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Behaviour, Performance and Psychosocial Issues in Space (1)

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PERSONAL VALUES AND CREW DYNAMICS DURING LONG DURATION SPACE MISSIONS:
COMPARING RESULTS FROM THE ISS AND SPACE ANALOG SETTINGS

Abstract

Long duration space missions present challenges for maintaining crew motivation, morale, and individual well-being. Experts in space psychology suggest that interpersonal compatibility in crew composition can help overcome some of these challenges. The present paper examines how individual personal values (a factor linked to crew compatibility) might impact upon interpersonal relationships during missions in space. Data were collected from cosmonauts (N=12) at the International Space Station and crew members involved in the Mars 500 (N=6) and Mars 105 (N=6) experiments. The portrait of crew values questionnaire (PCVQ), assessing individual personal values and the extent to which value differences contributed to interpersonal tension, was completed once a month during each of these missions. Results showed that emphasis on benevolence (the well-being of others) declined significantly over time during all missions, possibly reflecting a reduced sense of cohesion. Emphasis on self-direction increased during both the Mars simulation studies but not during the ISS missions. Individual differences in the emphasis on self-direction, hedonism and stimulation were most consistently related to report of interpersonal tension. Findings may have implications for crew composition and the psychological countermeasures deployed during missions in space.