

As a consequence, the contrast between familiar and thus "safe" and unfamiliar and thus "unsafe" situations is perceived as amplified to the extent that a critical threshold gets passed. Subsequently, in complex "unsafe" social situations this can result in a stress reaction with the symptoms of a transmarginal inhibition. The system "freezes" and speaking thus becomes impossible while other symptoms also may prevail. Repeated similar experiences may continuously reduce the threshold for dissociative experience and increase the habituation to the non-speaking behaviour. Safe and familiar situations, in contrast, do not lead to a comparable overload reaction.

**Methods:** In a pilot study a sample of children suffering from selective mutism and their respective mothers were compared to a normal sample of children and adolescents. Both groups were compared regarding sensitivity, dissociation and anxiety assessed by inventories.

**Results:** Preliminary results confirm the new model of selective mutism: Selective mutism is significantly associated with high sensitivity and dissociation.

**Conclusion:** Dissociation and sensitivity appear to be relevant constructs allowing a better understanding of selective mutism in children.

**Category/Topic:**  
7 Panic disorder

**Abstract Type:**  
Oral Presentation

**Abstract Number:**  
114

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**Abstract Title:**

Experience of panic symptoms and related concepts of distress among patients with anxiety disorders in Northern India: a mixed-method study

**Abstract Text:**

**Objective:** Cultural concepts related to the mechanisms of mental and bodily events contribute to the experience of anxiety disorders by determining the meaning and importance of particular symptoms. Cross-cultural research has highlighted differences in the presentation of panic attacks and panic disorder in terms of symptom profiles, underlying beliefs, and causal explanations. This study was carried out with the purpose of exploring the phenomenology of panic attacks and understanding their culturally relevant characteristics which have implications for diagnosis and psychotherapeutic intervention.

**Methods:** This study adopted a two-phase, exploratory sequential mixed methods design. The first phase utilized qualitative methods to capture culturally relevant symptomatology, catastrophic cognitions, and pathophysiologicals and incorporated them in a standardized instrument. Focus groups and key informant interviews involving various stakeholders (patients, carers, mental health and other medical professionals) were conducted for this purpose. This adapted instrument was then applied on a clinical population presenting with complaints of episodic anxiety (panic attack-like episodes) with a myriad of somatic and behavioral symptoms to

study phenomenology and correlates of panic attacks and panic disorder and to relate them to DSM-IV and ICD-10 descriptions.

**Results:** Four major themes emerged from the analysis: (1) Differential panic symptom endorsement and culture-specific symptoms, (2) idioms of distress with underlying unique ethnophysiological concepts, (3) possible existence of cultural variants of panic attacks across anxiety disorders not conforming to ICD-10 or DSM-5 classical descriptions, (4) causal attribution of illness and help seeking.

**Conclusion:** This is the first ethnographic study on panic disorder from India. It provides preliminary insights into the issues of diagnostic universality and cultural specificity which require further systematic investigation.

**Category/Topic:**

4 Animal models of fear and anxiety

**Abstract Type:**

Oral Presentation

**Abstract Number:**

109

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**Abstract Title:**

Environmental and metabolic therapeutic strategies improve anxiety-like behaviour in a rat model of sporadic Alzheimer's disease

**Abstract Text:**

**Objective:** Cognitive impairment has often been associated with anxiety in Alzheimer's disease (AD) seen both in AD patients and its animal models. Literature data indicate that social interactions, as well as physical and mental activities, might have beneficial effects on both cognitive and non-cognitive behavioural impairments in AD condition. We used streptozotocin-intracerebroventricularly treated rats (STZ-icv) as a model of sporadic AD to investigate possible beneficial effect of enriched housing and oral galactose treatment (might replace glucose as an energy source) on anxiety and cognitive deficits found in the model.

**Methods:** Adult male Wistar rats were given STZ-icv (3 mg/kg) while controls received vehicle only (CTRL). In one experiment half of STZ-icv and CTRL groups received oral galactose treatment (200 mg/kg/day) for 2 months, starting 4 month after icv injections. In the other experiment, half of STZ-icv and CTRL groups was rendered for 9 weeks to enriched housing (EH), starting 3 weeks after STZ-icv treatment. Behavioural assessment was done by Morris Water Maze Swimming (MWM) test, Dry maze (DM) and Open field test (OF). Data were analysed by Kruskal-Wallis and Mann-Whitney U-test ( $p < 0.05$ ).

**Results:** STZ-icv treated rats demonstrated significant deficit in learning and memory functions associated with increased anxiety found both 3 (31%/MWM, 142%/DM) and 6 (58%/MWM, 395%/OF) months after icv treatment. STZ-icv induced anxiety behaviour was normalised both by EH and galactose treatment, while cognitive deficits were normalised only by EH.

**Conclusion:** Results indicate that the long-term mental activities/social interactions and nutrient-based treatment alleviate anxiety-like

behaviour in STZ-icv rat model of sAD, while their effect on the cognitive deficits depends probably both on the therapeutic approach and the underlying pathology stage at which the therapy has been introduced (irreversible pathology found previously in the later stage). Supported by MZOS, DAAD and HRZZ-IP-2014-09-4639.

**Category/Topic:**

10 Stress-related and anxiety disorders

**Abstract Type:**

Oral Presentation

**Abstract Number:**

126

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**Abstract Title:**

On the roles of emotional intelligence and metacognitive beliefs for coping with chronic heart failure

**Abstract Text:**

**Objective:** The meta-cognitive model of GAD proposed by Wells (2005) postulates that increased anxiety can result from reinforced beliefs about uncontrollability and danger due to ineffective coping strategies. The present study was aimed at investigating the role of emotional intelligence (EI) in coping with distress caused by chronic heart failure (CHF) and to identify metacognitions explaining ineffective coping despite high EI.

**Methods:** A cross sectional design was used to assess  $N = 100$  chronic heart failure patients ( $M = 53.79$  years,  $SD = 13.77$ ) at CPE Institute of Cardiology Multan, Pakistan. In addition to socio-demographic data, standardized questionnaires were used to gather information on EI, coping strategies, meta-cognitive beliefs, depression, anxiety, worry and quality of life.

**Results:** High trait EI was significantly correlated with lower levels of generalized anxiety ( $r = -0.52$ ), worry ( $r = -0.50$ ), anxiety sensitivity ( $r = -0.38$ ), depression ( $r = -0.34$ ), negative coping mechanisms ( $r = -0.49$ ) and meta-cognitive beliefs about uncontrollability and danger ( $r = -0.45$ ) respectively (all  $p \leq 0.05$ ). In contrast high trait EI was significantly correlated with high levels of cognitive self-consciousness (0.21), positive coping strategies (0.39), emotional well-being (0.62) and high levels of energy and low fatigue (0.37; all  $p \leq .05$ ). Stepwise regression analysis indicated that meta-cognitive beliefs about uncontrollability and danger significantly predicted negative coping strategies and accounted for 55.2% of variance. Mediation analyses revealed that meta-cognitive beliefs about uncontrollability and danger accounted for the negative relationship between trait EI and negative coping styles ( $p \leq 0.03$ ).

**Conclusion:** In line with the meta-cognitive model of GAD, the current findings support the hypothesis that the negative correlation between high trait EI and negative coping is fully mediated by meta-cognitive beliefs of Pakistani CHF-patients about uncontrollability and danger.

**Category/Topic:**

1 Fear conditioning, extinction and generalization

**Abstract Type:**

Oral Presentation

**Abstract Number:**

127

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**Abstract Title:**

Fear extinction recall modulates human fronto-medial theta and amygdala activity during simultaneous EEG-fMRI

**Abstract Text:**

**Objective:** Translating insights from rodent threat processing studies to human brains is both challenging and important, as assumed functional and structural homologies are controversial. Human neuroimaging (fMRI) and electrophysiological (EEG) studies, as well as animal studies, indicate that the amygdala and fronto-medial brain regions—including fronto-medial theta oscillations—are critically involved in conditioned fear. However, few studies have used a multimodal approach to probe interactions among these key brain regions in humans. Here, our goal was to bridge the gap between prior human fMRI, EEG, and animal findings.

**Methods:** Twenty-one healthy participants underwent a 240-trial fear conditioning and extinction paradigm. Using simultaneous EEG-fMRI recordings during a recall test 24 h later, conditioned stimuli presented (CS+E, CS-E) and not presented during extinction (CS+N, CS-N) were compared to identify effects specific to extinction versus fear recall.

**Results:** Differential (CS+ vs. CS-) electrodermal, fronto-medial theta (EEG) and amygdala activity (fMRI) were reduced for extinguished vs. nonextinguished stimuli. Importantly, effects on theta power covaried with effects on the amygdala response. Fear and extinction recall as indicated by theta explained 60% of the variance for the analogous effect in the right amygdala ( $R^2 = 0.60$ ,  $pFWE = 0.015$ ).

**Conclusion:** This study demonstrated that simultaneous EEG-fMRI can capture oscillatory (theta) and subcortical (amygdala) fear-related activity at the same time in the human brain. Mirroring prior rodent data, our findings show for the first time the interplay of amygdala and fronto-medial theta activity during fear and extinction recall in humans and lay the foundation for studying abnormal fear processing in psychopathology.

**Policy of full disclosure:** The study was supported by a grant of Justus Liebig University Giessen (Germany) to Erik M. Mueller and by a PROMOS scholarship of the German Academic Exchange Service to Matthias F. J. Sperl.

Over the past three years, Dr. Pizzagalli received consulting fees from Akili Interactive Labs, BlackThorn Therapeutics, Pfizer, and Posit Science, for activities unrelated to the current research. Dr. Pizzagalli was partially supported by NIH grant R37 MH068376. Dr. Rosso was partially supported by NIH grant R01 MH096987. In the last three years, Dr. Dillon has served as a consultant for Pfizer on unrelated projects. Dr. Dillon was supported by NIH grant 4R01MH094438-03. Mr. Sperl was supported by DFG grant