

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)  
Behaviour, Performance and Psychosocial Issues in Space (1)

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PROCESS-BASED COGNITIVE BEHAVIOURAL INTERVENTIONS FOR ENHANCING THE  
PERFORMANCE, MENTAL HEALTH, TEAM COHESION AND AUTONOMY OF THE ANALOG  
ASTRONAUTS, FLIGHT CONTROLLERS AND SUPPORT STAFF IN THE AMADEE20 MISSION  
SIMULATION.**Abstract**

A series IAC papers discuss and show the theory and evidence of process-based cognitive-behaviour therapies (CBTs) including mindfulness, and acceptance and commitment therapy (ACT) (Decadi Schlosser et al 2018; Schlosser 2020a; Schlosser 2020b; Schlosser Lucic, 2021; Schlosser, Antonova Petrut, 2021; Schlosser Whiteley, 2022). Some of the relevant data resulted from a landmark pilot study discusses the benefits of modern organisational development interventions using process-based CBT with ISS flight controller teams (Schlosser, 2020b). In this current study, we evaluate the results of a brief ACT team-building intervention of crew members, flight controllers and support staff serving together in the AMADEE20 mission for a month (N=25). We will discuss how key psychological processes impact mission critical outcome variables including performance, mental health, team cohesion and autonomy. The data collected during this quasi-experimental study benefits from an intensive longitudinal design with 25 timepoints to monitor changes in participants over time and partially compensate for the low sample size. The significance of this pioneer study is that (1) it evaluates the utility of leading-edge forms of CBTs in the space industry; (2) for the first time it focuses on the complete operative team, regarding the flight controllers and support staff just as important as the analog astronaut crew; (3) speaks from an organisational development perspective when aiming to boost mission critical outcomes; (4) serves as a compelling behavioural health framework for future human behaviour and performance trainings.