

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Behaviour, Performance and Psychosocial Issues in Space (1)Author: Ms. Qianying Ma
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Ms. MANRUI WU
Beihang University, ChinaMULTICULTURAL PERSPECTIVE OF NEGATIVE MOOD STATES IN LONG-TERM ISOLATION
AND CONFINEMENT**Abstract**

During the isolated time, a series of stressors like lack of social support, monotony, interpersonal conflict, could potentially bring about negative influence on crews' mood states, performance and interpersonal relationships. However, the expression and covariation of negative mood states could be affected by different cultural. For example, previous studies showed that Asian were likely to describe somatization symptoms in depression, but emotional disturbance would be stressed in American subjects. In addition, a study based on Chinese depression patient find that they tended to express depression in embodied emotional experience or socio-somatic experience, and always related with heart. Cultural difference of negative mood states also showed in extreme environment. In Russian cultural, depression could potentially covary with fatigue based on diagnose of asthenia in ICD. But difference exist in the America conception and diagnostic system (DSM), depression have correlation with anxiety rather than fatigue (chronic fatigue syndrome). The study in the ISS gave the evidences of this cultural difference. The report of mood states reveal that fatigue significantly covaried with depression among Russian, but the level of anxiety had covariance with depression among Americans. As an ongoing contributor to the space exploration, Chinese has potential role in the future. Hence, the increasing tendency of international cooperation draw an emphasis on cultural influence in heterogeneous groups. In this study, the relationships among various mood states were investigated based on two Chinese isolated and confined experiments, Lunar Palace 1 and CELSS-180. During the isolated time, crews completed questionnaire named Profile of Mood states (POMS) to assess their range of moods. POMS is a widely used questionnaire in actual space missions and earth-based experiments. There were 3 crews in Lunar Palace 1 with 11 test points, and 4 crews in CELSS-180 with 8 test points. Linear regression model was used to testify the relationship among mood states. Results showed that the level of depression in Chinese crew was significantly covaried with fatigue and anxiety (CELSS-180: $\beta_{\text{depression-anxiety}}=0.789$, $p=0.02$, $\beta_{\text{depression-fatigue}}=0.907$, $p=0.002$; Lunar Palace 1: $\beta_{\text{depression-anxiety}}=0.741$, $p=0.009$, $\beta_{\text{depression-fatigue}}=2.593$, $p=0.029$). The results showed different pattern of correlations in negative mood states compared with Russia and America. Cultural difference may play a potential role. In addition, all crews in these two experiments were not astronauts who may have more stable mood states than others. Small sample also may impair rigorous statistical analysis. Further study should be conducted in cultural difference on covariation of mood states.