second study was to explore predictive validity of ITQ. It was administered with the use of PANAS-X (Watson&Clark, 1994) and BFQ (Goldberg&Mlacic, 1991) to 222 participants. Correlating with Positive activation, Negative activation, Extraversion and Neuroticism in expected direction, ITQ demonstrated good predictive validity. The Arousal subscale was found to be useful for clearer distinguishing between main r-RST constructs (BAS, BIS and FFFS), which is emphasized as a key methodological advantage of this questionnaire. Given satisfactory psychometric properties of ITQ, potential usefulness for prediction of stress and anxiety proneness in social context is discussed.
AN EXPLORATION OF FACTORS ASSOCIATED WITH STRESS, ANXIETY AND DEPRESSION IN MOTHERS OF INDIVIDUALS WITH AUTISM SPECTRUM DISORDERS

Geraldine Leader, National University of Ireland, Galway, Ireland
Oliver Healy, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland
Aoife Finnerty, National University of Ireland, Galway, Ireland
Grace O'Shea, National University of Ireland, Galway, Ireland

Abstract
The aim of this study was to investigate the factors associated with maternal stress, anxiety and depression in mothers of individuals with Autism Spectrum Disorder (ASDs) in Ireland. Standardised instruments were used to measure child and mother characteristics in a sample of 180 participants. The effect of the child’s age, educational placement, behaviour problems, autistic severity and the size of the mother’s social support network was also investigated. Participants in this study were found to have elevated levels of stress, anxiety and depression. The importance of these findings will be discussed in relation to an Irish context and the importance of evaluating the well-being of all family members when autism is present.
INFLUENCE OF HOSTILITY ON WORKTIME-DOWNTIME VARIATIONS IN BLOOD PRESSURE

Eimear M. Lee, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract

Objectives. Several studies have implicated hostility in the etiology of cardiovascular disease, but the precise pathogenic mechanisms remain unclear. One possible pathway relates to the capacity to relax after physical or mental challenge, which is known to be important for good cardiovascular health. As hostility reflects a personal style of responding to challenge, it may well interfere with post-challenge relaxation. The present study tested this possibility by investigating whether hostility influences changes in cardiovascular functioning across workdays and downtime days. Methods. Eighty undergraduate participants used portable blood pressure monitors to record blood pressure over four consecutive days. A battery of psychometric measures assessing anger, hostility, and related variables was administered. Additionally, participants completed behavioural diaries during the protocol. Results. Analyses of covariance showed significant differences in patterns of systolic blood pressure (SBP) and diastolic blood pressure (DBP) over time, which were qualified by hostility. Hostility predicted workday-downtime differences in SBP ($p = .030$) during daytimes and in DBP ($p = .049$) during evenings. For SBP, hostility was inversely associated with capacity to relax during downtime daytimes. For DBP, the effects were most pronounced during evenings. Conclusions. The results suggest that hostility is associated with how workdays and downtime days are experienced. Hostility may prevent people from deriving benefit from rest after work and during downtime days.
WHY CZECHS BELIEVE ALCOHOL AND MARIHUANA REDUCE STRESS:
ALCOHOL AND MARIHUANA CONSUMPTION IN THE CONTEXT OF TRAIT SPIRITUALITY

Radmila Lorencová, University Pardubice, Czech Republic
František Vrhel, Charles University, Czech Republic

Abstract
The alcohol and marihuana consumption is believed to be the most common strategy for reducing stress and anxiety in the Czech cultural environment. The consumption per person of both alcohol and marihuana in the Czech Republic belongs to the highest in the Europe. Therefore the main purpose of the current study was to find out detailed circumstances of this phenomenon. Previous studies were focused on many aspects of personality. However, none of them has contained spiritual dimension of personality. The Prague Spirituality Questionnaire (PSQ; Říčan and Janošová, 2006) was chosen as a research instrument in the current study. The PSQ measures 6 dimensions, namely Togetherness, Solicitude, Monotheism, Mysticism, Eco-Spirituality and Moral Involvement. The questionnaire was supplemented with open questions focusing on reasons, expectations and consequences of using these drugs. The questionnaire was administered to 155 adults (female = 83, male = 72) ranking in the age 17 to 55. The group of marihuana and alcohol users was compared to the group of only alcohol users by t-test. Though random sampling was used, 90% of respondents were regular alcohol users. Therefore, a control group of non-users was not possible. The group of marihuana and alcohol users yielded significantly higher scores just on Mysticism than group of only alcohol users. The results indicate that consumption of marihuana is connected with increased trait spirituality in the dimension of Mysticism. These findings are further interpreted with respect to results of open questions involving reasons, expectations and consequences of marihuana and alcohol consumption.
DIFFERENTIAL EFFECTS OF PARENTING STYLES ON ANXIETY DISORDERS

Liam A. Mahedy, University of Ulster, UK
Michael S. Gordon, University of Ulster, UK
Brendan Bunting, University of Ulster, UK

Abstract

Objectives. The objective of this study was to formulate a theoretical model to demonstrate the relationship between early attachment experiences and subsequent adult anxiety disorders. Methods. Data from the National Comorbidity Survey (NCS, 1990-1992) was used. The NCS is a stratified, multistage probability sample conducted in North America (N = 5,327). Attachment style (secure, disorganised, avoidant and anxious) was assessed using Hazan and Shaver’s (1987) romantic attachment model. Parental bonding was assessed for both Mother and Father using the Parental Bonding Instrument (PBI, Parker et al., 1979) 8-item short version questionnaire. Anxiety disorders (generalised anxiety disorder, panic disorder, simple phobia, social phobia, agoraphobia and post-traumatic stress disorder) were assessed using lifetime prevalence rates. Multinomial logistic regression was used to examine the possible predictive relationship between early developmental factors and anxiety in terms of main effects and their interaction. Results. Exploratory Factor Analysis of the PBI revealed three identical factors (lack of care, overprotection and authoritarianism) for both Mother and Father versions, which are supported by acceptable fit indices. Parental bonding and insecure attachment are shown to significantly predict anxiety disorders. Differences were found to exist between maternal and paternal parenting practices, with certain adverse paternal parenting styles predicting a lower chance of having an anxiety disorder. Females have a significantly greater chance of having an anxiety disorder compared to males. Conclusions. The results indicate that maternal lack of care was shown to significantly increase the chance of having an anxiety disorder. Paternal overprotection may significantly decrease the chance of having an anxiety disorder.
THE ROLE OF COPING IN EXPLAINING WHY SOME PEOPLE WITH NEUROLOGICAL ILLNESS ARE MORE RESILIENT THAN OTHERS

Marita P. McCabe, Deakin University, Australia
Elodie J. O'Connor, Deakin University, Australia

Abstract

Objectives. This paper was designed to evaluate the coping strategies of people living with a chronic progressive neurological illness, as well as their carers, to identify the differences in coping strategies of those who were more resilient in their adjustment to the demands of the illness. Methods. The neurological illnesses of interest were Huntington’s disease, motor neurone disease, multiple sclerosis and Parkinson’s. Participants included 15 people who showed high levels of adjustment and 15 who showed low levels of adjustment. Participants were selected from an earlier study, to ensure that they satisfied the inclusion criteria for the current study. Interviews were completed to determine the strategies used to cope with the demands of the illness. Results. Participants who demonstrated good adjustment were more likely to draw on social support to provide them with the resources to deal with the illness. In contrast, those who evidenced poor adjustment were more likely to draw on external supports to complete tasks for them. Conclusions. The implications of these findings for people with chronic neurological illnesses and their families are discussed. They demonstrate that people with chronic neurological illnesses need to be encouraged to be proactive in managing their symptoms and their lives, rather than being dependent on other to do tasks for them.
A MODEL OF THE PROMOTION OF HEALTH AND WELL-BEING IN HOSPITAL STAFF: THE RELATIONSHIPS LINKING ORGANISATIONAL CULTURE, STRESS AND CHANGE

Eunice McCarthy, University College Dublin, Ireland

Abstract

Aim. This research focuses on the relationship between leadership/mission, the policies and organisational culture of a large Dublin hospital, and outcomes such as job satisfaction, health and well-being, stress and coping, and desired future change. Method. A cross sectional random sample of 179 staff, including nurses, medical and allied staff and administrators were studied, adopting a systems model of change. Attitude scales were developed using bottom-up and top down research methodology and tailored to the demands of the particular hospital. Results. Results, including descriptive statistics, qualitative analysis of focus groups and interviews, factor analysis, and multiple linear regression analysis, will be presented. Conclusions. Challenges and priorities for the population will be discussed and outcomes for future change mapped out.
COHORT AND PERSONALITY EFFECTS ON STUDENTS’ STATISTICS BELIEFS AND PERCEPTIONS IN UNDERGRADUATES

David McIlroy, Liverpool John Moores University, UK
Pauline Bolt, Liverpool John Moores University, UK
Valerie Todd, Liverpool John Moores University, UK

Abstract

Objectives. Statistics anxiety is a common phenomenon in undergraduates and may impact adversely on study, achievement and career pathway. This study therefore explored the issue with reference to personality profile (Five Factor Model, FFM) and the Survey of Attitudes Toward Statistics (SATS). Methods. Three cohorts of Psychology students (N = 151) in a North West England university completed validated self-report measures on the FFM and SATS in a cross-sectional, quantitative survey method with the subscales of the FFM as independent variables and the SATS subscales as dependent variables. Results. Reliabilities for all measures were high (α > 0.75), with consistently low skewness and kurtosis (< 0.5). Variances demonstrated individual differences on SATS subscales: Affect, Difficulty, Cognitive Competence and Value. Although mean scores indicated negative perception (Affect and Difficulty), many students attributed Value to statistics and believed in their Cognitive Competence. On the FFM, Emotional Stability and Openness were consistent, positive predictors of the SATS subscales (r’s = .19 to 0.39, p < .05 & p < .001), although Multiple Regression demonstrated that the cohort effect impacted more substantially and negatively on SATS than FFM, accounting for up to 23% variance on SATS subscales (p < .001). Conclusions. More familiarity with statistics was associated with greater negative perception (Negative Affect and Difficulty) and cohort effect was stronger than personality. Results suggest that more exposure to statistics per se is not the solution to statistics anxiety but changes in beliefs, perceptions, emotional regulation and behavioural patterns are more likely to be fruitful.
INVESTIGATING THE IMPACT OF THE UNIQUE BUSINESS ENVIRONMENT
OF FARMING ON FARMING FAMILIES’ WELL-BEING

Connar McShane, James Cook University, Australia
Frances Quirk, James Cook University, Australia
Anne Swinbourne, James Cook University, Australia

Abstract

Objectives. This study aimed to investigate the impact that the unique organisational structure of the farming business had on farming families’ wellbeing. Due to a lack of research in the area and available relevant measures, this study is also part of a process to adapt, develop and validate measures of work-family conflict, stressors, and coping that are relevant for farming families of Australia. This presentation will show findings from the interview and item reduction stages of the study. Methods. Interviews (N = 53) were conducted and analysed using a combination of grounded theory and content analysis, predefined major categories with subcategories were generated from the interview data. The Item Reduction Study included participants from across Australia and involved a survey that asked participants to rate items for relevance and importance. Results. Support was found for both Spillover and Segmentation Theory in explaining conflict direction. Women were not committed to the farming business as much as their partners, suggesting a possible source of conflict. Farming families perceived the public and government as uncaring and unsupportive of farming issues. Despite adversity and stressors, farming families were generally satisfied with life and roles. Conclusions. The feelings of abandonment and perceived lack of care and support for farming families could have serious implications for farming families’ mental health, the development of learned helplessness and contribute to the observed high suicide rates of male farmers. Furthermore, changes in policies that result in reduction of community connectedness and a sense of belonging could be augmenting the problem.
DO THEY LOOK THE SAME?
ANXIETY AND LONG-TERM ATTENTION TO THREAT

Kristin Mitte, University of Jena, Germany
Claudia Gebhardt, University of Jena, Germany

Abstract
The investigation of the attentional bias in anxiety has a long-standing tradition in research. Cognitive models suggest that high-anxious people allocate their attention to threat on early stages of information processing but that they show an avoidance of threat on later stages. But most of the studies concentrate only on the first part of the theoretical assumptions by relying on short-term processes or assessing only snapshots of attention. Additionally, the reliability of the most common used paradigms is quite low and effects are therefore a matter of chance. We will present data for an alternative experimental task in this context: we adapted the similarity rating task and introduce an alternative measure for long-term selective attention. Stimuli were pictures from people with different facial expressions ranging from very happy to very critical (= threat). Using a multidimensional scaling procedure, we estimated whether participants used this dimension for a similarity rating or a different dimension unrelated to threat. In two samples, we showed a satisfying reliability of the task with a retest-reliability of .65 and a paralleltest-reliability of .64. Additionally, in a further sample positive relations to anxiety were found thereby suggesting that high-anxious persons also attend to threatening stimuli in long-term.
THE CONNECTION BETWEEN SELF-BLAME AND PTSD
FOLLOWING RAPE COMPARED TO OTHER FORMS OF TRAUMA

Avigail Moor, Tel Hai College, Israel

Abstract

Objectives. The present study seeks to determine the relative severity of self-blame and PTSD following rape as compared to that noted in other forms of trauma. It is hypothesized that current, collective victim-blaming attitudes, typically faced by rape survivors, unlike others, may put them at higher risk for developing severe self-blame. It is further assumed that such elevated guilt may exacerbate PTSD levels within this particular population. Methods. The present sample consisted of 304 participants, 71.6% female and 28.4% male. Most of the participants (72%) were college students from a community college in northern Israel; the rest (28%) were community members. They completed a self-administered measure tapping exposure to traumatic events, Self-Blame (Meyer & Taylor, 1986), and the PTSD Diagnostic Scale (Foa et al., 1997). Results. The central hypotheses that rape survivors will display higher levels of self blame and graver PTSD in comparison to survivors of other forms of trauma were tested by two sets of one way ANOVA and post hoc comparisons. The results confirm the hypotheses, indicating that rape survivors display significantly greater self-blame ($F = 10.19, p < .001$) and higher PTSD levels ($F = 4.95, p < .001$) in comparison to each of the other trauma groups. Conclusions. It is concluded that the elevated, culturally inculcated, self blame experienced by rape victims is a serious risk factor for increased PTSD following rape. This reality calls for extensive changes in the way rape survivors are viewed and treated in present society, so as to minimize complications to their post-rape stress and further their recovery.
URBAN STRESS AND HEALTH: A ROLE FOR COMMUNITY IDENTIFICATION

Orla T. Muldoon, University of Limerick, Ireland
Niamh McNamara, University of Limerick, Ireland
Clifford Stevenson, University of Limerick, Ireland

Abstract
An increasing body of research points to the central role of identity in buffering the impact of stress on mental and physical health and well being. To date, little research has examined the potential of community identification, rather than religious or national identification to buffer the impact of aversive experiences. Too often, communities under stress are pathologized and the protection offered by connectivity offered via community is not assessed as a potential buffer. This paper reports on two related studies undertaken in areas of social disadvantage in Limerick, Ireland. The first study (N = 210) demonstrates the pathologization and stigmatization of socially disadvantaged communities using measures of implicit and explicit prejudice. The second study reports on a door to door survey of residents of these communities (N = 444). The analysis of this survey assesses the potential moderating and mediating impact of community identification on the relationship between urban stress and mental and physical health. Findings indicate that identification with community mediates the impact of stress on health. This relationship is strongest in those with the lowest levels of perceived stigmatization. These results are interpreted and discussed in terms of the Integrated Social Identity Model of Stress.
WELLNESS AS A MEDIATOR OF STRESS AMONG NEW FACULTY

Liza Nagel, Washington State University Tri-Cities, USA
Heidi S. Deschamps, Washington State University Tri-Cities, USA
Shawn M. Hrcir, University of New Mexico, USA

Abstract

Objectives. The literature assumes a commitment to wellness decreases stress. Wellness is a core value of the counseling profession. This study examined new counselor educators’ attitudes toward wellness and the relationship to perceived stress during the first three years of faculty appointment. It examined their: 1) level of stress, 2) level of wellness, and 3) differences in stress levels between the five wellness variables (i.e., Creative Self, Coping Self, Social Self, Essential Self, and Physical Self). Method. Participants were surveyed in May, 2007 and September 2007 using the Lifestyle Appraisal Questionnaire which assesses stress levels and the Five Factor Wellness Inventory which assesses the value and practice of wellness. Results. Participants reported a low mean score on the stress scale (mean = 45.76; SD = 11.06) and high value for wellness (mean = 83.59, SD = 6.45). A multiple regression analysis determined a significant relationship between low stress levels and higher wellness scores (p = .000). And though the Coping Self was the only significant predictor of low stress levels (p = .000), the analysis did not rule out the combined impact of the five wellness factors contributing to the lower stress levels. Conclusions. Due to the unique nature of counseling and the values the profession holds, the outcomes of this study help to illustrate the relationship of those values’ impact on new faculty members’ ability to cope with the stressors inherent in the professoriate. Results of this study may be used to design future faculty mentoring programs and doctoral preparation programs.
TEACHERS’ STRESS: SOURCES, COPING STRATEGIES AND THEIR RELATION TO PERSONAL AND JOB CHARACTERISTICS

Fadia Nasser-Abu Alhija, Tel Aviv University, Israel

Abstract
Stress is defined as a state of psychological pressure influenced by three major sources: personality, environmental and emotional factors (Derogatis, 1987) and likely to arise when the demands of the environment exceed personal resources (Lazarus & Folkman, 1984). Teaching has been perceived as a stressful job; consequently, teachers engage in diverse coping strategies in order to lessen feelings of distress. Personal and job characteristics can affect the amount of stress experienced and the level of engagement in coping strategies. This study examines the relationships among teachers’ stress, engagement in coping mechanisms and personal and job characteristics. Data were collected from a sample of 425 school teachers representing different personal and job characteristics. A Hebrew version of the Teacher Stress and Coping Strategies Scale (Kyriacou & Chien, 2004) was used to collect the data. Factor analysis of the data yielded four factors of stressors, five factors of personal coping strategies and two factors of organizational coping strategies. These factor solutions accounted for 44%, 40% and 38% of the variance in the data on each of the three constructs, respectively. MANOVA results indicated gender differences in active coping strategies and emotional coping by self-control and social and emotional support in favour of female teachers. As compared to teachers in rural schools, teachers in urban schools reported higher levels of stress caused by heavy workload, poor working conditions, student misbehaviour and lack of motivation. They also scored significantly higher on active coping but lower on passive coping. No significant differences were found regarding other characteristics.
TRAINING WITH ANXIETY: SHORT- AND LONG-TERM EFFECTS ON POLICE OFFICERS’ SHOOTING BEHAVIOR UNDER PRESSURE

Arne Nieuwenhuys, VU University Amsterdam, Netherlands
Raoul R. D. Oudejans, VU University Amsterdam, Netherlands

Abstract
Objectives. This study aimed to investigate short- and long-term effects of training with anxiety on police officers’ shooting performance under pressure and explored the role of several behavioral processes (e.g., mental effort, movement speed, visual attention) in explaining the observed results. Methods. Using a pre-test, post-test, and retention-test design, participants (27 police officers) executed a shooting exercise against opponents who did (high-anxiety) or did not (low-anxiety) shoot back using colored-soap ammunition. During the training sessions (between pre-test and post-test) the experimental group practiced with anxiety and the control group practiced without anxiety. Results. With respect to shooting performance, statistical analysis on the pre- and post-test yielded a significant three-way interaction of group, test, and condition (p = .05). At the pre-test, the shooting performance of both groups was significantly lower under high anxiety (ps = .001). At the post-test, this effect was still found for the control group (p < .001), but not for the experimental group. Additional analyses showed that at the retention-test, four months after training, positive results for the experimental group remained present. Finally, analyses on gaze behavior indicated that good performance under anxiety was related to longer fixations at the targets and reduced visual attention to other locations. Conclusions. Training with anxiety has positive short-term and long-term effects on police officers’ shooting performance under pressure. It appears that these positive effects are related to visual attention on task-related information, also under high anxiety. Findings are explained in the light of Attentional Control Theory.
EFFECTS OF MINDFULNESS-BASED STRESS REDUCTION ON PSYCHOPHYSIOLOGICAL LABORATORY STRESS RESPONSES: A RANDOMIZED CONTROLLED TRIAL

Ivan Nyklíček, Tilburg University, Netherlands
Sylvia van Beugen, Tilburg University, Netherlands
Chris Ramakers, St. Elisabeth Hospital, Netherlands

Abstract

Objectives. To examine the effects of a Mindfulness-Based Stress Reduction (MBSR) intervention on psychophysiological responses during a laboratory stress protocol. Methods. Eighty-seven participants were randomly assigned to the MBSR protocol or a waitlist control group. Before and after the intervention period, they participated in a laboratory stress protocol consisting of a mental arithmetic and speech tasks. Laboratory measurements included continuous cardiovascular parameters (heart rate, heart rate variability, Finapres systolic and diastolic blood pressure). In addition, salivary cortisol samples were taken and negative affect (distress) levels were assessed. Results. Pre- to post-intervention differences in physiological stress reactivity did not differ between the groups (all \( p > .10 \)). However, compared to the control group, the MBSR group showed larger decreases in laboratory overall distress levels (\( p < .05 \)) and in overall systolic and diastolic blood pressure (\( F[1,56] = 4.53, p = .04, p^2 = 0.08 \), and \( F[1,56] = 7.29, p = .009, p^2 = 0.12 \), respectively). No other effects were obtained. Conclusions. MBSR is effective in reducing psychological distress and blood pressure levels. However, no evidence was found for effects on cardiovascular or cortisol responses to stress tasks.
PSYCHOPHYSIOLOGICAL EFFECTS OF TWO MINDFULNESS STRESS REDUCTION INTERVENTIONS IN CARDIAC PATIENTS AFTER A PERCUTANEOUS CORONARY INTERVENTION (PCI): A RANDOMIZED CONTROLLED TRIAL

Ivan Nyklíček, Tilburg University, Netherlands
Suzanne C. Dijksman, Catharina Hospital Eindhoven, Netherlands
Pim J. Lenders, Tilburg University, Netherlands
Jacques J. Koolen, Catharina Hospital Eindhoven, Netherlands

Abstract

Objectives. This study investigated effects of two mindfulness-based interventions aimed at stress reduction in cardiac patients who had a percutaneous coronary intervention (PCI). It was hypothesized that patients receiving group mindfulness training would show stronger beneficial effects on mood and on cardiovascular function compared to patients receiving mindfulness bibliotherapy. Methods. Eighty-one patients were randomly assigned to the group intervention or the bibliotherapy intervention. All patients received questionnaires and cardiovascular measurements (resting heart rate variability, systolic and diastolic blood pressure) were performed during rest and a mild stressor (emotional Stroop task) before and after the intervention. Results. Across mindfulness groups, significant pre-to-post intervention changes were obtained for nearly all psychological variables. In addition, the group intervention was associated with a larger decrease of symptoms of anxiety and depression ($F_{1,77} = 4.64, p = 0.03, \eta^2 = 0.06$) and a larger increase in total quality of life ($F_{1,78} = 4.40, p = 0.04, \eta^2 = 0.05$) and mindfulness ($F_{1,79} = 5.00, p = 0.03, \eta^2 = 0.06$) compared to the bibliotherapy group. No main or interaction effects were found on any of the cardiovascular measures. The beneficial psychological effects showed to be (at least partially) mediated by a change in mindfulness over time. Conclusions. No evidence was found for immediate post-intervention effects on the cardiovascular system. However, mindfulness based group intervention decreases distress and facilitates psychological well-being in PCI patients.
EFFECTS OF SOCIAL EVALUATION AND CONTROL ATTRIBUTION ON HEMODYNAMIC REACTIVITY TO LABORATORY STRESS

Éanna O’Leary, National University of Ireland, Galway, Ireland
Jack E. James, National University of Ireland, Galway, Ireland

Abstract
Objectives. To examine if the presence of a video-relayed confederate conferring social evaluation would increase hemodynamic reactivity to a stressor, relative to a participant alone condition. This was investigated in combination with an examination of individuals’ attribution of control. The locus of control (LOC) construct was used to establish if an interaction exists between social evaluation while under stress & individual differences in control attribution. Individuals with an “internal” LOC tend to attribute life events as being a consequence of one’s own actions, while those with an “external” LOC attribute such events as being unrelated to one’s behaviour in certain situations and thereby beyond personal control. Methods. Multiple readings of heart rate (HR), systolic and diastolic blood pressure (BP) from sixty university students were taken at baseline, under evaluation and non-evaluation, while undergoing a computerised stressor task. The evaluative feedback was provided by video-relayed confederate presentation. Measures of locus of control were obtained through self-report questionnaire. Results. Mixed ANOVA analyses indicated a significant main effect for LOC, such that participants with an internal LOC exhibited overall increased diastolic BP when compared to externals ($p = .010$), independent of experimental condition. Additionally, an interaction was observed between HR and LOC ($p = .017$) such that participants with an internal LOC exhibited larger increases from baseline to evaluation, as well as larger decreases from evaluation to non-evaluation, when compared to participants with an external LOC. Conclusions. These findings suggest that physiological differences may exist between individuals regarding perceptions of control when presented with a stressful environment.
PARENTAL CAREGIVING FOR A CHILD WITH AN INTELLECTUAL DISABILITY: IMPACT OF SOCIAL SUPPORT AND LIFE STRESS ON SECRETORY IMMUNOGLOBULIN A AND SELF-REPORTED PHYSICAL SYMPTOMS

Clair O’Connor, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract
Psychoneuroimmunology (PNI) research that focuses on young parental caregivers is a new and emergent area. The purpose of the present study was to examine perceptions of parenting stress in parents of children with intellectual disability, and to investigate the impact of stress on both self-reported physical symptoms and on levels of secretory immunoglobulin A (S-IgA) as assessed from saliva. S-IgA is a reliable marker of immune system function that indicates the individual’s resistance to respiratory infection. S-IgA has previously been implicated as a marker of stress-related physical pathology. As well as providing saliva samples, participants (43 young caregiving parents of children [aged 3-14] with intellectual disabilities) were subjected to extensive psychometric screening, intended to assess quantity and quality of social support (the Sarason Social Support Scale-SF; Sarason, 1987), perceived life stress (the 4-item Perceived Stress Scale; Cohen, 1983), anxiety and depression symptomology (The Hospital Anxiety and Depression Scale; Zigmund & Snaith, 2003), self-reported physical symptoms (The Cohen Hoberman Inventory of Physical Symptoms; Cohen & Hoberman, 1983), parental stress (The Parental Stress Index S.F.; Abindin, 1995), and functional and dysfunctional aspects of family dynamics (The McMaster Family Assessment Device General Functioning Subscale; Byles et al, 1988). A series of tailored multiple regression analyses revealed psychosocial variables to be predictive of both S-IgA and self-reported physical symptoms. In particular, social support and perceived stress were found to predict levels of S-IgA, with perceived life stress also predictive of self-reported physical symptoms. The findings of the present study illuminate the role of psychosocial variables in the physical well-being of young parental caregivers.
STRESS COPING IN MILITARY AVIATION

Paul O’Connor, National University of Ireland, Galway, Ireland
Justin Campbell, Embry-Riddle University Worldwide, USA

Abstract
The purpose was to consolidate the disparate literature pertaining to stress coping in military aviation. A computerized literature search was conducted, and 10 studies were identified with substantive material concerning psychologically induced stress in military aviation. The key findings were: (i) military aviators were more likely to use problem-focused coping, rather than focus attention on emotional outcomes and reactions; (ii) military aviators were emotionally stable and therefore less prone to anxiety and depressive disorders associated with neuroticism; (iii) when military aviators experienced life changing events, the level of stress they experienced was significantly lower compared to non-aviation military personnel; and (iv) the exposure to stress experienced during initial training improved the ability of military aviators to cope with stress in the future. It can be concluded that, on average, military aviators are one of the most stress resilient populations in the military. However, it is suggested that there is a need for a standardized method for evaluating individual differences in the ability to withstand and cope with stress. The development of a standardized methodology would improve the selection, training, and sustainment of military aviators and provide a basis for comparing stress responses in personnel across a range of high-risk industries.
MALADAPTIVE SCHEMAS AND MARITAL ADJUSTMENT: MEDIATIVE ROLE OF COPING AND POSITIVE AFFECT WITH GENDER

Yaşar Özbay, Gazi University, Turkey
Müşgan Altın, Gazi University, Turkey
Şerife Terzi, Gazi University, Turkey

Abstract
The aim of this study is to test the meditative roles of coping styles and positive affect in the relationship between marital adjustment and maladaptive schemas. Young’s model of schema therapy asserts that early maladaptive schemas are those that individual perpetuates in daily experiences and forms the coping and other reactions to the stressful encounters throughout the life span. The schema theory also proposes that maladaptive schemas are mostly triggered in dyadic relationships. One of the most perpetuating relationship types is assumed to be marital one. It is hypothesized that the relationship between maladaptive schemas and marital adjustment may be explained by the mediation of coping responses and positive affect individual generates in the relationship. The research sample is comprised of 112 young couples, marrying between 3-8 years and presenting considerable degree of marital adjustment problems and having various maladaptive schemas related to their level and area of symptoms. The measurement pack is composed of Dyadic Adjustment Scale, Young Maladaptive Schemas-Short Form, Coping Scale, and Humor Styles Questionnaire. The results revealed that couples having marital adjustment problems due to the maladaptive schemas are also prone to meditative effects of dysfunctional coping repertoire and low degree of sense of humor. These findings may also contribute to some explanations for sustainability of marriage and maladaptive schema theory related to intimate relationships. The findings might be shed light for theory and research in the area of coping in married couples having some sorts of relationship problems and schema therapy as well.
A QUALITATIVE INQUIRY INTO WORK AND FAMILY CONFLICT AMONG INDIAN DOCTORS AND NURSES

Suchitra Pal, National University of Ireland, Galway, Ireland

Abstract
The aims of this pilot study were to identify and examine job control, working long hours and their impact on work and family conflict (WFC) among four Indian doctors and nurses. The four participants had previously worked in the west and now working in India. Employing a grounded theory approach data were analyzed using several coding procedures geared toward model development. For these four Indian doctors and nurses, job control was found to be grounded in two factors: type of work group control and a lack of control in the work environment. Working long hours is seen to be possible due to a culture accepting of working long hours, a supportive family system, and other arrangements at home.
HOSPITAL PERSONNEL REACTIONS TO HAITI'S EARTHQUAKE:
A PRELIMINARY MATCHING STUDY

Yuval Palgi, Tel Aviv University, Israel
Menachem Ben-Ezra, Ariel University Center of Samaria, Israel
Jonathan Jacob Wolf, Trinity College Dublin, Ireland
Hilik Soffer, Israel Defense Forces, Israel
Amit Shrira, Tel Aviv University, Israel

Abstract

Objectives. The purpose of this preliminary study was to survey hospital personnel reactions to the sights in Haiti. Based on previous research, we hypothesized that the hospital personnel who were in Haiti would report a higher level of post traumatic stress symptoms and a lower life satisfaction than a comparison group of hospital personnel who were not in Haiti. Methods. Participants included 21 Israeli hospital personnel who were in Haiti and 21 Israeli hospital personnel who were not in Haiti matched on age, gender, marital status and profession. Each participant filled a short demographic survey (age, sex, marital status, profession), the Impact of Event Scale–Revised, and a single item of life satisfaction. Hospital personnel from the two groups were compared using t tests for PTSD symptoms and life satisfaction. Cohen’s $d$ was calculated in order to obtain the effect size along with statistical power analysis that assessed type II error. Results. According to our hypothesis, Israeli hospital personnel exposed to Haiti’s severe sights reported higher levels of PTSD symptoms in comparison to the matching hospital personnel group. However, no significant group differences in life satisfaction scores were found. Conclusions. The results suggest that exposure to a large scale natural disaster takes its toll on the mental health of hospital personnel when posttraumatic symptoms are considered. Contrary to our hypothesis, the level of life satisfaction was similar in both groups. This may imply that even under extreme workload hospital personnel still show high job value, responsibility and purpose in aiding the patients, and satisfaction from saving life.
MAJOR STRESSFUL EVENTS AND ANXIETY SYMPTOMS IN 5 YEAR-OLD CHILDREN AS PREDICTORS OF HEALTH PROBLEMS AND INFECTIONS FOUR YEARS LATER

Geneviève Piché, Université de Montréal, Canada
Caroline Fitzpatrick, Université de Montréal, Canada
Linda S. Pagani, Université de Montréal, Canada

Abstract

Background. Anxiety disorders are relatively frequent among youngsters, as parent reports suggest that 17.5% of 6- to 8-year-old children have at least one anxiety disorder during the early school years (Breton et al., 1999). Over the past two decades, epidemiological research has established that anxiety problems are associated with devastating long-term outcomes for children’s academic success and psychosocial functioning. Experiencing major stressful events (e.g., parental divorce) may also have detrimental effects on children academic and psychological wellbeing. Few studies have simultaneously considered the unique contributions of early childhood anxiety symptoms and major stressful events on subsequent physical well-being, as suggested by the diathesis-stress model (Holmes & Rahe, 1967). Objective. This study aimed to verify if stressful events and anxiety symptoms in 5-year-old children predict: (1) chronic health problems and (2) infections four years later. Methods. Secondary analyses were conducted based on prospective-longitudinal data from the Quebec Longitudinal Study of Child Development. Results. Anxiety symptomatology predicted greater use of antibiotics at age 10, yet failed to predict chronic health problems. Major stressful events were not associated with later health outcomes. These results are found above and beyond pre-existing and concurrent child (e.g., infections in kindergarten) and family influences (e.g., maternal health). Conclusions. Results of this prospective-longitudinal study lend partial support to the diathesis-stress hypothesis, by showing the unique contribution of early childhood anxiety toward the development of middle childhood infections. Given the important prevalence of anxiety symptoms in middle childhood, this paper highlights the importance of targeting anxiety-prone children, to prevent later immunosuppressive risk, which in turn, leads to infections and antibiotic use.
PERSONALITY AND OCCUPATIONAL STRESS IN METHODIST MINISTERS

Tommy Poling, University of Arkansas at Little Rock, USA
John Faucett, University of Arkansas at Little Rock, USA
Robert Corwin, University of Arkansas at Little Rock, USA

Abstract

Objectives. The purpose of this project was to evaluate the relationships among personality type, job satisfaction and occupational burnout in United Methodist ministers. This research was based on increasing evidence that aspects of personality play important roles in occupational choice and in adjusting to expectations, constraints and rewards associated with career development. Methods. Participants (N = 82) were volunteers representing pastors within a conference of the United Methodist Church. The web survey they completed consisted of the Myers-Briggs Type Indicator- Form M, the Ministerial Job Satisfaction Scale (Glass, 1976) and the Pines Burnout Measure (Pines and Aronson, 1988). Results and Conclusions. All data for this project have been collected but the analyses have not yet been completed. The MBTI evaluates psychological preferences in the context of four dichotomous pairs: Extraversion vs. Introversion (E vs. I), Sensing vs. Intuition (S vs. N), Thinking vs. Feeling (T vs. F), and Judging vs. Perceiving (J vs. P). The data analyses treat these preference pairs as class variables while the scores on the Ministerial Job Satisfaction Scale and the Pines Burnout Measure are used as dependent measures. A preliminary ANOVA (E-I x S-N x T-F x J-P) to evaluate the influence of personality on burnout yielded a significant main effect for S-N, indicating that participants endorsing intuition in preference to sensing show a higher level of burnout (p < .003). This analysis also found the following significant two-way interactions: E-I x S-N (p < .011), E-I x T-F (p < .029), and E-I x J-P (p < .008).
COPING STYLES AND ANXIETY AMONGST FEMALE VICTIMS OF BULLYING

Katherine Poynton, The University of Melbourne, Australia
Erica Frydenberg, The University of Melbourne, Australia

Abstract

Females who are victimized by their peers at school are likely to be anxious and cope in non-productive ways. In an attempt to identify those young women who are at risk and to determine how they can be best resourced to cope, 352 female adolescents between the ages of 11 and 17 years from four secondary schools completed a self-report questionnaire which identified frequency and type of bullying, coping styles, and level of anxiety. Results indicated that female adolescents who are frequently victimized use more non-productive coping style, more reference to others coping style, and experience higher levels of anxiety when compared with low victims. It was also found that non-productive coping style and associated strategies can also be used to differentiate between high victims and low victims of bullying. The outcomes of this study provide useful information for practitioners that may assist in the identification of at-risk students, as well as the development and implementation of effective programs for young females who are victimized by their peers at school.
LEVELS OF ACADEMIC EMOTIONS AT TWO STAGES OF TAKING AN EXAM
AND THE ROLE OF POSITIVE EMOTIONS IN EMOTIONAL PROCESSES

Raimo Rajala, University of Lapland, Finland

Abstract

There is evidence that persons experience, in stressful situations, blended emotions. In this paper, positive (PE) and negative (NE) academic emotions are studied in the beginning and end of a course, when students have taken their exam, but outcomes are not yet announced. The aim of this paper is (1) to examine the levels of PE’s and NE’s at two stages of a course, and (2) to analyze the functions which initial PE’s serve in study difficulties, cognitive appraisal and negative emotional processes. The sample consists of 50 students of education with measurements at both times. The data was collected via closed-ended questionnaires. The main variables were study difficulties, cognitive appraisals, and academic emotions. The data was analyzed by examining within-subject differences on the variables. The functions of PE’s were analyzed by conducting regression analyses. The results indicated that the beginning and the end of a course were different stages. T1 was an anticipation stage evidenced by blended anticipatory PE’s and NE’s. T2 was a waiting stage with increased clarity and decreased ambiguity, because anticipatory emotions decreased. PE’s had many functions in negative emotional processes. They decreased later NE’s and elevated later challenge appraisals. PE’s played a role of stopping continuation of study difficulties and NE’s. PE’s gave also continuation to challenge appraisals. The results are discussed with respect to their relevance to appraisal and emotional processes.
SOCIAL SUPPORT AS PREDICTOR FOR OUTCOME OF OPIOID ADDICTS
– “WITH A LITTLE HELP FROM MY ABSTINENT FRIENDS”

Volker Reissner, Hospital of the University of Duisburg-Essen, Germany

Abstract

Objectives. Opioid dependence in Europe is a major problem with mortality rates up to 23% among those aged between 15 and 49 years in some urban regions. Social support may be one factor influencing outcome of opioid dependence. This study evaluates the level of different types of social support and its development over 18 month in opioid addicts from six European cities: Athens, London, Essen, Padua, Stockholm and Zurich. Methods. In each city 100 opioid addicts were recruited and twice assessed by a standardized interview within 18 month. The UCLA-Social Support Inventory, the Europ-Addiction Severity Index for drug- and alcohol-dependence and the Composite International Diagnostic Interview for alcohol, depression and anxiety were administered. Results. Women received higher family support than men. For professional social support there were no such differences. Patients starting their injection-drug use earlier in life experience higher family support. Opioid addicts consuming alcohol obtain higher levels of social support than those without comorbid disorders. Over the period of 18 month especially professional support levels remained stable in Athens and Padua, decreased in London, Stockholm and Zurich and increased in Essen. Severity of drug dependence, professional social support (and to a certain extent family support) at study end-point as well as living with an abstinent partner predicted improvement of opioid dependence. Conclusion. Support levels developed differently in European cities. Social support is a significant short-term predictor of improved outcome. Stabilizing professional and family contexts may be effective in reducing drug-related harm.
REDUCING OCCUPATIONAL STRESS IN EMPLOYMENT (ROSE):  
THE DESIGN OF A WEB-BASED STRESS MANAGEMENT INTERVENTION FOR  
support workers in the mental health and intellectual disability sector

Mary Ridge, King's College London, UK
Trudie Chalder, King's College London, UK
John Wells, Waterford Institute of Technology, Ireland
Margaret Denny, Waterford Institute of Technology, Ireland
Jennifer Cunningham, Waterford Institute of Technology, Ireland

Abstract

Working in the mental health and intellectual disability support sector can be particularly challenging for staff in terms of occupational stress and ‘burnout’. Whilst a number of de-stressor programmes have been developed for staff working in clinical environments, no such programmes have been developed for staff working in rehabilitation or employment support. The aim of the ROSE project is to develop a bespoke online stress management intervention (SMI) for these staff. We conducted a systematic literature review on SMIs in mental healthcare workers. The results of the review were used to inform the design of the ROSE SMI. We also used a cross-sectional survey to tailor ROSE to the group in question. The Job Content Questionnaire (JCQ; Karasek, 1979, 1998), and focus groups were used to gather data on stressors from managers and support workers \(N = 54\) from the 5 partner countries (Austria, England, Ireland, Italy and Romania). Focus group data was analysed using NVivo8. A primary intervention was designed for managers and a secondary/tertiary intervention based on Cognitive Behaviour therapy was designed for support workers and managers. The literature review findings are presented, with an overview of the intervention and preliminary findings from a pilot of the intervention. Many of the previous studies on SMIs had small samples and were not based on models. It was not always clear from the literature why certain elements of the various SMIs were included. ROSE is a promising alternative, targeting stress in a previously unstudied group with a systematically designed, user-friendly intervention.
GUIDED ART-BASED INTERVENTIONS REDUCE ANXIETY LEVELS IN COLLEGE STUDENTS

Kimberly L. Rinehart, University of Houston-Clear Lake, USA
Ragan E. Aaron, Texas State University, USA
Natalie A. Ceballos, Texas State University, USA

Abstract
Anxiety is a major concern among college and university institutions in the U.S., especially since college students are particularly prone to stress. The American College Health Association reported in a National College Health Assessment that 18.2% of students consider anxiety their greatest stressor in that it interferes and disrupts academic performance and working habits. Literature remains sparse with regard to therapeutic applications of art therapy or arts interventions to reduce anxiety and stress in normal, non-institutionalized populations. Participants included 90 students, randomly assigned to three project groups of 30 participants: individual art, group art, and individual academic (versus artistic) for control. An overall within-subjects effect of anxiety was noted in which participants reported reduced anxiety levels following intervention. Anxiety was significantly reduced by arts intervention within the individual arts intervention ($F(1,29) = 5.39; p < .001$) and group therapy conditions ($F(1,28) = 25.84; p < .001$); however, anxiety levels were not significantly affected by the control condition. The extent of anxiety reduction (e.g., difference scores) did not differ between the individual and group conditions. As shown in the research literature on this topic, anxiety is an increasingly dominant factor in the lives of undergraduate college students, thus it is important to identify outlets for this negative emotion in order to avoid adverse effects on mental and physical well being. The results of this study indicate that guided arts intervention, both individually and within groups, is an effective method for reducing anxiety in college students.

Learning Objectives. 1. Participants will be able to identify two measures indicating that the arts intervention was successful in reducing anxiety. 2. Participants will be able to recognize similarities between the effectiveness of individual vs. group projects, and ineffectiveness of non-art therapy projects, in reducing levels of anxiety. 3. Participants will learn about future influence of possible art-based interventions to reduce anxiety in a variety of populations.
HEALTH SERVICE FEATURES AND THEIR IMPACT ON SOCIAL SUPPORT FOR OPIOID ADDICTS
– FROM ATHENS TO ZURICH

Christine Schwarzer, Henirich-Heine-University, Germany

Abstract

Objectives. About 1.7 million Europeans are dependent on illegal substances. They receive family and professional social support from different types of drug service organizations. This study evaluates the level of social support received by opioid addicts from six European cities. It determines the influence of various drug services characteristics on social support. Methods. Five hundred and ninety nine opioid addicts were recruited in Athens, London, Padua, Stockholm, Zurich and Essen. The UCLA-Social Support Inventory and the Europ-Addiction Severity Index for drug- and alcohol-dependence were administered. Data on the patients’ drug services regarding the organizational level (e.g. admission threshold, treatment modalities) was obtained by the Health-Service-Utilization-Sheet. Data on the individual level of drug services (i.e. drug service workers) as work-satisfaction, burnout (Maslach Burnout Inventory) and self-efficacy (General Self-Efficacy Questionnaire) were obtained simultaneously. Results. Opioid addicts from different European cities differed significantly with regard to social support. On the organizational level addicts with frequent health service use and those from high threshold drug services received higher professional support than their counterparts from low-threshold organizations. Significant differences were found between addicts from different treatment modalities (e.g. methadone maintenance treatment). On the individual level post hoc analysis demonstrated that addicts received less social support from drug service workers characterized by low self-efficacy and low work-satisfaction. Conclusion. Social support is influenced by factors such as regional culture, drug service organizations and their drug-workers. Staff-related quality management and an integration of family and professional social support are potential resources to improve treatment.
STRESS, COPING AND WELLBEING AMONG FINNISH AND ISRAELI STUDENT TEACHERS

Sarit Segal, Levinsky College of Education, Israel
Raimo Rajala, University of Lapland, Finland
Hanna Ezer, Levinsky College of Education, Israel
Itzhak Gilat, Levinsky College of Education, Israel

Abstract
Starting studies is a life change with many conflicting expectations imposed on a student. Main sources of stress are human relationships, starting independent housing, change of life style, academic pressures and demands to handle a new life situation. Purpose (1) compare stress, coping, sources of aid and wellbeing among Israeli and Finnish student teachers, and (2) find out the best predictors of wellbeing. Sample sizes were \( n = 526 \), Israel) and \( n = 145 \), Finland). Data were gathered via closed-ended questionnaires. The measures comprised wellbeing, coping styles, support sources, stress factors and optimism. Data was analyzed by examining means by nationality and conducting multiple regressions with wellbeing as a dependent variable. Differences were noticed on every scale. Finnish students had higher career choice satisfaction, whereas Israeli students showed a higher self-efficacy. Loneliness and academic pressures were stress factors among Israeli students. Finnish students resorted to active coping, whereas Israeli student used more avoidance. Finnish students were more active in seeking support from formal sources. Israeli students relied on informal sources. Career satisfaction was predicted by low academic stress, high direct coping, low avoidance, high resorting to informal aid and high optimism. The best predictors of self-efficacy were low social stress, low avoidance, high resorting to informal aid and high optimism. Cross-cultural differences in stress, coping and wellbeing are discussed.
ANXIETY, ANGER AND THREAT APPRAISAL IN SPORT COMPETITION:
AN EXPLORATORY STUDY WITH PORTUGUESE ATHLETES

Rui Sofia, University of Minho, Portugal
José Fernando Cruz, University of Minho, Portugal

Abstract

Research on stress and the “emotional life” in sport contexts has focused mainly on competitive anxiety. Only recently, researchers started to focus their interest in other negative, as well as positive “toned” emotions. The importance of cognitive appraisals is also well established in different emotional reactions and processes (Lazarus, 2000; Skinner & Brewer, 2002). Besides, in the particular case of research on sport aggressiveness the focus has been on the study of differences between contact vs noncontact sports. Using a trait-like approach, a major aim of this preliminary study was to explore the relationships between anger, anxiety and competitive threat appraisal in athletes from individual and team contact sports, with different levels of physical contact. Participants were 122 athletes of both genders, ranging between 14 and 32 years old, and competing at different contact sports: self-defence ($N = 35$), kickboxing ($N = 40$) and soccer ($N = 47$). Adapted Portuguese versions of several psychological measures were completed: a) Competitive Anxiety Scale - 2 (Smith et al., 2006); b) Competitive Anger and Aggressiveness Scale (Maxwell & Moores, 2007); and c) Cognitive Appraisal in Sport Competition Scale – Threat Perception (Cruz, 1996). Multivariate and univariate analyses showed strong, but differential, relationships between individual differences measures. Additionally, significant differences occurred between gender, age levels and type of sport. Support was also obtained for the psychometric characteristics of the measures used. Finally, some directions for future research, as well as applied implications for psychological interventions are suggested, in order to promote emotional regulation skills in athletes.
DRIVING WITHIN THE FAMILY
– A SOURCE FOR SUPPORT OR FOR STRESS?

Orit Taubman - Ben-Ari, Bar-Ilan University, Israel

Abstract
Driving has been recognized as a stress-evoking experience, which engages positive feelings (e.g., fun, achievement), but might also evoke anxiety, stress, and helplessness. Throughout the world, young drivers are identified as at risk for involvement in traffic crashes, therefore attempts are made to involve parents in supporting careful driving patterns by accompanying drivers from their first steps. However, previous studies did not examine whether this supervision is not a potential source for increasing stress in regard to driving.

The present study examined the relationship between parents' and offspring's attitudes toward accompanied driving (ATAD, Taubman – Ben-Ari, 2010; i.e, Tension, Relatedness, Avoidance, Disapproval, and Anxiety), and the associations between parents' driving styles (MDSI, Taubman – Ben-Ari et al., 2004; risky, angry, anxious, or careful) and their offspring's ATAD. Participants were 129 young drivers and their principal accompanying parents. The findings indicate a correspondence between parents' and children's ATAD scores, as well as significant associations between teens' ATADs and the way their parents habitually drive. Specifically, higher tension, relatedness, avoidance, disapproval, and anxiety reported by the young drivers were positively correlated with higher reports on the same attitudes by parents. In addition, parents' maladaptive driving styles were positively associated with their offspring's tension, avoidance, disapproval and anxiety ATADs, whereas parents' careful driving style was related to offspring's higher relatedness and lower negative ATADs. The results are discussed in respect to the relationship between the parental model and the young driver's ATAD, pointing to the importance of parents' role in promoting young drivers' safety attitudes and behaviors.
THE STRUCTURE OF DISPOSITIONAL COPING:
ARE THERE HIGHER-ORDER TRAIT STRUCTURES FOR
COPING WITH STRESS AND ANXIETY?

Radek Trnka, Prague College of Psychosocial Studies, Czech Republic
Karel Balcar, Prague College of Psychosocial Studies, Czech Republic
Martin Kuška, Prague College of Psychosocial Studies, Czech Republic

Abstract
The main purpose of the current research is to explore the structure of personality dispositions for coping with stress in the Czech population sample. The Czech version of SVF 78 inventory (Janke and Erdmann, 2003) was chosen as a research instrument. This self-report inventory measures 13 scales. Each scale describes individual tendency to use particular coping strategy in the situation of stress (undervaluation, guilt rejection, distraction, alternative satisfaction, control of situation, control of reactions, positive self-instruction, perservation, tendency to escape, resignation, self-blame, social support seeking, avoidance). Dispositional coping strategies are divided into effective (or positive) strategies that are supposed to effectively reduce actual level of stress and ineffective (or negative) strategies that are supposed to maintain or even strengthen actual level of stress. Social support seeking and avoidance are considered as independent groups of dispositional coping strategies. The SVF 78 inventory was administrated to 187 adults (102 female; 85 male) in the age from 19 to 38. Factor analysis was used for the data processing. Interestingly, a factor analytic data reduction yielded only 4 significant factor dimensions explaining over 68 % of the total variance of the 13 original SVF- scales according to both the Kaiser-Guttman and the Cattell’s criteria. The results are discussed with respect to the hypothetical existence of higher-order dispositional trait structures for coping with stress.
DO SOCIAL SUPPORT AND SOCIAL IDENTITY BUFFER STRESS FOR IRISH HOMELESS ADULTS? A REPORT ON PRELIMINARY FINDINGS

Michael Tully, University College Dublin, Ireland
Gary O’Reilly, University College Dublin, Ireland

Abstract

Guided by the social identity / self categorization model of stress, the aim of the current research is to determine whether social support and social identity buffer stress for homeless adults. Using standardized measures, participants engaged with homeless services in Dublin City are being surveyed on their levels of social support, their social identity, the number and perception of stressful events encountered, their drug use, and their physical and mental health. Preliminary results will be discussed in terms of their implications for the social identity / self categorization model of stress in participants exposed to high levels of strain. The impact of social support and social identity will also be discussed in terms of explaining previous converse findings that, although social support can have stress-buffering effects for homeless participants, findings have also been reported where larger or more supportive networks are linked to higher substance abuse. Finally, the view of homelessness as a distinct identity and not an extreme form of poverty will also be discussed in relation to coping and stress appraisal.
COMPARING THE RELATIONSHIP OF GERMAN AND UNITED STATES ELEMENTARY TEACHERS’ EXPERIENCE, STRESS, AND COPING RESOURCES TO BURNOUT SYMPTOMS

Annette Ullrich, Heidelberg University of Applied Sciences, Germany
Richard G. Lambert, UNC Charlotte, USA
Chris McCarthy, University of Texas at Austin, USA

Abstract

Objectives. Transactional models of stress posit that perceptions of both resources and demands determine whether stress will be experienced. To test this model cross-nationally, previous research examining the relationship of elementary teachers’ experience, stress, and coping resources to burnout symptoms in the United States was replicated with elementary teachers in Germany. Methods. Levels of elementary teachers’ burnout symptoms were examined: (1) between schools, with individual/teacher perceptions of demands and resources aggregated to the group level, and (2) at the individual teacher within schools level, where perceptions of classroom demands and resources, as well as teachers’ personal coping resources and experience, were taken into account. Participants were 469 elementary teachers in Baden-Wurttemberg, Germany, and hierarchical linear modeling was to nest teachers within schools. Results. Consistent with findings from a U.S. sample, results showed little variance in reported burnout symptoms between schools, but significant variance was found between teachers aggregated at the individual level. Replicating previous research, individual teacher factors were associated with burnout symptoms in the predicted direction, but the pattern of statistical significance varied for German and U.S. teachers. Conclusion. These findings may offer cross-cultural support for transactional models of stress in elementary school settings.
HEART-RATE BEHAVIOUR UNDER CONDITIONS OF LOW-CHALLENGE STRESS: PARALLELS BETWEEN SCHIZOPHRENIA AND NON-CLINICAL SCHIZOTYPY

Diarmuid B. Verrier, National University of Ireland, Galway, Ireland
Brian M. Hughes, National University of Ireland, Galway, Ireland

Abstract
Schizotypy is a personality trait that has been conceptualised as existing on a behavioural and cognitive continuum with schizophrenia. However, while there has been much work investigating abnormalities of arousal in schizophrenia very little work has looked to see whether comparable abnormalities are observable in relation to schizotypy. The association between psychometrically assessed schizotypy and blood pressure under conditions of moderate cognitive load was assessed in a laboratory setting ($N = 126$). Participants completed measures of schizotypy, and their heart rate was subsequently observed while completing a number of computer-based tasks. Product-moment correlations revealed an inverse relationship between ‘negative’ schizotypy and autonomic arousal as indexed by heart rate. This finding corresponds with much research on schizophrenia, which has identified a tendency for the negative aspects of schizophrenia to be associated with hypo-responsivity. This evidence for a schizotypy-dependent effect on heart rate suggests that programmes of research concerning abnormalities of arousal may be enriched by a consideration of non-clinical schizotypy.
EVERYDAY LIFE EXPERIENCES AMONG RELATIVES OF PERSONS WITH MENTAL DISABILITIES AND EXPERIENCES OF CONTACTS WITH CAREGIVERS IN PSYCHIATRIC CARE

Anna-Britta Wilhelmsson, Umeå University, Sweden
Sture Åström, Umeå University, Sweden
Britt-Marie Berge, Umeå University, Sweden

Abstract
This study aims to describe the experiences of relatives’ in terms of their contacts with persons with mental disabilities and to examine the experiences of contacts with psychiatric caregivers. Eighteen tape-recorded interviews were conducted with close relatives of persons suffering from mental disabilities within the health care district of Umeå Sweden. The results indicate that the relatives feel guilty about not providing enough support for their relatives and those relatives are in a vulnerable position. Serious criticism was levelled against the psychiatric care, in particular against the psychiatric reform the aim of which was to improve support and coordination to people with mental disabilities. This study indicates that relatives feel they do not have sufficiently clear insight and involvement in the psychiatric care and treatment of members of their family. They are unsure of where to go for support and answers to their questions about their sick relatives. The majority of interviews revealed that relatives want professional therapy. They want to participate in the care and treatment and be informed about diagnosis, prognosis, when their relative will be sent home from the hospital, and the rehabilitation requirements. This study indicates that relatives experiences deficient continuity and unanimous in care and treatment between different connection in participation in the country council, local government and social services.
THE EFFECTS OF SENSE OF COHERENCE AND RUMINATION ON SLEEP QUALITY

C. A. Williams, West Chester University, USA
H. Binkley, Middle Tennessee State University, USA
P. Kim, Middle Tennessee State University, USA
G. Hamilton, Middle Tennessee State University, USA

Abstract
Poor sleep quality impacts daily function and overall health for many adults (American Academy of Sleep Medicine, 2008). The purpose of this study was to determine the effects of sense of coherence (SOC) and rumination on sleep quality. Rumination was measured as a mediating variable. Participants completed an on-line survey through snowball sampling and age ranged from 30-65 years. The majority of participants were female, 64.5% (n = 136), and most participants were Caucasian, 92.2% (n = 188). Results indicted a significant difference with rumination and gender t(209) = 3.02, p = 0.002. Structural equation modelling was used to determine the strength of the effects of SOC on sleep quality. Four path analyses were conducted: the SOC Sleep Quality Model that had a direct pathway between SOC on sleep quality, the Rumination Mediator Model that included rumination mediating SOC and sleep quality, the Complex Model that combined both the SOC Sleep Quality and Rumination Mediator Model, and the Comprehensive Model that incorporated the Complex Model and included sleep hygiene. The results indicate the SOC Sleep Quality Model had the best model fit. Rumination acting as a mediator did not strengthen the relationship between SOC and sleep quality, and sleep hygiene did not strengthen the overall model fit. SOC may act as a mediator between rumination and sleep quality. More research is needed to determine the relationship between SOC and sleep quality and between SOC and rumination. Sleep specialists and health educators may provide better resources for patients with sleep quality problems.
BULLYING, SELF-ESTEEM AND SUICIDAL IDEATION: A THREE-WAVE LONGITUDINAL STUDY OF ADOLESCENTS IN SOUTH AUSTRALIA

Anthony Winefield, University of South Australia, Australia
S. Pignata, University of South Australia, Australia
A. B. Bakker, Erasmus University, Netherlands
S. Trainor, University of South Australia, Australia

Abstract

Objectives. As part of a longitudinal study investigating the psychological functioning of adolescents in their transition to adult life, this study examined the mediating influence of self-esteem on the relation between peer and teacher bullying, and suicidal ideation in adolescents. Methods. A three-wave design was employed to examine these relationships in a sample of Year 10 students from secondary schools in rural and urban South Australia. To assess peer and teacher bullying at Time 1, participants were presented with statements regarding various forms of victimisation (i.e., ‘I get called names by other kids’, ‘I get picked on by some teachers’) and were asked to rate the extent to which they had experienced these both in and outside of school. Self-esteem at Time 2 was measured using Rosenberg’s (1965) Self-Esteem Scale. A suicidal ideation scale devised for this study asked participants at Time 3, if they had ever: had thoughts of killing themselves; had these thoughts persistently; made plans to kill themselves; attempted suicide; and, experienced any of these in the last six months. Results. Structural equation modelling analyses showed that bullying by peers and by the teacher at Time 1 had an impact on suicidal ideation at Time 3 through reduced self-esteem at Time 2. Conclusions. Our results show the mediational role of self-esteem in the relationship between peer and teacher bullying, and suicidal ideation. We also investigate the effects of gender, ethnicity and school demographics to identify patterns of suicidal thoughts. Implications and avenues for future research are discussed.
THE MEASUREMENT OF PSYCHOLOGICAL WELLBEING AND ITS RELATIONSHIP TO PSYCHOLOGICAL DISTRESS

Helen Winefield, University of Adelaide, Australia
Tiffany Gill, South Australian Department of Health, Australia
Anne Taylor, South Australian Department of Health, Australia
Carmen Koster, University of Adelaide, Australia

Abstract

Objectives. A government epidemiological survey regularly assesses levels of psychological distress (PD) in South Australia. We aimed to explore how to assess psychological wellbeing (PW), and its relationship to distress. Methods. Data collection used telephone interviews (N = 1933). Sociodemographic variables included gender, age group, household size, metropolitan versus country residence, children in the household, country of birth, language spoken at home, marital status, education, work status, income level and home ownership. Respondents also completed the K10 measure of PD and three brief scales to assess aspects of PW: Positive Relations with others, Environmental Mastery, and Satisfaction with Life. The total from these three was also computed and used as a measure of Overall Wellbeing. Results. Scales had acceptable internal reliability. In the majority of analyses, variables positively associated with PD were negatively associated with PW and vice versa. For example high PD was associated with being the only adult in the household, speaking a language other than English at home, being divorced or separated, having no educational qualifications beyond secondary school, being unable to work, having a low income, renting one’s accommodation, and being on a pension. High PW on the other hand was associated with the converse of these variables. However gender and living in a household with one or more children did not follow this rule. Conclusions. The measure of wellbeing shows psychometric promise for community surveys. Psychological wellbeing is not completely the opposite end of the continuum to PD.
UNDERGRADUATE STUDENTS’ NETWORKING SKILLS IN CYBERSPACE: 
A SOCIAL NETWORK ANALYSIS

Peter Yang, National Taichung University, Taiwan
Min-Chang Wu, National Yunlin University of Science and Technology, Taiwan
Yu-Fang Chen, Diwan University, Taiwan

Abstract
Social capital researchers have demonstrated a high interest in people’s networking at work. Social network studies, more specifically, aim to identify the characteristics of the individual’s network structure and their potential impact on outcomes. To date, many sociologists have addressed the structural aspects of social capital, because certain network structures are considered as more advantageous than others (Raider & Burt, 1996). This is one of the central premises underlying social network studies that argue for the importance of analyzing network structures. Using social network analysis (e.g. Scott, 2000), several aspects of individuals’ network structures can be examined to reveal the positive features of social capital in a given setting (Stroebe & Stroebe, 1996). This network paradigm is emerging dramatically in current educational research because of the occurrence of advanced social network analysis software (Borgatti & Foster, 2003). In this study, undergraduate students' social capital is defined as the strong support ties in their social networks for daily college life. With emphasis on the dynamic relationship between support members, networking refers to “the exchange of information, knowledge and experience between those people who share common issues and concerns” (Jochum, 2003: 36). Using a longitudinal design, we examined the main characteristics of undergraduate students’ social ties in terms of social network analysis, as well as the students’ interaction with peers in cyberspace and the changes of their networks were studied. From a cultural perspective, the support received from one’s social networks is particularly important for Taiwanese students, as it has been suggested that collectivist rather than individualist values are more salient in Chinese culture (Hofstede, 2001; Smith, Bond & Kağıtçibaşı, 2006). A tendency to maintain cohesive bonds with in-group members, and seek support from social networks with similar others rather than heterogeneous network members or professionals when the stressors are present, helps to inform the characteristics their coping styles (Inman & Yeh, 2007). Implications for research and educational practices are discussed.
STRESSORS AND COPING STRATEGIES OF UK FIREFIGHTERS FOLLOWING ACUTE EXPOSURE TO MAXIMAL PHYSICAL EFFORT AND LIVE FIRE TASKS

Paul M. Young, Tyne and Wear Fire and Rescue Service & Northumbria University, Newcastle, UK
Mark Wetherell, Northumbria University, Newcastle, UK
Sarah Partington, Northumbria University, Newcastle, UK
Alan St Clair Gibson, Northumbria University, Newcastle, UK
Elizabeth Partington, Northumbria University, Newcastle, UK

Abstract
Operational response by UK firefighters requires an abrupt change from rest to near maximal physical effort in novel environments and necessitates almost instant stress management during rapid decision making that must be made under prolonged periods of extreme heat, limited time, and high physical and mental demands. Despite these unique demands there is limited research exploring the physical and psychological stressors considered most demanding by firefighters, or the coping strategies employed to minimise and manage them during operational incidents. 22 operational personnel took part in focus groups identifying common role-related stressors as well as coping techniques based upon problem and emotional-focused coping methods (Lazarus & Folkman, 1984). Individual interviews were then utilised across nine participants at one of three stages of their career: probationary (less than 2 years’ service), mid career (~15 years’ service) and late career (~30 years’ service). The results indicate that most fire service stressors are related to intense periods of heat, life risk and fatigue, and exist driving to the incident, during, and after the incident. Problem focused approaches (such as planning, training and nutritional awareness) are utilised 65% of the time, compared with 35% of emotion focused coping techniques (including imagery, acceptance and anticipated highs), and are related to self perceived effectiveness and frequency of usage. Findings are explained in terms of related research into physiological demands, perceived workload and task complexity during live fire and maximal physical effort tasks. Implications for new recruits and recommendations for future research are discussed.
WHAT MAKES STUDENTS BECOME MORE ANXIOUS AT COLLEGE?

Ivanka Živčić-Bećirević, University of Rijeka, Croatia
Ines Jakovčić, University of Rijeka, Croatia
Jasminka Juretić, University of Rijeka, Croatia

Abstract

Objectives. Following the sample of freshmen through their second year of study we have found that their anxiety significantly increased on average, so we wanted to check some of the possible factors that might contribute to the change in anxiety symptoms. Methods. The representative sample of 260 students was assessed twice, during their first and third semester. Anxiety as a trait (STAI-T), present anxiety symptoms (BAI) and their adaptation to college (SACQ) were assessed in the first measurement. Next year, we have assessed their anxiety symptoms (BAI), as well as their automatic thoughts during study and taking exams. The hierarchical regression analysis was used to check the contribution of assessed variables in explanation of anxiety symptoms at the second year of study. The logistic regression analysis was used to assess the contribution of the same predictors to the difference in anxiety symptoms in two measurements. Results and Conclusions. The results show that anxiety as a trait has a significant contribution to anxiety symptoms at the second year of study, but it was not a predictor of the change in the level of anxiety. Students who were better emotionally and academically adjusted at the beginning of college had less anxiety symptoms a year later. The most significant predictor of the increase of anxiety was negative automatic thoughts related to fear of disappointing parents. The results suggest the need to help freshmen to adjust to college, as well as help them cope with their worries of disappointing parents during college.
POSTER PRESENTATIONS
I CAN’T KEEP UP ANYMORE!
A MOTIVATIONAL ANALYSIS OF BEGINNING TEACHERS’
WORK-LIFE CONFLICT, FATIGUE, AND TURNOVER INTENTIONS

Stéphanie Austin, Université du Québec à Trois-Rivières, Canada
Claude Fernet, Université du Québec à Trois-Rivières, Canada

Abstract
From their first day of work, beginning teachers are asked to produce the same workload than more experienced colleagues, often resulting in overextending hours of preparation, increased level fatigue and turnover intentions. Work-life conflict, which is experienced as a stressor when expectations of competing roles are incompatible with one another, may be an important predictor of beginners’ level of fatigue and turnover intentions. The present study aimed to propose and test a model of beginning teachers’ turnover intentions and fatigue based on Self-Determination Theory (Deci & Ryan, 1985). This model posits that work-life conflict predicts turnover intentions and fatigue through self-determined motivation—a feeling that one’s actions are autonomous and stem from the self rather than from external forces. The hypothesized model was tested among 702 beginning school teachers and showed good fit indices ($\chi^2 = 70.171, df = 48, \text{NNFI} = .997, \text{CFI} = .998, \text{RMSEA} = .026$). Results indicate that work-life conflict is negatively associated with self-determined motivation ($\beta = -.23, p < .001$), which in turn predicts turnover intentions ($\beta = -.62, p < .001$). Results also show a direct effect from work conflict to fatigue ($\beta = -.39, p < .001$), which suggest that self-determined motivation is only a partial mediator of this relationship ($\beta = -.36, p < .001$). Results are discussed in light of the relevant literature, and future research directions are proposed.
THE INVOLVEMENT OF WORK RELATED STRESSORS AND RESOURCES IN BURNOUT AND SATISFACTION WITH LIFE

Hedva Braunstein-Bercovitz, The Academic College of Tel Aviv-Yoffo, Israel

Abstract

Objectives. Work-family conflict (WFC) is considered as stressful: work may interfere with family (WIF) and family with work (FIW). Since WFC is associated with resources depletion, we assumed that personal resources would reduce WCF, which in turn would improve well-being, measured by levels of burnout and satisfaction with life (SWL). Accordingly, the objectives were: a) To assess whether personal resources (person-environment [PE] congruence, Conscientiousness and Extraversion) reduce WIF and FIW; b) To examine if the reduced WIF and/or FIW by the personal resources alleviate burnout and enhance SWL.

Method. Mothers (140) from dual-career-families completed the following questionnaires: WFC Questionnaire, the Self-Directed search, NEO-FFI, The Burnout Measure Inventory, and the SWL-scale.

Results. The relationships between PE-congruence and both burnout and SWL were not direct, but mediated by WIF and FIW. The following standardized pathway coefficients were significant: a. PE-congruence with both WIF and FIW (-.15, -1.5). b. WIF with burnout and SWL (.47, -.20). c. FIW with burnout and SWL (.30, -.19). The relationships between Conscientiousness and both burnout and SWL were direct (-.25, .59), as well as indirect (WIF and FIW mediated the relationship). The standardized pathway coefficients of Conscientiousness with both WIF and FIW were significant (-.25, -.26). Extraversion was not a moderator in the model.

Conclusions. P-E congruence and Conscientiousness may be viewed as personal resources for coping with stress induced by work-family conflict. Empowering these personal resources might prevent the negative consequences of WFC, and result in lower burnout and higher satisfaction with life in young mothers.
TRAIT ANXIETY IN YOUNG CHILDREN: 
EFFECTS ON IMMEDIATE AND DELAYED MEMORY FOR EMOTIONAL STIMULI

Lavinia Cheie, Babeş-Bolyai University, Romania
Laura Visu-Petra, Babeş-Bolyai University, Romania

Abstract
According to the Attentional Control Theory (Derakshan, Eysenck, Santos, & Calvo, 2007), the adverse effects of anxiety on performance are greater when task-irrelevant stimuli are threat related. This prediction has been validated by the experimental research in the field, as studies show that adults with high levels of anxiety recall better negative information. However, research considering this issue in children has been scarce, the few existing studies yielding mixed results. The present study focused on investigating immediate and delayed memory for emotional stimuli in low-anxious (LA) and high-anxious (HA) preschool children ($N = 76$, mean age $= 65.48$ months, $SD = 10.94$). The emotional stimuli used were taken from standardized affective stimuli sets (Affective Norms for English Words; NimStim Face Stimulus Set; Pictures of Facial Affect) and represented negative, positive and neutral words and facial expressions, respectively. In the immediate verbal memory condition, all children remembered better the negative words than the positive ones, yet there were no between-group differences. In the delayed verbal memory condition, HA children remembered less neutral words than the LA preschoolers, and showed a non-significant tendency to reproduce less positive words. However, more clear-cut results were revealed in the delayed visual memory condition, as the HA children recognized significantly less happy faces, and (marginally) more angry expressions than their LA peers. These results support the existence of early anxiety-related differences in the delayed memory of emotional information.
STRESS MANAGEMENT BY PROFESSIONAL TRAINING

Saul Neves de Jesus, University of Algarve, Portugal
Eusébio Pacheco, University of Algarve, Portugal
Nuno Murcho, University of Algarve, Portugal

Abstract
There are some professions with high levels of stress. Teachers, doctors and nurses are some of these professions. Intervention is necessary to change this situation. One of the ways to work on it is by professional training. In this action-research a 50-hours programme to prevent professional stress is presented. The ten sessions of the course included several exercises on a variety of topics: Sharing professional experience with colleagues, identifying specific stress factors and possible coping strategies, replace irrational beliefs with more appropriate ones, and practicing assertiveness and relaxation. Following the programme, participants showed a significant decrease in their irrational beliefs and professional distress, as well as an increase in their professional motivation and wellbeing.
ANXIETY, PERFORMANCE IN A COGNITIVE TASK AND WORKING MEMORY:
AN EXPERIMENT WITH CHILDREN AGED 11 – 12 YEARS OLD

Katerina Detoraki, University of Crete, Greece
Eleni Vassilaki, University of Crete, Greece
Ioannis Spantidakis, University of Crete, Greece

Abstract
52% of the student population in Greece reports school anxiety as one of the most commonly recorded emotions. The literature review reveals that the studies investigating anxiety, performance and working memory in Greece are few. Thus, the main aim of our study was to investigate the relationship between anxiety, the central executive subsystem of W.M. and performance reduction. The theoretical background of the study is based on the theory of information processing efficiency by Eysenck & Calvo (1992). The study took place in Cretan primary schools in two stages: i) 350 children aged 11 – 12 years old completed the STAI inventory, ii) of them 30 were put in the high anxiety and 30 in the low anxiety group. The selection process was based on the STAI results. Both groups were given a test measuring the reading span of working memory (Daneman & Carpenter, 1980). The test includes 27 sentences orally pronounced which are divided into groups of 2, 3, 4 sentences. The child has to recall the last word of each sentence in the same order presented to him/her. Time taken to complete the task was measured. The statistical analysis so far has shown that: i) the performance of the two groups differ significantly, ii) high anxiety levels are related to the processing efficiency of the working memory, iii) there appears to be a relationship between anxiety levels and performance on the cognitive task completed. It seems that the highest the demands imposed on working memory the more time children spent on the test.
HOW DOES WORKPLACE CONTRIBUTE TO EARLY EXPERIENCE OF BURNOUT AND ENGAGEMENT? A MOTIVATIONAL ANALYSIS

Claude Fernet, Université du Québec à Trois-Rivières, Canada
Stéphanie Austin Université du Québec à Trois-Rivières, Canada

Abstract
Burnout and engagement are considered as psychological responses to pervasive working conditions, such as job demands and resources. Although the first years of a career provide valuable information on how working conditions contribute to early experience of burnout and engagement, past research has overly concentrated on populations of established employees. Integrating and expending upon the job demands-resources model and the self-determination theory, we propose a model in which work motivation partially mediates the relationships between job demands and burnout and between job resources and engagement. This model was tested in a multi-cohort sample (1-2, 3-4, and 5 years of experience) of beginning teachers (n = 1055). It is hypothesized that for less experienced employees, working conditions are better predictors of burnout and engagement than work motivation. Conversely, working conditions are assumed to be less influential than work motivation for more experienced employees. A multi-group structural equation analysis provide support for the proposed model (χ² = 3226.915, df = 165, NNFI = .934, CFI = .953, SRMR = .075). Consistent with predictions, the relationships between work motivation and burnout (β = -.35, β = -.53, β = -.57) and between motivation and engagement (β = .43, β = .63, β = .56) are greater as employees gain experience. Additionally, the direct links between job demands and burnout (β = .56, β = .50, β = .34) and between job resources and engagement (β = .31, β = .13, β = .17) diminish as employees gain experience. Implications for research are discussed.
DEVELOPMENT OF POSITIVE INTERACTION SCALE FOR CLASSMATES: ITS INFLUENCE ON LATER DEPRESSION AND ANXIETY

Hideyuki Fujiu, University of Tsukuba, Japan
Masako Fujiu, Shinjuku-ku Education Center, Japan

Abstract

Objectives. The purpose of the present study was to examine the influence of positive interaction for classmates on depression and anxiety from Japanese middle school students. Methods. There were 713 7th-grades students in the first survey (Time 1; April), 312 in the second survey (Time 2; May) and 162 in the third survey (Time 3; July). Students completed questionnaires that asked about the positive interaction scale for classmates, Japanese version of Depression Self Rating Scale (Birleson, 1981) and Japanese version of State-Trait Anxiety Inventory form Y (Spielberger et al., 1983). Results. The results showed that having positive interaction between classmates predicted students' future depression and anxiety level. The subscales of "friend's existence", "comfortable class" and "kindness to others" at Time 1 and Time 2 had significant negative effect on depression and anxiety level at Time 3. Conclusions. It was suggested that positive interaction for classmates is important for students to protective factor of depression and anxiety.
DEVELOPMENT OF POSITIVE INTERACTION SCALE FOR CLASSMATES:
SCALE DEVELOPMENT, RELIABILITY, AND VALIDITY

Masako Fujiu, Shinjuku-ku Education Center, Japan
Hideyuki Fujiu, University of Tsukuba, Japan

Abstract

Objectives. The purpose of the present study was to develop the positive interaction scale for classmates in middle school students, and to examine the reliability and validity. Methods. The items were developed based on free description from 170 7th-grade middle school students in Japan. The question of free description were "what is the friend relation that the school life becomes enjoy?" and so on. The 39 items were collected by using KJ method. 7th-grade Japanese middle school students(N = 713) completed the questionnaire that asked about the positive interaction scale for classmates, Depression Self Rating Scale (Birleson, 1981) and State-Trait Anxiety Inventory form Y (Spielberger et al., 1983). Results. The results of factor analysis revealed that the positive interaction scale for classmates had 4 factors: "friend's existence", "comfortable class", "classmate's interaction" and "kindness to others". Reliability was examined from the alpha coefficient. Concurrent validity of the positive interaction scale for classmates was examined. The positive interaction scale for classmates had high alpha coefficient (.790 ~ .908). The positive interaction scale for classmates showed significant positive correlations with DSRS, STAI-Y and RSES, which supports concurrent validity. Conclusions. These results suggested that the positive interaction scale for classmates had good reliability and validity as a measure of classroom stress.
BEYOND DEMAND-CONTROL-SUPPORT:
EMOTIONAL LABOUR AND BURNOUT- A REPLICATION STUDY AMONG EMERGENCY STAFF

Faustine Grillo, Université de Franche-Comté, France
Didier Truchot, Université de Franche-Comté, France

Abstract

Objectives. The job-demand-control-support (JDCS) model (Karasek & Theorell, 1990) is a leading theoretical model in occupational health psychology. However, the relative influence of the JDCS model variables and that of emotional labour remains largely unknown. Emotional labour includes behaviours as surface acting (displaying an emotion that is not actually felt) and deep acting (the activity undertaken to actually feel a required emotion). Näing Brië and Brouwers (2006) demonstrated, among teachers, that emotional labour has a unique relationship with burnout that is separate from its relationship with the variables of the JDCS model. The main aim of the present study was to replicate this finding among emergency staff. Methods. 115 emergency staff filled out a questionnaire containing the measurement of burnout (MBIHSS, Maslach et Jackson, 1986), emotional labour (Brotheridge and Lee’s scale, 1998) and an adapted version of the Job Content Questionnaire (Karasek, 1985). Results. Regression analyses showed a significant main effect of job demand on emotional exhaustion ($\beta = .48, p < .01$) and depersonalization ($\beta = .34, p < .01$). Support had a negative main effect on emotional exhaustion ($\beta = -.26, p < .01$) and control a positive main effect on personal accomplishment ($\beta = .19, p < .05$). We did not observe an interaction. On the other hand, surface acting explained an additional part of the variance of the three burnout dimensions. Deep acting explains an additional part of the variance of the third dimension of burnout, personal accomplishment. Conclusion. Emotional labour explains a part of burnout beyond the JDCS model.
PROFILING IRISH YOUTH MENTAL HEALTH IN DISADVANTAGED AND MINORITY GROUPS

Louise Hall, University College Dublin, Ireland
Barbara Dooley, University College Dublin and Headstrong, Ireland

Abstract
To date there is limited research on the mental health of young people in Ireland. Specifically there is a lack of studies investigating adaptive or resilient development in disadvantaged youth groups. Thus, the main aim of this study is to further our understanding of youth mental health by profiling the mental health of 4 specific groups of young people: early school leavers, Travelers, young people from designated disadvantaged areas and deaf young people. A quantitative survey of 200 young people was carried out using the My World Questionnaire (MWQ) developed by Headstrong following a review of positive and negative functioning in youth mental health. These domains include both positive and negative aspects of functioning and contain a number of screening instruments which have each been used internationally for a normative population. However, there are no data in terms of a collective use of the domains in disadvantaged youth groups. Thus, a primary aim of the research is to (a) determine the psychometric properties of the MWQ for use on disadvantaged groups (b) profile youth mental functioning across age, gender and a number of other variables using the instrument and (c) to build a model of resilience specific to young people in disadvantaged and minority groups. Results are hoped to aid current information systems of adolescent mental health and provide a vehicle which will help facilitate the monitoring of the mental health needs of vulnerable populations so as to better inform both informal supports (e.g., families) and formal community supports. Please note: Results will be completed by August.
WORKING MEMORY PERFORMANCE: 
THE ROLE OF ATTENTIONAL BIAS AND WISHFUL THINKING IN CHECKERS

Ben Harkin, University of Glasgow, UK
Klaus Kessler, University of Glasgow, UK

Abstract

Objectives. Compulsive checking is reported by up to 81% of patients with OCD (Antony et al., 1998). This poster presents counterintuitive data and explains it through checkers’ bias for threat stimuli interacting with a desire to remove threat, that is, magical thinking. Method. We employed a delayed-match-to-sample task. Four household appliances (e.g., kettle) were presented in six possible locations and two devices were switched “ON” while two were “OFF”. An intermediate probe questioned the “ON/OFF” status of an appliance at a specified location. In “misleading” trials no item had been at that location, while in “resolvable” trials an item had been there. At the end of each trial, an appliance was presented as the actual memory probe (Probe2) and participants indicated whether it had been “ON” or “OFF”. Results. According to our expectations, checkers’ performance on Probe2 was attenuated in misleading ($p = 0.07$) but not resolvable ($p = 0.4$) trials. Revealingly, this data pattern was driven by the counterintuitive finding that high-checkers were more likely to provide an “OFF” response for an appliance that was “ON” ($p < 0.009$) compared to low-checkers (96% vs. 86%), but not the other way around. Conclusions. “ON” appliances are more threatening and grab the attention of checkers so they predominantly try to encode these items into WM. However, the desire to maximize control in misleading trials may result in repeated detrimental checking especially of these “ON”-items which deteriorates their memory traces and may result – in combination with an anxiety-fuelled desire for all items to be “OFF” – in a wrong “OFF”-response.
TYPE D PERSONALITY, GENDER, AND HABITUATION-SENSITIZATION OF CARDIOVASCULAR RESPONSE TO STRESS

Siobhán Howard, National University of Ireland, Galway
Brian M. Hughes, National University of Ireland, Galway

Abstract
The present study sought to examine the role of gender and the Type D personality on cardiovascular reactivity to stress (CVR). Cardiovascular data were collected from 65 students (29 male, 36 female) who, following an initial 10-minute baseline period, underwent two cognitive stress tasks. Patterns of CVR habituation-sensitization were examined. While female participants showed a similar magnitude of systolic blood pressure (SBP) and diastolic blood pressure (DBP) reactivity to both stressors, the pattern of response in males varied according to Type D status: non-Type D males showed less SBP reactivity to the second stressor, indicative of habituation, with Type D males showing a trend towards sensitization. For DBP reactivity, regardless of gender, Type D participants showed sensitization while non-Type Ds showed habituation. The results implicate Type D personality in maladaptive cardiovascular responses, particularly in men, highlighting a possible direct mechanism of psychosomatic cardiovascular pathogenesis.
POSTTRAUMATIC STRESS DISORDER AND THE TRAUMATIC MEMORY: GIVING LIFE TO A LIFELESS CONCEPT

Brock Kilbourne, El Camino Psychology Services, USA
Samantha Kilbourne, Alliant International University, USA

Abstract

Objective. While it is generally accepted that memory is a constructive and dynamic process, the two most widely used empirically supported treatments (i.e., CBT and EMDR) for Posttraumatic Stress Disorder (PTSD) focus on a static traumatic memory and its meaning. The therapist and the client work to construct a single traumatic event or list of separate traumatic events that the client will be exposed to repeatedly. Here we discuss an alternative conceptualization of PTSD traumatic memories. Methods. A qualitative, phenomenological and client centered approach is used to understand the clinical reports of American civilian and military clients with chronic PTSD in a private practice setting. Results. Chronic PTSD clients report traumatic memories that do not fit the idea of a static traumatic memory. Subjective reports suggest traumatic memories occur in succession, involve imprinting, occur in combination, are interactive and paradoxical, and are often altered and expansive. Conclusion. Memories in general and traumatic memories in particular are dynamic and constructive. Therefore, CBT and EMDR might improve their effectiveness by systematically addressing the multidimensional and dynamic nature of traumatic memories.
THROUGH THE LOOKING-GLASS:
INTENTIONALLY INDUCED PTSD AND WHAT ALICE FOUND THERE

Brock Kilbourne, El Camino Psychology Services, USA
Samantha Kilbourne, Alliant International University, USA

Abstract
In Lewis Carroll’s classic fairy tale, “Through the Looking-Glass, and What Alice Found There,” Alice enters an alternate world on the other side of a mirror. Alice transforms from a pawn to a queen in order to defeat the Red Queen at chess and then awakes from her dream. The present paper looks on the other side of Posttraumatic Stress Disorder (PTSD) treatment and sees an alternate world where PTSD is induced and perpetuated. However, unlike Lewis Carroll’s alternate world where Alice is empowered and from which she awakes, the alternate world of PTSD induction renders Alice helpless and dehumanized in a seemingly never ending nightmare. PTSD is easier to induce than coercive persuasion and more insidious, primarily because PTSD naturally occurs in diverse life settings and can often result in long lasting psychological effects, sometimes 40 years after the traumatic event (e.g., Vietnam Vets or molest victims). Beatings, torture, rape, molest, and/or threats of death and actual death can be contrived or executed to induce trauma and PTSD. Six ways to induce PTSD are discussed. It is recommended that the international community should explicitly prohibit the induction, perpetuation, and/or manipulation of PTSD for the purpose of coercion, torture, or human experimentation.
TRAIT ANXIETY AND PAIN-RELATED EXPECTANCY PREDICT PRE-PROCEDURAL STATE ANXIETY AND NEGATIVE AFFECT IN FIRST-TIME COLPOSCOPY PATIENTS

Susanna Kola, National University of Ireland, Galway, Ireland
Jane C. Walsh, National University of Ireland, Galway, Ireland

Abstract

Objectives. Women experience significant emotional distress in relation to further diagnostic evaluation of pre-cancerous cell changes of the cervix. However, less is known about the specific variables that contribute to elevated state anxiety and negative affect prior to colposcopy. Identification of psychosocial factors that predict distress in this patient group can help in the development of more sophisticated interventions to reduce psychological distress.

Methods. Socio-demographic variables, scores for state anxiety, negative affect, trait anxiety, fear of pain, pain-related expectancy and knowledge were assessed in 164 first-time colposcopy patients immediately before the colposcopy examination.

Results. Marital status, parity, trait anxiety, fear of minor pain and expectations of discomfort emerged as significant predictors of pre-colposcopy state anxiety. Parity, trait anxiety and expectations of pain emerged as significant predictors of pre-colposcopy negative affect.

Conclusions. Women who are single, have children, are high trait anxious, and anticipate pain and discomfort appear to be most at risk for pre-colposcopy distress. Interventions aimed at reducing pre-colposcopy psychological distress should include situation-specific variables that are amenable to change, and trait anxious women are likely to benefit from interventions to reduce distress.
COUNSELLORS’ PERSPECTIVES ON SELF-HARM AND THE ROLE OF THE THERAPEUTIC RELATIONSHIP FOR WORKING WITH CLIENTS WHO SELF-HARM

Maggie Long, University of Ulster, UK
Mary Jenkins, University of Ulster, UK

Abstract

Objectives. (1) To enhance understanding of self-harm, an increasingly prevalent phenomena in contemporary society, (2) to highlight the role of counsellors in developing understanding about self-harm, and (3) to outline counsellors’ ideas and experiences regarding the role of the therapeutic relationship when working with clients who self-harm. Methods. A qualitative exploration of counsellors’ perspectives on working with people who self-harm. Semi-structured interviews were conducted with counsellors who have experience of working with clients who self-harm (n = 8). The interviews were tape-recorded; each lasted approximately 45 – 60 minutes and was transcribed immediately after completion. The research gained approval from the University Ethics Committee. Results. Data were analysed using Grounded Theory. The emergent categories include: (1) the activity of self-harm and (2) the therapeutic relationship with people who self-harm. The categories and sub-categories were integrated to form the core category. Conclusions. Counsellors have a valuable role to play in the lives of people who self-harm through professional practice and through participation in research to share their ideas. An effective therapeutic relationship facilitates a safe environment wherein people can move from a life of self-harm to a life of self-healing.
MALE BODY IMAGE SELF-CONSCIOUSNESS DURING PHYSICAL INTIMACY

Lorraine K. McDonagh, National University of Ireland, Galway, Ireland
Todd G. Morrison, University of Saskatchewan, Canada

Abstract
Body image has been described as a multidimensional phenomenon which includes self-perceptions and attitudes regarding one’s physical appearance. A growing domain of research points to the role of body image attitudes in sexual functioning. Using a sample of male participants (N = 136) from the Republic of Ireland, the aim of this study was to develop a psychometrically sound measure of male body image self-consciousness during physical intimacy (i.e., The Male Body Image Self-Consciousness Scale, M-BISC). The generation and reduction of items; the internal reliability and dimensionality of the resultant measure; and various tests of validation are outlined. As predicted, participants' body image self-consciousness correlated positively with their sexual anxiety and motivation to become more muscular, and correlated negatively with their sexual esteem, body esteem, and self-rated physical attractiveness. Limitations of this study and directions for future research are discussed.
STRESS-INDUCED AVERSIVE LEARNING IN TWO RAT MODELS OF CHRONIC PAIN

Orla Moriarty, National University of Ireland, Galway, Ireland
Michelle Roche, National University of Ireland, Galway, Ireland
Brian E. McGuire, National University of Ireland, Galway, Ireland
David P. Finn, National University of Ireland, Galway, Ireland

Abstract
Passive avoidance (PA) is commonly used in rodents to test aversive learning. It involves pairing a mild stressor with an unconditioned stimulus, such as context, to produce a measurable correlate of memory. Chronic pain is associated with cognitive deficits; however, the neural mechanisms underlying this phenomenon are poorly understood. There is considerable overlap in the brain regions involved in stress, aversion and chronic pain, and so aversive learning may be particularly affected. The aim of this experiment was to examine the effect of chronic pain on aversive learning. Chronic neuropathic pain was modelled by spinal nerve ligation (SNL) surgery and chronic inflammatory pain by a single intra-plantar injection of complete Freund’s adjuvant (CFA) in male Sprague-Dawley rats. The PA paradigm involved pairing an air-puff stimulus with the preferred dark compartment of a light/dark arena, such that on re-exposure to the arena, rats avoided the dark context i.e. a PA response. Characteristic symptoms of chronic pain, allostynia and hyperalgesia, were confirmed for two weeks post-surgery/injection using von Frey, acetone-drop and Hargreaves’ methods. Rats were then tested in the PA paradigm. Air-puff produced a significant increase in latency to enter the dark compartment on re-exposure to the arena in both pain models and controls (n = 5-9/group, p < 0.05), indicating intact aversive learning. However, performance in CFA and SNL groups was not significantly different from their respective controls. These results suggest that aversive learning was not affected in these models of chronic pain, under these experimental conditions.
ILL-BEING RELATED TO NURSING:
STUDY OF PREDISPONING FACTORS

Nuno Murcho, Institute on Drugs and Drug Addiction, Portugal
Saul de Jesus, University of Algarve, Portugal
Eusébio Pacheco, Regional Health Administration of Algarve, Portugal
Andreia Pacheco, University of Algarve, Portugal

Abstract

Objectives. The aim of the present research is to determine the factors which can influence ill-being related to nursing, and to understand how burnout and depression can be related. Method. This is an exploratory, descriptive, correlational and quantitative study, with a sample of 499 nurses that work in public hospitals of the Algarve, in Portugal. The data was collected through a self-administered questionnaire. The variables studied were the characterization of psychosocial (stress vulnerability, stress, anxiety, depression and burnout), socio-demographical (e.g., age, sex, existence and number of children, type of service where the health professional works, absenteeism, reason why nursing was chosen as profession), and ill-being related to nursing factors (ill-being felt in the past 30 days and symptoms of ill-being related to nursing). Results. The socio-demographical variables show no relevant (\( r > .30 \)) or significant (\( p < .05 \)) correlations with the psychosocial or ill-being variables. However, these past ones correlate all each other, except for some of the dimensions of burnout. Through the use of linear regressions we verified that psychosocial characterization variables can predict ill-being characterization variables, and that burnout can also predict depression. Conclusions. This research seems to confirm the hypothesis that the ill-being experienced by these health professional (nurses) can present predisposing factors of psychosocial nature, not socio-demographical variables. On the other hand, depression appears to be influenced by burnout.
ORAL GAVAGE ADMINISTRATION DURING PREGNANCY HAS DEVELOPMENTAL AND BEHAVIOURAL EFFECTS ON OFFSPRING

Sandra O’Brien, National University of Ireland, Galway, Ireland
John P. Kelly, National University of Ireland, Galway, Ireland

Abstract
Administration of drugs to rodents by oral gavage is commonplace and a relevant route allowing extrapolation to the human situation. However, gavage administration increases corticosterone levels, a stress indicator in rodents. Stressors, when applied during pregnancy, can result in a range of deficits in the resultant offspring. Thus, the purpose of this study was to examine whether daily gavage administration of water (between days 7 and 21 of gestation) to pregnant female Sprague-Dawley rats (n = 5-6/group) would have an impact on body weight and behavioural parameters such as the open field (OF), elevated plus maze (EPM) examined either at 1, 2, 3 or 4 months of age, or the Morris water maze (MWM) examined at 3 months of age. Results were compared to matched untreated pregnant rats. Neither maternal weight gain during gestation nor pup birth weight were affected by gavage administration. However, significant reduction in bodyweight in the gavage offspring was evident from 4 days to 8 weeks after birth. Locomotor activity in the EPM was decreased in male gavage offspring at 1 month, but increased in male gavage offspring at 3 months. In the OF, locomotor activity was increased in female gavage offspring at 3 months. In the MWM, path length and time to find platform were reduced in gavage offspring of both sexes on the final day of testing (all significant results p < 0.05). The results suggest that oral gavage administration during pregnancy is a stressful procedure with profound developmental and behavioural consequences in the offspring.
DO MALADAPTIVE EMOTION REGULATION AND AVOIDANCE MOTIVATION
EXPLAIN RISK FOR ANXIETY DISORDER?

Elodie J. O’Connor, Deakin University, Melbourne, Australia
Petra Staiger, Deakin University, Melbourne, Australia
Nicolas Kambouroopoulos, Deakin University, Melbourne, Australia

Abstract

Objectives. Emotion regulation (ER) is the process of modifying emotional states, in order to control
experienced emotion. Few studies have investigated ER in the context of anxiety disorders, a condition
classified by pervasive negative emotional states. The aim of this research was to determine whether
maladaptive ER had a significant positive relationship with avoidance motivation (AM; known to have a
strong association with anxiety) and whether these two variables significantly explained risk for anxiety
disorders. Methods. Participants (N = 408), ranging in age from 18 to 73 (M = 32.63, SD = 11.59), completed
a validated self-report questionnaire. Seventy-nine percent of the sample was female. Fifty-five percent
scored at high risk for generalised anxiety disorder (GAD) and/or social anxiety disorder (SAD). A series of
MANOVAs were conducted to test relationships between constructs. Results: Participants at high risk for
GAD had significantly higher AM and maladaptive ER scores, and significantly lower adaptive ER scores,
than those at low risk for GAD (p < .001). Those at high risk for comorbid GAD/SAD experienced more
maladaptive ER than those at high risk for either GAD or SAD (p < .001), who in turn experienced more
maladaptive ER than those at low risk for either anxiety disorder (p < .001). Conclusions. Findings provide
the first evidence for a positive relationship between maladaptive ER and AM. ER significantly contributed to
the explanation of risk for anxiety disorder, independent of the effect of AM. The need for further research
examining the types of ER strategies utilised by those with high AM when placed under anxiety-provoking
conditions is highlighted.
EVIDENCE OF A GENE BY ATTACHMENT SECURITY INTERACTION ON HELPLESS RESPONSES IN CHILDREN AGED FIVE

Katherine O'Donnell, McGill University, Canada
John E. Lydon, McGill University, Canada
Leslie Atkinson, Ryerson University, Canada
Alison S. Fleming, University of Toronto, Canada
James L. Kennedy, University of Toronto, Canada
Marla B. Sokolowski, University of Toronto, Canada
Ellen Moss, Université de Québec à Montréal, Canada
Hélène Gaudreau, Douglas Mental Health University Institute, Canada
Ashley Wazana, McGill University, Canada
Michael J. Meaney, McGill University, Canada

Abstract

Research has demonstrated the link between negative cognitions (helplessness) and the development of anxiety. There is a paucity of research on the early manifestations of such thinking styles in children. In the present study, we explored the genotype by early rearing environment interaction in association with helpless behaviours in children aged five. More specifically, we hypothesized that children homozygous for short allele of the serotonin-transporter gene and an insecure attachment style would react more negatively to failure than those without both risk factors. 

Methods. This data is drawn from a sub-sample of mother-child dyads from the prospective longitudinal Maternal Adversity Vulnerability and Neurodevelopment project. The mother-child dyads completed the laboratory measure of attachment security (Strange Situation) and buccal DNA check swabs were taken when the child was 36 months. At 60 months, the children performed an impossible puzzle task, a measure of learned helplessness. The task was designed to assess the child's response to a “failure” or mild stressor, as some of the puzzles were impossible to solve.

Results. Results revealed that the children with at least one copy of the short allele and an insecure attachment rated their performance significantly lower than those with a secure attachment or homozygous for the long allele.

Conclusion. In light of a small sample size these results should be interpreted with caution. Nonetheless, these findings suggest a possible pathway between early rearing environment and genotype to increase risk for psychopathology.
THE UTILITY OF THE SELF-REGULATORY MODEL (SRM) IN PREDICTING ANXIETY, DEPRESSION AND CLINICAL OUTCOME IN COUPLES UNDERGOING IN-VITRO FERTILIZATION (IVF) TREATMENT FOR INFERTILITY

Claire O'Driscoll, National University of Ireland, Galway, Ireland
Jane Walsh, National University of Ireland, Galway, Ireland
Aonghus Nolan, University College Hospital Galway, Ireland
Eithne Lowe, University College Hospital Galway, Ireland

Abstract

Aims. The aim is to investigate the utility of the Self-Regulatory Model (SRM) (Leventhal et al., 2003) in predicting anxiety, depression and clinical outcome in couples undergoing in-vitro fertilization (IVF) treatment for infertility. Methods. Thirty two men and 34 women (N = 66) receiving IVF completed questionnaires assessing the components of the Self-Regulatory Model (cause, timeline, perceived consequences, perceived cure/control, coping), anxiety and depression using a cross-sectional design. Data regarding clinical outcome of treatment was obtained from medical charts approximately 2 weeks after embryo transfer. Results. Hierarchical multiple regression analysis revealed that the model predicted 57% of the variance of anxiety in patients (Adjusted $R^2 = .567$, $F[14, 53] = 5.95$, $p < .000$). Perceived consequences ($\beta = .510$, $p < .05$) and illness identity ($\beta = .419$, $p < .05$) were independent predictors of anxiety. Results of a logistic regression suggested that age ($\beta = .188$, $p = .04$) and cure/control beliefs ($\beta = -.273$, $p = .05$) were independently associated with clinical outcome of pregnancy. Conclusions. Patients undergoing IVF experience psychological distress. Distress was not, however, associated with clinical outcome. Future intervention aimed at decreasing anxiety in patients undergoing IVF should consider taking into account patients’ perceptions of identity and consequences of undergoing fertility treatment.
SO YOU ARE LOOKING FOR SPIT!
AN INVESTIGATION OF PARENTS’ PERSPECTIVES OF SALIVA SAMPLING TECHNIQUES

Christine O’Farrelly, University College Dublin, Ireland
Eilis Hennessy, University College Dublin, Ireland

Abstract
The aim of this research is to investigate parents’ perspectives of saliva sampling techniques. The measurement of salivary cortisol as a noninvasive and effective biological marker of stress is attractive to researchers and clinicians alike. It is particularly useful with young children, as observation methods may not always reflect young children’s stress levels reliably. However, saliva collection with young children can be problematic as both assent and sample volumes can be low. These issues are further compounded when adherence with collection protocols is poor. To address these issues it is important to consider children’s and parents’ own perspectives of saliva sampling approaches. This poster reports on a pilot study comparing the acceptability of three saliva sampling approaches to parents of preschoolers attending early childhood care and education settings. Parents’ perceptions of saliva sampling using eye spears, oral swabs and passive drool techniques were sought using semi-structured interviews. Interviews were transcribed verbatim and analysed using the principles of thematic analysis. Results refer to differences in parents’ attitudes towards the three sampling techniques. Given that the success of psychobiological research often hinges on parental consent and adherence to collection protocols, the importance of parents’ perspectives cannot be overestimated.
IDENTIFICATION OF GENES EXPRESSED DURING CONDITIONED FEAR, PERSISTENT PAIN STATE AND FEAR-CONDITIONED ANALGESIA

W. M. Olango, National University of Ireland, Galway, Ireland
S. M. Géranton, University College London, UK
O. Moriarty, National University of Ireland, Galway, Ireland
M. Roche, National University of Ireland, Galway, Ireland
S. P. Hunt, University College London, UK
D. P. Finn, National University of Ireland, Galway, Ireland

Abstract
The neural substrates and pathways mediating endogenous analgesia and aversion (fear, anxiety) overlap. Fear-conditioned analgesia (FCA) is the profound suppression of pain during exposure to conditioned aversive stimuli and is mediated at spinal and supraspinal levels. The present study investigated brain and spinal cord expression of genes previously implicated in pain- and fear-related plasticity (Zif268 and SGK1), following expression of formalin-evoked nociception, contextual fear or FCA in rats. Male Lister-hooded rats (225-250 g, n = 12) received an intra-plantar injection of formalin or saline into the right hind paw. Rats were then re-exposed to an arena in which, 24hrs previously, they had received footshock (10 x 1s, 0.4 mA, 1 min intervals). Non-footshock and yoked footshock control groups were also included. Post-mortem mRNA levels were measured in discrete brain regions and in the dorsal horn using RT-qPCR. Contextual fear (freezing and 22 kHz ultrasonic vocalisation) and formalin-evoked nociceptive behaviour were recorded for 30 min. Re-exposure to the context previously paired with footshock was associated with robust fear behaviour and an attenuation of formalin-induced nociceptive behaviour. Formalin injection resulted in an increase in Zif268 and SGK1 mRNA expression in the ipsilateral dorsal horn. FCA was associated with reduced expression of zif268 in ipsilateral dorsal horn. Conditioned fear was associated with an increase in Zif268 mRNA expression in the rostral ventromedial medulla of saline-, but not formalin-treated rats. In conclusion, these data provide evidence for differential pain- and fear-related expression of plasticity-related genes in the presence or absence of contextually induced aversion and nociceptive tone.
THE LEVELS OF STATE - TRAIT ANXIETY IN CHILDREN’S LIVES WITH AN ABSENT FATHER

Aggeliki Papadaki, University of Crete, Greece
Eleni Papadaki-Michailidi, University of Crete, Greece
Eleni Vassilaki, University of Crete, Greece

Abstract
Until recently, most research related to the child’s development focused on the maternal role leaving aside the role of the father. Many researchers put emphasis on the quality of fatherhood because it influences all aspects of children’s personality, cognitive and emotional development, diagnosis of anxiety and depression. The data presented here are part of a larger project investigating the effects of separation and father’s absence on the child’s psychological well being. Here we will present data concerning the relationship between father’s absence and children’s anxiety levels. The study took place in Cretan primary schools. 194 children aged 11–12 years old (98 females, 96 males) completed the STAI inventory. Of them, 109 children were living with both parents and 85 only with the mother. The data analysis so far has shown that children living without the father record significantly higher levels of state (M.O. = 40.34, T.A. = 9.98) and trait anxiety (M.O. = 41.47, T.A. = 8.71) than children living with both parents (M.O. = 35.79, T.A. = 9.05 and M.O. = 37.45, T.A. = 8.94, respectively). Additionally, sex differences were recorded concerning the anxiety levels. Females recorded higher state (M.O. = 39.23, T.A. = 10.06) and trait (M.O. = 40.43, T.A. = 9.02) anxiety levels than males (State: M.O. = 36.30, T.A. = 9.15, Trait: M.O. = 37.97, T.A. = 8.94). Since there are no other research evidence in that area in Greece our data are discussed, interpreted and compared with evidence from abroad.
CORRELATION BETWEEN LIFE EVENTS AND COPING IN ADOLESCENT STUDENTS OF LOW INCOME

Consuelo Durán Patiño, National Autonomous University of Mexico, Mexico
Blanca Barcelata, National Autonomous University of Mexico, Mexico
Emilia Lucio-Gómez, National Autonomous University of Mexico, Mexico

Abstract
The purpose of this study was to assess the perception of life events, and coping strategies in high school students from a low-income neighbourhood. This is a cross-sectional and correlative study. A total of 288 student adolescents, 45.8% males and 54.2% females from 15 to 18 years old (mean age = 16.3 years, SD = 1.33), from public schools participated. A socio-demographic questionnaire was used to assess economic status; life events were assessed using the Life Stressful Events Questionnaire (Lucio & Durán, 2003) and coping was measured by the Coping Responses Adolescents Questionnaire (Lucio & Villaurrel, 2008). The relation between some demographic variables, stressful events, and coping strategies were examined by means of bivariate correlations. Hierarchical multiple regression analysis was used to determine the contribution of some predictor variables (gender, family structure). Most stressful events were observed with respect to the family and social dimensions, such as parent’s job loss, having a small amount of money, school changes, being assaulted, someone related to the family economic status). The main coping strategies used are avoidance and seeking social support from their peers. This could be a risk factor in this population, as reported by other studies of risk behaviors in adolescence. Some r and beta coefficients reached significance. Family and social stressful events were related to most of the areas, showing also negative correlations with family support seeking. Gender differences are discussed.
THREAT AND CHALLENGE APPRAISALS OF IMPRESSION MANAGEMENT COGNITIONS IN TEAM-SPORT ATHLETES

Simon Mark Payne, Aberystwyth University, UK
Joanne Thatcher, Aberystwyth University, UK
Sally Akehurst, Aberystwyth University, UK

Abstract
Since Schlenker and Leary's (1982) comprehensive review, much research has examined the self-presentation antecedents of social anxiety. Further, Leary's (1995) formula for social anxiety: Strong impression motivation (IMO) coupled with correspondingly weak impression efficacy (IEFF), has stimulated considerable research in sport psychology; the associated construct, ‘self-presentation concerns,’ consistently predicts a good amount of variance in trait and state competition anxiety (Wilson & Eklund, 1998; McGowan, Prapavessis, & Wesch, 2008). However, despite quite a substantial body of literature (cf. Martin Ginis, Lindwall, & Prapavessis, 2007), the extant research has failed to acknowledge the potential for functional cognitive and emotional responses to result from a discrepancy between high IMO and low IEFF. Couched in the framework of Lazarus and Folkman (1984, 1991), and part of a questionnaire development and validation study, this presentation will discuss how athletes may often appraise these impression management constructs as a challenge, not a threat i.e. they induce excitement, not anxiety. Data from independent samples of team-sport athletes that were utilised for exploratory (N = 316) and confirmatory factor analyses (N = 406) support this contention. The measurement device in question, the Impression Motivation and Efficacy in Sport Questionnaire (IMESQ-T), is the first known measure to tap these key self-presentation cognitions. Results lead to theoretical assertions concerning the psychological mechanisms that may underpin the data - which have implications for preventing self-presentational anxiety. Limitations of the study will be discussed, and suggestions for future research offered.
THE ANGER SUPERIORITY EFFECT IN CHILDREN:
AN INVESTIGATION OF ECOLOGICAL RELEVANCE USING TWO VERSIONS
OF THE VISUAL SEARCH TASK

Irina Pitică, Babeş-Bolyai University, Romania
Georgiana Susa, Babeş-Bolyai University, Romania

Abstract

Research on the relation between emotion and cognition often assumes that angry facial expressions represent a phylogenetically relevant signal of threat. This assumption is grounded mostly in studies using the visual search task that report a “face in the crowded” effect for anger. Recent research challenges the anger superiority effect in tasks using ecological displays arguing that the more efficient detection of angry faces might be restricted to search between homogenous, artificially controlled distracters. Also, it is yet not clear whether the anger superiority effect can be observed in children as well. Therefore the present study investigates the anger superiority effect in children aged 9 to 14 using two visual search tasks. We test the hypothesis that this effect is relevant for ecological situations of searching among different faces by comparing the efficiency of detecting angry and happy faces in the two tasks. One task, the low ecological validity task, employs strictly controlled one person displays ensuring homogenous distracters. The other task, presents to participants multiple person-displays in order to create a more ecological context for searching the emotional faces. In both tasks stimuli are controlled to ensure similarity in terms of lower-level features such as brightness, or the presence or absence of distinctive facial features like the teeth. Consistent with the phylogenetic relevance hypothesis we expect that children will detect angry expressions faster than the happy ones in both tasks. Such results would offer strong evidence for the relevance of angry faces as threat cues in similar to life contexts.
DYSFUNCTIONAL FACIAL EMOTION RECOGNITION AND PEER VICTIMIZATION IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

Dong-Won Shin, Sungkyunkwan University School of Medicine, Republic of Korea

Abstract

Objectives. The purpose of the present study was to examine whether dysfunctional facial emotion recognition is associated with peer victimization in children with attention-deficit/hyperactivity disorder (ADHD). Methods. Sixty-two children with ADHD were recruited from the psychiatric outpatient clinic of a university hospital. Children diagnosed with ADHD by the Korean version of the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL). The emotional recognition test–revised (ERT) was used to assess the ability of subjects’ to recognize emotions. The ERT consists of emotion recognition (ER) and contextual understanding (CU) subsets. In each CU item, four cartoons depicting situations and a picture of facial expression was displayed on the monitor. Children and their parent were asked to fill out the structured self report form regarding bullying experience. Children were placed in one of three groups according to their response; no bullying, current bullying victimization, and past bullying victimization. The ERT scores were compared between these three groups by using ANOVA. The results of 10-item Conner’s abbreviated parent-teacher questionnaire (CAPTQ) and Korean version of Child Behavior Checklist were used to evaluate the clinical characteristics of children. Results. ADHD children who reported current bullying victimization showed significantly lower score in contextual understanding of angry affective expressions ($F = 4.504, df = 2, p = 0.015$). Conclusion. Bullying victimization was related to the dysfunctional recognition of angry affective expressions in ADHD children. Skill development in verbal communication of anger may prevent further isolation of these children.
THREAT APPRAISAL CONTENTS AND PERFORMANCE ANXIETY IN YOUNG TALENTED ATHLETES: AN EXPLORATORY STUDY OF COGNITIVE, MOTIVATIONAL AND EMOTIONAL CORRELATES

Maria Manuela Amaral, University of Minho, Portugal
Rui Sofia, University of Minho, Portugal
José Fernando Cruz, University of Minho, Portugal

Abstract
Despite the vast amount of empirical evidence on stress and emotions in sport contexts, researchers are still trying to achieve a better and full understanding of the “terrible one”: performance anxiety. Research in different achievement domains has documented its role, impact, and pointed for a growing need of a joint consideration of cognitive, motivational, and emotional predictors. The main purpose of this study was to explore the links between anxiety and related psychological constructs also associated with sport performance and success. Participants are 102 male young athletes (aged between 13 and 18 years) who were “selected” for competing in a major Portuguese and European professional soccer club. Measures of individual differences in sport anxiety, threat appraisals, and emotional regulation during competition, self-control, perfectionism, and goal orientations were administered. Preliminary results showed important associations between cognitive, motivational and emotional factors with cognitive and somatic dimensions of sport anxiety. The most important threat appraisals contents (performance, goal attainment and self-presentation concerns) were identified. In addition, variables such as self-control, perceived parental pressure, strivings for perfection, and specific emotional regulation strategies (e.g., tension reduction, importance reappraisal, and wishful thinking) seem to emerge as significant predictors of anxiety. Results will be discussed considering its theoretical contributions, promising paths for future research and practical implications for designing interventions with young athletes. Overall, preliminary results suggest the advantages of the combined study of cognitive, motivational and emotional individual differences, toward a better comprehension of the “adaptive functioning” under pressure, as well as of sport success among talented athletes.
THE EFFECTS OF TRAIT ANXIETY ON INHIBITION OF DISTRACTING THREAT STIMULI IN A SAMPLE OF SCHOOL-AGED CHILDREN

Georgiana Susa, Babeş-Bolyai University, Romania
Irina Pitică, Babeş-Bolyai University, Romania

Abstract
Cognitive models of anxiety assume that both clinical and subclinical levels of anxiety are associated with difficulties in inhibiting distracting stimuli especially if they are threatening. Although adult studies have consistently demonstrated that individuals with high levels of anxiety present attentional biases towards threat and find it hard to inhibit the processing of threat related material, little research has examined in children the effects of anxiety on the ability to inhibit the processing of task-irrelevant threatening stimuli. Therefore, the aim of the present study is to investigate in a sample of children aged 8-14 the effects of trait anxiety on inhibition of distracting threatening stimuli. In order to analyze these aspects, we developed a visual search task in which we presented emotional and neutral photographic faces. In this task we manipulated the facial expression of target (happy, angry and neutral) and distracters (neutral and emotional). We predict that high trait anxious children compared with children with low levels of trait anxiety will be less efficient at inhibiting the processing of angry faces when this stimuli act as a distracter. More specifically, anxious children will be slower to search a target facial expression (happy or neutral) when distracters are angry faces. These results will be discussed in terms of difficulty disengaging attention from threatening information in anxious children.
PSYCHO-SOCIAL PREDICTORS OF BURNOUT AMONG FRENCH ONCOLOGY WORKERS:
A NATIONWIDE CROSS SECTIONAL STUDY

Didier Truchot, University of Franche-Comté, France
N. Rascle, University of Franche-Comté, France
X. Borteyrou, University of Franche-Comté, France

Abstract

Objectives. To identify the psycho-social sources of burnout among French oncology workers. Methods. 1) We first held interviews with 270 persons with the aim of collecting, among other things, indications of perceived stressors. That step permitted us to construct a stressors scale composed of 54 items. 2) The stressors scale was administered (along with, inter alia, the MBI—Maslach Burnout Inventory) to a national sample of 1606 persons working in oncology in the Centers for the Struggle Against Cancer, in hospital services, or in private clinics. Results. Factorial analyses of the sources of stress revealed 4 latent factors: 1) Workload; 2) Organizational conflicts; 3) Conflicts with patient; 4) Emotional load (all α > .80). Then hierarchical regression analyses indicated that Workload (β = .47, p < .0001) and Organizational conflicts (β = .27, p < .0001) were linked to emotional exhaustion. Also, workload (β = .21, p < .0001), Organizational conflicts (β = .10, p < .001), and Conflicts with patients (β = .17, p < .0001) were linked to depersonalization. However, Emotional load was not associated with emotional exhaustion, and was negatively linked to depersonalization (β = -.10, p < .004). Conclusion. These results extended previous work showing that emotional demands do not necessarily impinge on burnout among oncology workers. In contrast, organizational stressors appeared to be the mains sources of burnout among these professionals.
BRAIN BASIS OF DEFICITARY ATTENTIONAL EFFICIENCY RELATED TO TRAIT-ANXIETY

Antonia-Pilar Pacheco Unguetti, University of Granada, Spain
M.R. Rueda, University of Granada, Spain
M.C. Castellanos, University of Granada, Spain
A. Acosta, University of Granada, Spain
J. Lupiáñez, University of Granada, Spain

Abstract
When studying the functioning of attentional networks (orienting, alerting, and executive control) in individuals with different type and level of anxiety, we have previously observed poorer efficiency of the executive attention network (i.e., larger flanker interference) in high trait-anxiety individuals as well as an overfunctioning of the alerting and orienting networks associated with state-anxiety compared to age matched controls. Other studies have shown that patients with anxiety disorders have common deficits associated with trait and state-anxiety consisting of reduced cognitive control and greater cost when it comes to disengage attention from irrelevant stimulation. In the current study we aim at examining brain activation during performance of a modified version of the Attention Network Test as a function of trait-anxiety using a high-density event-related potentials technique. Participants are individuals with high (currently $n = 10$) and low (currently $n = 13$) STAI trait-anxiety scores. Preliminary data show the most important difference between High and Low anxiety on the flanker interference effect, an index of efficiency of the executive control network. High anxiety participants show a delayed N2b effect (i.e. larger negative amplitude for incongruent compared to congruent trials) over fronto-parietal channels compared to the Low-anxiety group. Additionally, the N2b is left-lateralized for the High-anxiety group and right-lateralized for the Low-anxiety group. Further, the fronto-central P3 effect appears to be larger for the high-anxiety group. These results are consistent with the idea that anxious individuals have poorer efficiency of regulatory mechanisms important for attentional control.
WEBQUEST IN MATHEMATICS CLASSES: CAN TASK-BASED LEARNING METHODS HELP REDUCE MATHEMATICS ANXIETY AND HELPLESSNESS?

Ulrich Weiss, Bergische Universität Wuppertal, Germany
Petra Buchwald, Bergische Universität Wuppertal, Germany

Abstract
Theoretical basis. Based on Hobfoll’s conservation of resources theory (COR) (Hobfoll, 1998, Hobfoll & Buchwald 2004) and Seligman’s theory of learned helplessness (Seligman, 1986) we assume that mathematics anxiety and helplessness is closely related to low math-specific self-efficacy. The widespread mathematics anxiety among German pupils might be caused by the methods of math teaching, which strongly emphasize fixed ways of problem solving provided by the teacher. WebQuest is a task-based teaching method in which groups of 2-4 pupils independently solve a specific quest and are thus provided the opportunity to establish their own way of solving a problem. Potentially, solving such a quest can help reduce mathematics anxiety and helplessness. Methods. Implementation of WebQuests in classes of grades 6-8 in German comprehensive schools; assessment of mathematics anxiety and mathematics helplessness before treatment; processing of WebQuests by students in experimental group; assessment of mathematics anxiety and mathematics helplessness after treatment. Hypothesis. Task-based learning in mathematics can help reduce mathematics anxiety and mathematics helplessness. The interrelation between mathematics anxiety, helplessness and the processes of problem solving will be discussed.
THE EFFECTS OF SOCIAL EVALUATION DURING AN ECOLOGICALLY VALID LABORATORY STRESSOR (THE MULTI-TASKING FRAMEWORK)

Mark Wetherell, University of Northumbria, UK

Abstract

Objectives. The Multi-tasking Framework is a performance-based, cognitively demanding stressor representative of environments where users must attend and respond to several stimuli simultaneously. Previous uses of the Framework have demonstrated that it reliably induces a range of psychobiological stress responses. This study assessed the additive effects of social evaluation on psychological responses during the Multi-tasking Framework. Methods. Healthy adults (N = 50) were exposed to either 20 minutes of workload stress using the Multi-tasking Framework in isolation or in the presence of an experimenter who provided critical evaluation of participant performance and recorded their behaviour via a webcam and video camera. Mood was assessed immediately before and after the stressor and participants reported perceived workload demands immediately following stressor cessation. Results. Multi-tasking stress elicited the expected pattern of behavioural responses: increases in feelings of stress and anxiety and reductions in feelings of calm; however, these responses were exacerbated in the presence of social evaluation. In addition, socially evaluated multi-tasking led to increases in all aspects of perceived workload demands. Conclusions. Results provide further support that the Multi-tasking Framework requires sustained attention whilst being cognitively demanding and anxiolytic; however, social evaluation increases the Framework’s negative effects. Socially evaluated multi-tasking, therefore, provides a reliable and ecologically valid tool for investigating the effects of stress in the laboratory.
THE EFFECTS OF AN ANTICIPATED LABORATORY STRESSOR ON DIURNAL ACTIVATION OF THE HYPOTHALAMIC-PITUITARY-ADRENAL (HPA) AXIS

M. A. Wetherell, Northumbria University, UK
B. Lovell, Northumbria University, UK
M. Moss, Northumbria University, UK

Abstract

Objectives. In healthy, non-challenged individuals, the secretion of cortisol typically follows a diurnal profile characterised by a peak in the period following waking (cortisol awakening rise: CAR) and a gradual decline throughout the day. The magnitude of the CAR has been associated with a range of psychosocial variables; however, recent meta-analyses suggest that elevated responses are associated with stressors requiring engagement with the environment. The current study assessed the impact of an anticipated acute laboratory stressor superimposed upon the typical diurnal pattern of cortisol secretion. Methods. Healthy adults (N = 23) provided four salivary cortisol samples (immediately upon waking, 30 minute post waking, 1200h and 2200h) on two typical days. On the second day, participants undertook an acute socially evaluative stressor immediately following provision of their 1200h sample and provided additional measures of heart rate, blood pressure, mood and salivary cortisol during the stressor protocol. Results. Typical patterns of cortisol secretion were demonstrated on both days and the laboratory stressor was associated with the expected increases in heart rate, blood pressure, negative mood and cortisol. However, increased negative mood and an elevated CAR were observed on the day of the superimposed laboratory stressor. Conclusion. Increased negative mood and an elevated CAR are consistent with the notion that the cortisol awakening rise is a preparatory mechanism associated with anticipation of the upcoming day and the subsequent demands required of the individual. In this case, the upcoming day involved an atypical, but anticipated stressful challenge.
MEDIATING EFFECT OF EMOTIONS IN RELATION BETWEEN STRESS APPRAISAL AND SUBJECTIVE HEALTH STATUS IN MI PATIENTS

Dorota Włodarczyk, Medical University of Warsaw, Poland
Kazimierz Wrześniewski, Warsaw School of Social Sciences and Humanities, Poland
Jolanta Kołodziejk, Cardiac Rehabilitation Centre, Łódź, Poland

Abstract
The study concentrates on personality dispositions to appraise stressful situations (dispositional stress appraisal, DSA) and their relations to subjective health status (SHS) in MI (myocardial infarction) patients. It was deigned to examine the role of emotions as a factor which mediate these relations. It was hypothesized that the relations between individual types of DSA and SHS will be mediated by specific emotion. A group of 128 men after the first MI, aged 28-58 ($M = 49.2$; $SD = 6.16$) participated in the study. Materials. KOS by Wrzesniewski et al. (to assess DSA), POMS by McNair et al. (to assess emotions), NHP by McEvan et al. (to assess SHS). The patients were examined twice: Wave 1 - at the beginning of a cardiac rehabilitation programme (the measurement of independent variable and mediator) and Wave 2 - at the end of rehabilitation (the measurement of dependant variable). The effect of threat DSA on SHS was mediated by tension-anxiety and depression-dejection; the effect of harm/loss DSA – by depression-dejection; the effects of challenge-activity and challenge-passiveness DSA – by depression-dejection and vigour-activity. The results indicate that depression-dejection plays a critical role for SHS regardless to the type of DSA. Apart from these similarities in mechanisms of affecting DSA on SHS there are some differences which indicate that the relation between individual type of DSA and SHS is mediated by specific emotion. The lack of differences between the two types of challenge DSA is to some extant in odds with the other research results which indicated the functional differences between them.
ETHICAL DILEMMAS AS PSYCHOLOGICAL STRESSORS AND THEIR RELATIONS TO PROFESSIONAL BURNOUT IN NURSES

Dorota Wlodarczyk, Medical University of Warsaw, Poland
Dorota Jarmolowska, District Hospital in Białystok, Poland

Abstract

Background. There are many studies which examine the relations between different types of stressors and professional burnout (PB), but there are few which consider the role of ethical dilemmas (EDs) in this context. Objectives. To characterize the frequency of EDs and the level of subjective burden with them in a group of nurses and to establish the relations between the frequency of EDs and burden with them and professional burnout. Method. The study was cross-sectional and 100 nurses participated (age 20-50, M = 39.4, SD = 8.08). They were professionally active, employed mainly in public hospitals (77%) and during extramural master’s studies. Materials. To test the frequency and burden of EDs, an original questionnaire was adopted (it contains 14 dilemmas prepared on the basis of professional ethic code). PB was examined by means of the Polish version of the Maslach Burnout Inventory. Results. The most frequent dilemmas concerned the nurse-patient relationship. Similarly, the most burden provoking dilemmas resulted from the nurse-patient and the nurse-nurse relationships. PB was positively related to frequency of EDs (r = 0.54; p = 0.001) and to the burden with EDs (r = 0.22; p = 0.03). The results indicated that the frequency of specific dilemma does not imply the burden with it and vice versa. The frequency of EDs turned out to be more important for PB than the level of burden with EDs. Not only the most frequent and the most burden provoking dilemmas are related to PB. The stressors less frequent, and appraised as less burden-provoking, can be also very significant.
**PSYCHOLOGICAL CORRELATES OF BALLET INJURIES**

Kanaka Yatabe, St. Marianna University School of Medicine, Japan  
T. Kohno, St.Marianna University School of Medicine, Japan  
H. Fujiya, St.Marianna University School of Medicine, Japan  
N. Yui, St.Marianna University School of Medicine, Japan  
K. Tateishi, St.Marianna University School of Medicine, Japan  
F. Terawaki, St.Marianna University School of Medicine, Japan  
S. Kasuya, Showa University of Music, Japan  
H. Miyano, National Center for University Entrance Examinations, Japan  
T. Oyama, Nihon University, Japan

**Abstract**

Injury is a major problem for ballet dancers. There is now substantial evidence that psychological interventions can reduce injury in sport. When planning intervention programs designed to help reduce injuries to dancers, researchers or doctors should identify the major psychosocial factors that are associated with injury risk. We conducted a prospective study of psychosocial factors and injury, based on the stress-injury model in sport. The subjects were 44 elite adolescent ballet dancers. We researched their injuries and psychological questionnaires once in two weeks for 6 months, as for the person who can come. This study explored the inter-relationships among state and trait anxiety, stress, and ballet performance anxiety in this group. High trait anxieties are also associated with high personal strain. We investigated that their psychological correlates of dance injuries and psychological stress using SAS (Sports Anxiety Scale), has three sub-scales, somatic, cognitive anxiety and concentration disruption, and BRUMS (Brunel Mood Scale). For one index of physical stress, we measured the muscle stillness changes of Gastrochemius muscle. When I evaluated it only about the trait and performance anxiety of them, most subjects arc high levels. Their environment practicing ballet every day is the world of "No pain, no gain", and related with perfectionism which stress and performance traits of the kind of occupation to be seen in a professional. Ballet dancers must accept the situation even if they always have uneasiness and must aim at competition improvement. Therefore, we must think about a better approach.
THE CONTRIBUTION OF PRE-HIGH SCHOOL FACTORS TO THE MALADJUSTMENT OF HIGH-SCHOOL STUDENTS IN JAPAN

Hiroshi Yoshihara, Hyogo University of Teacher Education, Japan
Hideyuki Fujii, University of Tsukuba, Japan
Yoshiki Tominaga, Hyogo University of Teacher Education, Japan

Abstract

Only a few studies have so far been done to research maladjustment in the school transition from junior high school to high school in Japan. This research examined contributions to the maladjustment of high school students stemming from factors that predate high school entrance. The subjects were 138 high school students with part-time course loads (66 males and 72 females). For Time1, the levels of various factors were measured, such as autonomous motivation to enter high school, subjective school stressors, and stress responses. This research was carried out in late March. For Time2, data was collected regarding students’ grades, days of absence, and delinquent behavior. This research data was collected in the middle of June. Then a multiple regression analysis was calculated using the data from Time2 as explanatory variables and the data from Time1 plus students’ days of absence during junior high as dependent variables. The results indicated, (1) nonautonomous motivation predicted the lowness of students’ grades, (2) “suffering a loss caused by another person” stressor predicted the amount of delinquent behavior, (3) “irritated-angry affect” of the stress response predicted the school maladjustment, (4) the days of absence in the third grade of junior high school predicted quality of students’ grades, amount of delinquent behavior, and an approximation of days of absence. It was suggested that the adjustment to pre-high school entrance predicted school maladjustment as above. An argument is presented for the prevention of school maladjustment based on these results.
AUTHOR INDEX
# Author Index

**A**

Aaron, Ragan E., 139

Abdel-Baki, Salwa, 66

Abdel-Rahman, Noha, 66

Acosta, A., 189

Aggar, Christina, 67

Akehurst, Sally, 183

Ali, Uzma, 68

Altin, Müjgan, 130

Amaral, Maria Manuela, 186

Ângelo, Rui Pedro, 69

Appleton Paul R., 61, 62

Arambašić, Lidija, 101

Arenas-Landgrave, Paulina, 45

Arkin, Robert, 29

Åström, Sture, 148

Atkinson, Leslie, 177

Austin Stéphanie, 156, 161

Ayers, Beverley N., 39

**B**

Bakker, A. B., 150

Balcar, Karel, 144

Barcelata, Blanca, 182

Baucom, Don, 19

Baum, Nehami, 70

Ben-Ezra, Menachem, 132

Benight Charles, 25, 28

Berenbaum, Howard, 73

Berge, Britt-Marie, 148

Bertrams, Alex, 71, 84

Binkley, H., 149

Blaszczynski, Alex, 86

Blower, Sarah, 95

Bodenmann, Guy, 16, 17

Bolt, Pauline, 117

Borteyrou, X., 188

Bradbury, Thomas N., 17

Brady, Ellen, 72

Braun-Lewensohn, Orna, 33, 34, 35

Braunstein-Bercovitz, Hedva, 157

Bredemeier, Keith, 73

Brown, Rowena, 74

Buchwald, Petra, 42, 47, 58, 190

Bunting, Brendan, 114

Burkert, Silke, 18

C

Cameron, Ian, 67

Campbell Justin, 129

Carapito, Elsa, 75

Carey, John J., 87

Carroll, Douglas, 8

Carroll, Patrick J., 29, 31

Cassady, Jerrell, 76, 77

Castellanos, M. C., 189

Ceballos, Natalie A., 139

Chalder, Trudie, 138

Chambel, Maria José, 69

Chamberlain, Suzanne, 80
Cheie, Lavinia, 158
Chen, Yu-Fang, 152
Corwin, Robert, 134
Coughlan, Robert, 87
Creaven, Ann-Marie, 78, 79
Creedy, Debra K., 107
Cruz, José Fernando, 142, 186
Cunningham, Jennifer, 138
Curtis, Ruth, 89

D
Dacanay, Athena, 77
Daly, Anthony, 80
Davies, S., 40
Davis Paul A., 20, 22, 24
Deans, Jan, 49
Denny, Margaret, 138
Derakshan, Naz, 39
Deschamps, Heidi S., 122
Detoraki, Katerina, 160
Devine, Darragh, 63
Devonport, Tracey J., 22, 24, 81
de Jesus, Saul Neves, 159, 174
di Blasi, Zelda, 105
Dickhäuser, Oliver, 71, 84
Dijksman, Suzanne C., 126
Ditzen, Beate, 14, 16, 19
Dooley, Barbara, 165
Duck, Julie, 74
Dundas, Ingrid, 82
Dunkley, David. M., 59, 64
Dunne, Simon, 83
Durán Patiño, Consuelo, 182

E
Edge, Clarissa, 59, 63
Englert, Chris, 71, 84
Erktin, Emine, 53, 54
Erskine, James, 37, 40
Eshet, Yovav, 85
Eskandari, Sarah, 86
Eysenck, Michael, 5, 37
Ezer, Hanna, 141

F
Fatima, Waseem, 93
Faucett, John, 134
Fehm-Wolfsdorf, Gabriele, 19
Fernet, Claude, 156, 161
Finn, David P., 173, 180
Finnerty, Aoife, 111
Fitzpatrick, Caroline F., 133
Fleming, Alison S., 177
Fletcher, Kathryn, 77
Fox, Lisa, 87
Frydenberg, Erica, 12, 48, 49, 135
Fujiu, Hideyuki, 162, 163, 196
Fujiu, Masako, 162, 163
Fujiya, Hideyuki, 195

G
Gallagher, P., 83
Gaudreau, Hélène, 177
Gebhardt, Claudia, 88, 119
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Géranton, S. M.</td>
<td>180</td>
</tr>
<tr>
<td>Germann, Janine</td>
<td>14, 16, 17</td>
</tr>
<tr>
<td>Gibbons, Andrea</td>
<td>89</td>
</tr>
<tr>
<td>Gibson, Alan St Clair</td>
<td>153</td>
</tr>
<tr>
<td>Gilat, Itzhak</td>
<td>141</td>
</tr>
<tr>
<td>Gilboa, Sigal</td>
<td>100</td>
</tr>
<tr>
<td>Gill, Tiffany</td>
<td>151</td>
</tr>
<tr>
<td>Gordon, Michael S.</td>
<td>114</td>
</tr>
<tr>
<td>Gralla, Oliver</td>
<td>18</td>
</tr>
<tr>
<td>Greenglass, Esther</td>
<td>48, 51</td>
</tr>
<tr>
<td>Grillo, Faustine</td>
<td>164</td>
</tr>
<tr>
<td>Groarke, AnnMarie</td>
<td>89</td>
</tr>
<tr>
<td>Guerin, Suzanne</td>
<td>72</td>
</tr>
<tr>
<td>Gunes, Hatice</td>
<td>90</td>
</tr>
<tr>
<td>Gustavsson-Lilius, M.</td>
<td>91</td>
</tr>
<tr>
<td>Hagtvet, Knut A.</td>
<td>82</td>
</tr>
<tr>
<td>Hahlweg, Kurt</td>
<td>19</td>
</tr>
<tr>
<td>Hall, Louise</td>
<td>165</td>
</tr>
<tr>
<td>Hall, Howard K.</td>
<td>61, 62</td>
</tr>
<tr>
<td>Hamilton G.</td>
<td>149</td>
</tr>
<tr>
<td>Harkin, Ben</td>
<td>92, 166</td>
</tr>
<tr>
<td>Hasan, Shazia</td>
<td>93</td>
</tr>
<tr>
<td>Hauge, Helge</td>
<td>82</td>
</tr>
<tr>
<td>Healy, Olive</td>
<td>111</td>
</tr>
<tr>
<td>Heinrichs, Markus</td>
<td>16, 17</td>
</tr>
<tr>
<td>Hennessy, Eilis</td>
<td>179</td>
</tr>
<tr>
<td>Hietanen, P.</td>
<td>91</td>
</tr>
<tr>
<td>Higgins, Niamh M.</td>
<td>94</td>
</tr>
<tr>
<td>Hill, Andrew P.</td>
<td>59, 61, 62</td>
</tr>
<tr>
<td>Hiskey, S.</td>
<td>40</td>
</tr>
<tr>
<td>Hobbs Tim</td>
<td>95</td>
</tr>
<tr>
<td>Hodapp, Volker</td>
<td>56</td>
</tr>
<tr>
<td>Hogan, Victoria</td>
<td>96</td>
</tr>
<tr>
<td>Hogan, Michael</td>
<td>97</td>
</tr>
<tr>
<td>Howard, Siobhán</td>
<td>38, 79, 97, 98, 108, 167</td>
</tr>
<tr>
<td>Hrncir, Shawn M.</td>
<td>122</td>
</tr>
<tr>
<td>Hughes, Brian M.</td>
<td>37, 38, 78, 79, 94, 98, 108, 111, 112, 128, 147, 167</td>
</tr>
<tr>
<td>Hunt, S. P.</td>
<td>180</td>
</tr>
<tr>
<td>Israelashvili, Moshe</td>
<td>42, 43, 99, 100</td>
</tr>
<tr>
<td>Jakovčić, Ines</td>
<td>154</td>
</tr>
<tr>
<td>James, Jack E.</td>
<td>7, 97, 98, 127</td>
</tr>
<tr>
<td>Janssen, Dirk P.</td>
<td>60</td>
</tr>
<tr>
<td>Jarmolowska, Dorota</td>
<td>194</td>
</tr>
<tr>
<td>Jenkins, Mary</td>
<td>171</td>
</tr>
<tr>
<td>Jimmieson, Nerina</td>
<td>74</td>
</tr>
<tr>
<td>Jokić-Begić, Nataša</td>
<td>101, 109</td>
</tr>
<tr>
<td>Jones, Barbara</td>
<td>48, 50</td>
</tr>
<tr>
<td>Julkunen, Juhani</td>
<td>91, 102</td>
</tr>
<tr>
<td>Juretić, Jasminka</td>
<td>154</td>
</tr>
<tr>
<td>Jurin, Tanja</td>
<td>103</td>
</tr>
<tr>
<td>Kakunda-Mualem, Helen</td>
<td>43</td>
</tr>
<tr>
<td>Kambourooulos, Nicolas</td>
<td>176</td>
</tr>
<tr>
<td>Kaniasty, Krys</td>
<td>25, 27, 48</td>
</tr>
<tr>
<td>Kapetanaki, Eirini Markella</td>
<td>104</td>
</tr>
</tbody>
</table>
Kasuya, S., 195
Keane, Anne Marie, 89
Kearney Grainne, 105
Kelly, John P., 175
Kennedy, James L., 177
Keskivaara, P., 91
Kessler, Klaus, 92, 166
Kilbourne, Brock, 106, 168, 169
Kilbourne, Samantha, 168, 169
Kilmartin, Liam, 97
Kim, P., 149
Klainin, Piyanee, 107
Knoll, Nina, 14, 15, 18
Koh, David, 55
Kohno, T., 195
Kola, Susanna, 108, 170
Kolodziejek, Jolanta, 193
Koolen, Jacques J., 126
Korajlija, Anita Lauri, 109
Koster, Carmen, 151
Križanič, Valerija, 110
Krupić, Dino, 110
Kuška, Martin, 144
Kvavilashvili, L., 40

L
Lambert, Richard G., 146
Lane, Andrew M., 20, 22, 24, 81
Lane, H. J., 22, 24
Leader, Geraldine, 111
Lee, Eimear M., 112
Leggett, S., 40
Lenders, Pim J., 126
Leonie Stewart, Charlotte, 20, 23
Li, Jian, 3, 53, 57
Lipsanen, J., 91
Long, Maggie, 171
Lorencová, Radmila, 113
Lovell, B., 192
Lowe, Eithne, 178
Lucio-Gómez, Emilia, 42, 45, 182
Lupiáñez, J., 189
Luszczyńska, Aleksandra, 18
Lydon, John E., 177
Ma, Denise, 64
Mahedy, Liam A., 114
Mangisto, Danny, 99
Matthews, A., 83
Mavridaki, Kalliopi, 46
McCabe, Marita P., 115
McCarthy, Eunice, 116
McCarthy, Chris, 146
McDonagh, Lorraine K., 172
McGuire, Brian E., 87, 173
McIlroy, David, 117
McNamara, Niamh, 121
McShane, Connar, 118
Meaney, Michael J., 177
Meng, Heng, 57
Meuwly, Nathalie, 14, 16, 17
Mitte, Kristin, 88, 119
Miyano, H., 195
Mohiyeddini, Changiz, 11, 20, 21, 23
Moor, Avigail, 120
Moore, Kate A., 2, 42, 44, 48, 52
Moriarty, Orla, 173, 180
Morrison, Todd, 172
Moss, Ellen, 177
Moss, M., 192
Muldoon, Orla T., 121
Murcho, Nuno, 159, 174
Murphy, Mike, 105
Myers, Lynn B., 37, 39, 40, 41

N
Nagel, Liza, 122
Nasser-Abu Alhija, Fadia, 123
Ng, Vivian, 53, 55
Nieuwenhuys, Arne, 124
Nilson-Niemi, E., 102
Nolan, Aonghus, 178
Norris, Fran, 25, 26
Nykliček, Ivan, 125, 126

O
O’Brien, Sandra, 175
O’Connor, Clair, 128
O’Connor, Paul, 129
O’Connor, Elodie J., 115, 176
O’Donnell, Katherine, 177
O’Driscoll, Claire, 178
O’Farrelly, Christine, 179
O’Gorman, David, 87
O’Leary, Éanna, 127

O’Reilly, Gary 145
O’Shea, Grace, 111
O’Sullivan, David, 105
Ongolo, W. M., 180
Oleson, Catherine, 29
Opacka-Juffry, Jolanta, 21, 23
Oudejans, Raoul R. D., 124
Oyama, T., 195
Özbay, Yaşar, 130

P
Pacheco, Andreia, 174
Pacheco, Eusébio, 159, 174
Pacheco Unguetti, Antonia-Pilar, 189
Pagani, Linda S., 133
Pal, Suchitra, 131
Palgi, Yuval, 132
Papadaki, Aggeliki, 181
Papadaki-Michailidi, Eleni, 46, 181
Partington, Sarah, 153
Partington, Elizabeth, 153
Payne, Simon Mark, 183
Pfeiffer, Stefanie, 42, 47
Piché, Geneviève, 133
Pignata, S., 150
Pitică, Irina, 184, 187
Poling, Tommy, 134
Poynton, Katherine, 135

Q
Quirk, Frances, 118
Rajala, Raimo, 136, 141
Ramakers, Chris, 125
Raschle, N., 188
Reissner, Volker, 137
Ribeiro, Maria Teresa, 75
Rice, Kenneth G., 63
Ridge, Mary, 138
Rinehart, Kimberly L., 139
Ringeisen, Tobias, 14, 15, 42, 53
Ritchie, Timothy, 29, 30
Roche, Michelle, 173, 180
Rohrmann, Sonja, 53, 56
Roigas, Jan, 18
Ronaldson, Susan, 67
Ruane, Nancy, 87
Rueda, M. R., 189
Russell, Daniel, 4, 25

S
Saarinen, T., 102
Sagy, Shifra, 33, 34, 35
Sahin, Nesrin H., 90
Salim, Agus, 55
Schorn, Nicola K., 53, 58
Schwarzer, Christine, 53, 140
Segal, Sarit, 141
Shaheen, Azra, 68
Sharpe, Louise, 86
Shattler, Amber-Lee, 64
Sheeran, P., 24
Shin, Dong-Won, 185
Shrirai, Amit, 132
Skowron, Elizabeth A., 79
Soffer, Hili, 132
Sofia Rui, 142, 186
Sokolowski, Marla B., 177
Spalding, Victoria, 80
Spantidakis, Ioannis, 160
Spielberger, Charles D., 6
Staiger, Petra 176
Staničič, Ana, 103
Steinberg, Shoshana, 33, 36
Stephenson, Ellen, 64
Stevenson, Clifford, 121
Stoeber, Joachim, 10, 59, 60
Susa Georgiana, 184, 187
Swift, C. F., 24
Swinbourne, Anne, 118
Tateishi, K., 195
Taubman - Ben-Ari, Orit, 143
Taylor, Anne, 151
Terawaki, F., 195
Terzi, Şerife, 130
Thatcher, Joanne, 183
Thayer, Julian, 16
Todd, Valerie, 117
Tominaga, Yoshiki, 196
Totterdell, P. A., 24
Trainor, S., 150
Trnka, Radek, 144
Truchot, Didier, 164, 188
Tully, Michael, 145
Turunen, H., 102

U
Ullrich, Annette, 146

V
van Beugen, Sylvia, 125
Vassilaki, Eleni, 42, 46, 160, 181
Verrier, Diarmuid B., 147
Visu-Petra, Laura, 158
Vrhel, František, 113

W
Walsh, Jane C., 87, 108, 170, 178
Wang, De-Yun, 55
Wazana, Ashley, 177
Webb, T., 24
Weiss, Ulrich, 190
Wells, John, 138
Wetherell, Mark, 153, 191, 192

Wichman, Aaron, 29, 32
Wilhelmsson, Anna-Britta, 148
Williams, C. A., 149
Winefield, Anthony, 150
Winefield, Helen, 151
Wlodarczyk, Dorota, 193, 194
Wolf, Jonathan Jacob, 132
Wormnes, Bjørn, 82
Wrześniewski, Kazimierz, 193
Wu, Min-Chang, 152
Yang, Peter, 152
Yatabe, Kanaka, 195
Yoshihara, Hiroshi, 196
Young, Paul M., 153
Yui, N., 195

Živčić-Bečirević, Ivanka, 154