INTERNATIONAL SOCIETY FOR THE ADVANCEMENT OF RESPIRATORY PSYCHOPHYSIOLOGY (ISARP)

12th Annual Meeting
and
24th Symposium on Respiratory Psychophysiology

Meeting Report

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The twelfth annual meeting of the International Society for the Advancement of Respiratory Psychophysiology took place in Hamburg, Germany, on September 14-16, 2005. The meeting continued the longstanding tradition of bringing together an international group of researchers from multiple disciplines, such as psychology, medicine and biology, and maintained the character of a special interest group meeting. Invited addresses, symposia, workshops and poster presentations on a wide variety of topics provided a stimulating forum for fruitful discussions between experimental, clinical and student researchers. The topic areas ranged from traditional respiratory issues, such as breathing training, to applications of the latest advances in physiological measurement including the neurophysiology of respiratory sensations, as measured with brain imaging techniques. The meeting had the following foci:

- Symptom perception and dyspnea
Dyspnea is a cardinal symptom in a variety of respiratory diseases. The adequate perception of dyspnea and early symptoms of developing bronchoconstriction is important for appropriate self-management. A number of papers focused on different influences on pediatric symptom perception, distinct dimensions in the perception of dyspnea and verbal descriptions of the sensations. Three papers examined respiratory related evoked potentials associated with breathlessness. Abraham Guz delivered an invited address on the development of our understanding of the neurobiology of perceived respiratory sensations. Robert Banzett devoted his invited address to the neurophysiology of dyspnea by summarizing the current findings of neuroimaging studies on cortical pathways underlying different dyspneic sensations. Omer van den Bergh discussed potential influences of different learning processes on the perception of respiratory symptoms in his presidential address.

- Controlled breathing
Different forms of controlled breathing have been derived from Asian practices over the past several decades and have been implemented in various intervention techniques. A number of papers focused on the effectiveness of controlled breathing in healthy individuals and patients with COPD or anxiety disorders, and the effects of varying instructions on physiological responses. Other authors presented promising results of controlled breathing in the context of heart rate variability biofeedback, in which breathing frequency is decreased to a target of 6 breaths/min. Applications were reported for patients with depression, asthma, pain and pediatric cancer.

- Emotions, stress and asthma
A number of presentations were devoted to the role of emotions on lung function, including a workshop on psychological treatment of comorbid panic disorder and asthma. In addition, negative affect and stress were shown to have altered the lung function of healthy and, in particular, asthmatic individuals in the laboratory and in naturalistic settings. Airway inflammation and vagal excitation were reported as pathways mediating this relationship between stress and lung function in men. Additionally, substance P was shown to mediate the effects of stress on airway inflammation in mice.

- Panic and respiration
The associations between panic and respiratory symptoms, e.g. hyperventilation, have generated intense discussions in recent years. A number of papers focused on respiratory abnormalities in panic disorder and methodological and statistical issues to examine these associations further. Giampaolo Perna summarized the current findings in an invited address suggesting abnormalities in homeostatic brain function in panic disorder, which might be related to primal emotions.

- Methodological Issues
Several presentations were given on methodological issues, including a panel discussion and a workshop on continuous physiological monitoring and specific analysis procedures. Investigations included heart rate variability correction, heart rate resonance features, assessment of airway inflammation and a workshop on COPD rehabilitation, providing insights into ventilatory and psychological interventions.

- Other topics
A number of papers examined the relationship between gas exchange and breathing instructions, gender and affect. Helgo Magnussen gave an invited address on the hygiene hypothesis of asthma, which combined epidemiological data with results on atopic and inflammatory status in patients and linked these with current findings on genetic factors.

Conference Building from outside

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