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MODERN PSYCHOLOGY FOR SPACE EXPLORATION

Abstract

Psychology is one of the most important and often undervalued aspects of the manned space program. As the space industry grows, the importance of psychology will be ever increasing. An overarching study of modern psychology and an investigation into the current state of space psychology were conducted concurrently. Herein, the results are used to develop proposals of concerns, mitigation strategies, and support to be adapted to an astronaut's entire lifetime. Psychology is a very broad field, so parameters must be set in place to limit the scope of the study. First, the astronaut's lifetime is delineated into 4 stages: selection, training, mission(s), and post mission, wherein the post mission phase includes the entire time from final return to Earth until the end of their lifetime. Second, an exploration mission is defined as one of the first subset of missions to visit a locale that no human has travelled before, like the Apollo Moon missions. There are innumerable proposals that can be made, and some of the more reasonable and necessary proposals are included. Four of which stand out prominently: 1. Providing a quasi-real-time live video coverage of Earth through a simulated window will improve the astronaut's connection to Earth during the mission and will help negate the possible Earth-Out-of-View phenomenon. 2. Once back on Earth, each astronaut may experience a wide range of psychological difficulties, so a post mission astronaut support program is recommended to provide guidance for the rest of his or her life. 3. Incorporating more positive psychology, such as mindfulness, is recommended throughout the lifetime of the astronauts; this should move the program towards salutogenesis, or a focus on maintaining psychological well-being over coping with issues that arise. 4. A culture shift in the space realm is necessary; this shift should entail a new atmosphere in which mental health is openly discussed and psychiatry is accepted and encouraged. Incorporating these four key proposals – and the numerous others provided – can help the growth and advancement of the space psychology field.