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SOCIAL ACTION RESEARCH: COMPARISON OF EMOTIONAL EXPERIENCE AND
PSYCHOLOGICAL STATE OF CREWS SIRIUS-19 AND SIRIUS-21 DURING SIMULATED
SPACEFLIGHT

Abstract

Introduction Within the framework of social action research by Bernardová Sýkorová, attention is focused on the 1st area of the model - specifically on the sub-area of emotional experiences reflecting the current psychological state during isolation. This contribution deals with this research area. During long-duration manned space flights, the psychological factor of the crew will become increasingly significant over time. This study compares and describes changes in emotional experiences, psychological states, and preferred forms of assistance for psychological problems among members of isolated crews of SIRIUS-19 and SIRIUS-21 missions. Method A five-point Likert scale was used to capture the frequency of experienced emotions before and after isolations. Participants then selected from a presented lists of options to measure their current psychological state and preferred assistance when dealing with psychological problems in the post-isolation phases. Results SIRIUS-19 The crew experienced the following emotions in the pre-isolation phase (from most to least experienced): Happiness, Appreciation, Sadness, Stress, Helplessness, Fear, Anger. In the post-isolation phase, the emotions were as follows: Happiness, Appreciation, Stress, Sadness, Anger. Helplessness and Fear were not reported. Four participants evaluated their psychological state in the post-isolation phase as Very Good, one participant as Good. Two participants would seek help when dealing with psychological problems from Family, one from Friends, one from a Professional institution, one from Experts at IBMP/NASA, and one from No one. SIRIUS-21 In the pre-isolation phase crew reported these emotions: Happiness, Appreciation, Stress, Helplessness, Sadness, Fear. Anger and Injustice were not reported. In the post-isolation phase, the emotions reported were: Happiness, Appreciation, Stress, Sadness, Helplessness, Anger, Injustice. Fear was not reported. The psychological state in the post-isolation phase was rated as Very Good by three crew members and as Good by single participant. Three crew members would seek psychological help from Family, and one from a Professional institution. **Conclusion** Overall, both crews predominantly experienced positive emotions

before and after isolation. There is a moderate increase in negative emotions in the SIRIUS-21 crew such as Stress and Sadness, reflecting a lesser cohesiveness compared to the SIRIUS-19 crew. Nevertheless, the majority of the SIRIUS-19 crew rated their psychological state after isolation as Very Good, similar to the SIRIUS-21 crew. The results generally indicate a relatively good level of psychological well-being before and after isolation for both isolated crews, with slightly more negative emotional experiences in the post-isolation phase for SIRIUS-21.