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PERSONAL VALUES IN A LONG-DURATION ISOLATED ANALOGUE

Abstract

Background: In long-duration missions, the physical and mental health of crew members as well as their ability to work and collaborate efficiently is important factors for mission's success. Isolation and confinement in small groups bring about social limitation, monotony, boredom, fatigue and other negative influences. The experience of living for a prolonged period in an isolated, confined environment may negatively influence mood as well as crewmembers' motivation, well-being, and personal values. Crewmembers may also experience personal growth and positive changes during missions that may last after the mission and positively influence re-adaptation after the end of the stay. The objective of the present study was to investigate the influence of prolonged dwelling in isolated and confined environment on personal values. Sample and procedure: Data was collected during a 180 days space station simulation in Shenzhen, China, named "4 Subjects 180 Days CELSS Integration Experiment" from June to December of 2016. The crew consisted of four subjects, three males and one female. To assess changes in personal values, the Portrait of Value Questionnaire (PVQ) was administered seven times during the experiment, approximately once each month. The items in the PVQ are answered on six-point response scale from "very much like me" to "not like me at all", which means the lower scores crew report, the more they think the description like themselves. Results: Due to the small sample, non-parametric statistics were conducted. Centered scores were used to reduce the interference of individual difference in responses to PVQ. Spearman non-parametric correlation was used to analyze relationships between centered value scores and time point. Among the ten subscales in the PVQ, security showed a significant correlation with time ($r=-.788, p=.035$). The scores of security decreased over time. In other words, crews emphasized safety, harmony and stability for self, group and society more. Conclusion: In present study, the scores of PVQ suggested that most personal values of crewmembers were stable over time contrasting to the results from other studies of isolated and confined crews.