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Behaviour, Performance and Psychosocial Issues in Space (1)

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PSYCHOLOGICAL RESILIENCE DURING OVERWINTERING IN ANTARCTICA

Abstract

Overwintering in Antarctica is considered an attractive psychological analog to long term human spaceflights. During the long winter, expeditioners are exposed to many similar stressors as those experienced by astronauts in space such as confinement, isolation, lack of short term evacuation possibilities, and disruption in circadian rhythms. A controversial question has been the extent to which psychological resilience undergo predictable changes under such conditions, and specifically the existence of a critical period occurring around the third quarter of the expedition. The aim of the present study was to empirically test the occurrence of the "third quarter phenomenon". Two crews (N=27) completed the Utrecht Coping List, PANAS and a sleep diary at regular intervals (x 9) during a ten month stay (February to November) at the Concordia station. The results showed that positive effect and subjective sleep quality showed a marked dip around half-way of the expedition corresponding to the midwinter. The use of several coping strategies (active, palliative, and avoidance) also decreased around half-way, and remained low throughout the expedition. In conclusion, the study is in line with research suggesting a change in psychological resilience around the middle of the stay among personnel undergoing time-limited isolation and confinement.