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COGNITIVE, EMOTIONAL AND SOCIAL SKILLS FOR AEROSPACE AND HIGH-PERFORMANCE
TEAMS

Abstract

The idea of the project is to assess how high performing teams can regulate their emotions and thoughts when they are aware of their emotional state and how this can affect their performance, social skills, and mental health. The research aims to demonstrate that Emotional Intelligence Skills (EIS) could be a tool to support the cognitive processes that will be influenced by the complexity of tasks required during long-duration space travel. EIS awareness contributes to professional and personal success. Our brains possess remarkable plasticity that allows us to shape the structures and functions of the nervous system during our development and enables humans to acquire knowledge and make decisions. The cognitive process will allow us to decode the information that comes to us through our senses. There is a difference between primary and higher mental processes, and they are fundamental to our adaptation to our social environment and survival. Very little research on this topic has been done with people working in the space sector, which could be interesting since we talk about professions requiring high performance under extraordinary conditions with a high level of stress and moral responsibility. Our research uses a series of questionnaires given to analogue astronauts in the Analog Astronaut Training Center in Poland and groups of people brought together by the EuroMoonMars group who conducted scientific work in extreme environments. The questionnaires included in this research are: The Emotional Meta-Awareness Scale (TMMS-24); Group Environment Scale (GES-E GES-R); HEXACO personality inventory; Cognitive and Affective Empathy Scale (TECA); Depression, Anxiety, Stress Scale (DASS); The SCL-90-S, a psychopathology indicator. These questionnaires will provide comparative and orientation data. We can examine how emotional processes can influence cognitive functions and whether training in emotional intelligence can affect long-term cognitive processes, social skills, and leadership. Mental and emotional processes would be imperative for future astronauts to maintain their attention and vigilance, reducing fatigue and stress while in space. After the first results, we add three new questionnaires to obtain information on cognitive processes and leadership and extend the research project about mental health in a high demanding environment.