

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Behaviour, Performance and Psychosocial Issues in Space (1)Author: Ms. Susan Ip-Jewell
United StatesMs. JASLEEN KAUR
Embry-Riddle Aeronautical University, United States

BEHAVIORAL MOTIVATION OF PROSPECTIVE MARS CREWMEMBERS

Abstract

Living in extreme climatic conditions is challenging on planet Earth which encourages researchers hoping to find life on other planets such as Mars. This research was conducted to explore the effects on human behavior and willingness to go to Mars when individuals were informed about all the possible risks. Two studies were conducted to examine the participants. First, through an online survey and second through observation study on the participants who participated in a habitat study in the LUNARES facility in Poland and Mars Academy USA (MAU) Mars Medics Analog Astronaut training facilities in California, USA and Mustang, Nepal. As per reviewed literature, there are thousands of people who have already shown their interest to go to Mars. Since the technology is under development to send humans to Mars, researchers are making sure of the safest journey for the astronauts. It is imperative to select the right candidates among all these thousands of interested people. This study was helpful to review the physiological effects that crew face in isolation, to find out the solutions before any long-duration space mission, and to satisfy the hypothesis. There were 157 participants who participated in the survey, and 45 participated in the habitat observation study. Researcher expected that most of the participants are not fully aware of the risks they may encounter in space. Once participants are aware, many are likely to decline the mission. The results from the daily diary questionnaire study convey that even though the participants stayed in isolation for a short period, participants still showed some symptoms of isolation such as loneliness, boredom, fatigue. Results also show that different age groups have a different mindset and motivation for the Mars mission. Results show some significant difference in the comparison study of participants ≤ 30 and $30+$ age group, such as ≤ 30 age group participants show more interest in the mission to Mars with no return to Earth, both the ≤ 30 and $30+$ age groups responded that their decisions are affected due to delay in communication, effect of extreme temperature, and receiving information solely from automation. Results from cognitive tests illustrate that participants took more time to solve the simple math problems with audio in the background as compared to the math problems with no audio in the background. Even though they took more time to solve the math problems, their recall answers were still wrong 40