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A SYSTEMATIC REVIEW OF PERSONAL VALUES RESEARCH IN ISOLATED, CONFINED AND
EXTREME ENVIRONMENTS

Abstract

Missions in isolated, confined and extreme (ICE) environments often require small heterogenous crews to live and work in close proximity for long periods of time. Identifying the personal characteristics that makes someone suitable for this type of deployment and might explain how they communicate and cooperate with others is crucial for mission success and ensuring the safety, performance and health of the crew. The study of personal values is an area of research that may have explanatory significance. Personal values are conceptualized as broad motivational goals of varying importance that guide attention and action to social, intellectual and emotional opportunities. Functionally, values provide standards against which the self and others can be judged: which, may explain both individual variations in behavior, performance and health and experiences of group cohesion and tension. There has been a considerable attempt to study the personal values of individuals and groups in a range of ICE conditions. Given the volume of work already published, it is timely to review what we have learnt, what can be generalized, and what further research is needed to support individual and group function in these settings.

We conducted a systematic review of research on personal values in ICE environments. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PISMA) guidelines were followed to identify, select and assess relevant studies. Entering combinations of keywords into scientific databases returned 27 articles. After screening titles and abstracts and removing duplicates, 12 articles were retained. A grey literature, reference list search and author consultation were undertaken, returning three additional papers (n = 15).

Across ICE environments, benevolence, self-direction, achievement and universalism were high and power low in observed value hierarchies. Value hierarchies tended to be ordered differently depending on the type of methodological approach used. Unlike other individual difference factors, such as personality, time-course changes in personal values were reported. This included both pre-to-post (e.g., increased universalism) and within-mission (e.g., decreased benevolence) changes. Between-person differences in values appeared to have an adverse effect on group function.

We discuss the generalizability of the reviewed personal value literature, consider methodological and measurement issues, and identify how future research may advance our present understanding. Suggestions

for the theoretical integration of personal values within a more holistic gestalt are provided, which may better explain individual and group behavior and ultimately contribute to the safety, performance and health of those living and working in ICE settings.