

Exploring psychophysiological processes in stress responses: from gastric to interpersonal dynamics

Wednesday, September 25, 2024 3:30 PM (20 minutes)

Stress triggers a complex cascade of physiological and psychological responses, affecting not only bodily functions like the gastrointestinal (GI) system but also cognitive processes such as self-focused attention, and eventually social interactions. Despite the common experience of stress-related GI symptoms, objective evidence on its impact on enteric functions in humans remains scarce, primarily due to monitoring challenges involving invasive methods. To address this gap, we employed non-invasive, biocompatible sensor-equipped pills in a study involving 36 participants, monitoring GI parameters during stress-inducing virtual reality (VR) scenarios. Our investigation revealed that perceived stress was associated with less acidic gastric pH, likely because of heightened sympathetic activity suppressing gastric secretion.

Moreover, scientific literature suggests that stress also enhances the focus on self-related negative affect, potentially influencing interpersonal relationships. The extent and mechanisms through which stress affects social interactions remains unexplored. In a separate study involving 49 healthy participants, we investigated the effects of stress-induced intrusive thoughts on interpersonal dynamics. Participants engaged in either a stress induction (in the form of perseverative cognition) or a control condition, and then they interacted online with another individual. Interpersonal dynamics were assessed in the forms of interpersonal physical and psychological closeness and automatic imitation. Results showed that an increased subjective perception of perseverative thoughts was associated with a reduced preference for physical closeness.

These studies provide valuable insights into psychophysiological effects of stress, elucidating its impacts on individual well-being and social behavior. Furthermore, they highlight the importance of developing non-invasive methods to further explore the underlying mechanisms.

If you're submitting a poster, would you be interested in giving a blitz talk?

If you're submitting a symposium talk, what's the symposium title?

Interoception, affectivity and cognitive processes

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

No

Primary author: Dr ERA, Vanessa (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;)

Co-authors: Dr VECCHIO, Arianna (2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy); Dr FUSARO, Martina (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;); Dr CICCARONE, Sofia (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;); Prof. PANASITI, Maria Serena (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;); Prof. OTTAVIANI, Cristina (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;); Dr FINI, Chiara (3 Department of Dynamic and Clinical Psychology and Health Studies, Sapienza University of Rome,); Dr PORCIELLO, Giuseppina (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome,

Italy); Prof. AGLIOTI, Salvatore Maria (2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy; 4 Sapienza, Università di Roma and Center for Life Nano- & Neuro-Science, Fondazione Istituto taliano di Tecnologia, Rome Italy.)

Presenter: Dr ERA, Vanessa (1 Department of Psychology, Sapienza University of Rome, Rome Italy; 2 Social Neuroscience Laboratory, IRCCS Santa Lucia Foundation, Rome, Italy;)

Session Classification: Symposia: Interoception, affectivity and cognitive processes