

Sample Journal Publications

Groups and Teams

Note: Bolded Names Indicate a UCF I/O Graduate Student; Underlined Names Indicate a UCF I/O Faculty Member

Aarons, G. A., Sklar, M., Ehrhart, M. G., Roesch, S., Moullin, J. C., & Carandang, K. (2024). Randomized trial of the Leadership and Organizational Change for Implementation (LOCI) strategy in substance use treatment clinics. *Journal of Substance Use and Addiction Treatment*, 165, 209437.

Abstract

Introduction: Evidence-based practice (EBP) implementation represents a strategic change that requires alignment of leadership and support throughout organizations. Leadership and Organizational Change for Implementation (LOCI) is a multifaceted implementation strategy that aims to improve implementation leadership and climate within organizations through iterative cycles of leadership and climate assessment and feedback, leadership training and coaching, and strategic planning with upper-level leaders. This study tested the effects of LOCI on transformational and implementation leadership, implementation climate, implementation citizenship behavior, and EBP reach.

Methods: A multiple cohort, cluster randomized trial tests the effect of LOCI in 60 clinics across nine behavioral health organizations in California and Arizona, USA. The study randomized clinics within organizations to either LOCI or a leadership training webinar control condition in three consecutive cohorts. Repeated web-based surveys of direct service providers (nLOCI = 201, nControl = 179) assessed leadership, implementation climate, and implementation citizenship over time. Multilevel autoregressive modeling was the primary statistical analysis such that providers (level-1) were nested within clinics (level-2). The study predicted between-condition differences at 4-, 8-, and 12-month follow-up assessments. Provider engagement in a fidelity monitoring process assessed reach of motivational interviewing (i.e., number of sessions recorded/submitted for fidelity coding). An independent sample t-test explored between condition differences in motivational interviewing reach.

Results: Results indicated between condition differences at 4 months for implementation leadership, implementation climate, and implementation citizenship behavior such that greater improvements were evidenced in the LOCI condition compared to the control condition. Reach of MI was significantly greater in the LOCI vs control condition such that LOCI providers were significantly more likely to engage in the fidelity monitoring process (chi-square (1, n = 370) = 5.59, $p = .018$).

Conclusions: LOCI was developed based on organizational theories of strategic leadership and climate to affect organizational change processes that communicate that innovation implementation is expected, supported, and recognized as a value of the organization. The LOCI implementation strategy resulted in more positive hypothesized outcomes compared to the control condition. Organizational change strategies have utility for implementing health innovations in complex, multilevel contexts and for greater sustainment of facilitative leader behaviors, strategic implementation climate, and improved implementation outcomes.

Burke, C. S., Feitosa, J., & Moavero, J. (2020). Towards an understanding of training requirements for multicultural teams in long duration spaceflight. In L. Landon, K. Slack, & E. Salas (Eds), *Psychology and Human Performance in Space Programs: Research at the Frontier* (pp.171-193). Boca Raton, FL: CRC Press.

Abstract

This chapter reviews the state-of-the art with respect to the impact that cultural diversity has on team interaction, with an emphasis on the context of spaceflight. In doing so, we seek to document what is known as well as what the future holds for research. As research that explicitly examines the impact of cultural diversity on team interaction within the context of spaceflight is limited, we also leverage research conducted outside spaceflight and consider the characteristics of long duration, long distance exploratory missions to make predictions.

Driskell, T., Burke, C. S., Driskell, J. E. (2025). Interpersonal dynamics in spaceflight: An archival study. *Acta Astronautica*, 229, 861-865. <https://doi.org/10.1016/j.actaastro.2025.01.065>.

Abstract

Maintaining positive and functional interpersonal relationships in spaceflight will be a significant challenge in future long-duration exploration missions (LDEM). What was once viewed as a beneficial, yet nonessential, element for short-duration missions, functional interpersonal relationships are now regarded as a critical element of LDEM. For instance, Stuster (1996) notes that “Minor annoyances, differences of opinion, or perceived transgressions that would be inconsequential under normal conditions can be magnified by isolated and confined personnel into issues of monumental importance” (p. 308). As Kanas (2023) notes, interpersonal issues have increased importance in future LDEM, which are expected to last years. For example, a mission to Mars will likely involve a crew of approximately six diverse team members living and working together for nearly three years in a confined habitat not much larger than a recreational vehicle. Under such conditions, interpersonal difficulties or friction among crewmembers may have important consequences for both crew performance and well-being, underscoring the need to better understand and monitor crew interpersonal dynamics.

This study adopts a network or sociometric perspective to examine crew interpersonal relationships from data collected in NASA's Human Exploration Research Analog (HERA). We examine interpersonal dynamics among crew members by applying and adapting a linguistic analysis technique called Language Style Matching (LSM) (Niederhoffer & Pennebaker, 2002). We use LSM to identify variability in interpersonal relationships across the course of a mission and to examine differences in interpersonal closeness both within crews (i.e., across dyads) and between crews. This study represents a needed first step toward documenting intercrew and intracrew differences in interpersonal dynamics in a spaceflight analog. The advantages of this type of communication analysis are that it is unobtrusive, it is derived directly from ongoing crew communications, and it can provide a means to measure crew interpersonal dynamics over the course of mission performance.

Driskell, T., Salas, E., Burke, C. S., & Driskell, J. E. (2023). A lexical approach to assessing stress: Development and proof-of-concept. *Human Factors*, 65(6), 1105-1129.

Abstract

Objective: We describe a methodology that provides a nonobtrusive means of detecting stress and related deficits through the assessment of spontaneous verbal output in ongoing communications.

Background: In high demand environments, operational personnel are exposed to an array of environmental, task, and interpersonal stressors that can negatively impact performance as well as jeopardize safety and well-being. In these settings, the requirement exists to assess cognitive and emotional state “at a distance” and without interfering with ongoing performance.

Method: We describe a lexical approach to assessing stress effects from ongoing or spontaneous verbal output. This approach is examined in a spaceflight analog setting.

Results: We assess stress effects in terms of five core dimensions and develop lexical indicators of these core stress dimensions and relevant sub-facets. We establish the proof-of-concept of this approach by presenting representative data from a spaceflight analog.

Conclusion: This approach provides an unobtrusive means to evaluate ongoing task communications at the individual and team level to assess cognitive/emotional states such as workload, negative affect, attentional focus, anxiety, and team orientation. *Application:* There are many high-demand settings in which it is valuable to monitor the potential negative effects of stress on operational personnel. These environments include spaceflight, the military, aviation, law enforcement, and medicine.

Feitosa, J., Davis, A. S., Fernández Castillo, G., Burke, C. S., Natale, A., & Harmata, R. K. (2025). Adapt, endure, succeed: Profiling extreme teams. *Team Performance Management*, 31 (7-8), 668-699. <https://doi.org/10.1108/TPM-05-2024-0045>.

Abstract

Purpose – Extreme teams are found in a great variety of contexts, from firefighting to space exploration. The number of extreme teams (alongside research on them) has exponentially increased in the last two decades. Thus, the purpose of this study is to examine the internal team dynamics of extreme teams, identify key team configurations and finally, to explore methodological insights for studying these teams with the use of innovative methods.

Methodology – Using Hollenbeck et al.'s (2012) three-dimensional typology, the authors conducted a systematic review and coded 195 articles according to their skill differentiation, authority differentiation and temporal stability.

Findings – Three profiles of extreme teams emerged: (1) agile experts, (2) cohesive mainstays, and (3) structured flex crews. The authors provide specific lessons for each profile as well as methodological guidance to aid researchers and practitioners working with extreme teams.

Originality/Value – We focus on teams' dynamics to offer more precision in capturing the relevant sources of stress and uncertainty that shape these teams based on their distinct characteristics, such as leadership structures, skill differentiation and temporal stability, to overcome challenges – regardless of their general extreme context. These new profiles will allow future researchers to understand extreme teams far and wide, from space teams to surgical teams and beyond.

Fisher, D. M., LeNoble, C. A., & Vanhove, A. J. (2023). An integrated perspective on individual and team resilience: Moving from multilevel structure to cross-level effects. *Applied Psychology*, 72(3), 1043-1074.

Abstract

We address the interrelatedness of resilience across levels by proposing a series of cross-level effects between individual and team resilience. First, we present a homologous model of resilience including four core components that transcend levels of analysis: (1) the occurrence of adversity, (2) the capacity for resilience (3) the enactment of resilience, and (4) the demonstration of resilience. Second, building on a multilevel perspective and existing theory (e.g., conservation of resources and role theory), we present five foundational principles for understanding cross-level resilience effects: (1) resilience components are interrelated across levels; (2) resilience capacity resources are finite and subject to depletion; (3) resources can be derived from and applied to individual or team levels; (4) effectively enacting resilience requires alignment between resources and situational demands; and (5) resilience processes can conflict across levels. Finally, we present a series of propositions that elucidate potential cross-level effects between components of individual and team resilience, including those with positive, null, and negative consequences. This work advances the resilience literature by offering an integrated, cross-level perspective concerning the ways in which individual and team resilience are likely interrelated.

Kaosaar, A., & Burke, C. S. (2025). The effect of challenge characteristics on teamwork and affective states in ICE. *Group and Organization Management*, 50 (5-6), 1876-1931. <https://doi.org/10.1177/10596011241304132>.

Abstract

With increasing attention on Lunar and Martian missions, understanding the effects of Isolated, Confined, and Extreme (ICE) environments on human teams becomes critical. Conducting ecologically valid research on team dynamics within these contexts poses challenges due to the unique challenges they operate and stemming scarcity and inaccessibility of such teams. Adopting a mixed-methods approach, this study answers the call for more research to understand the nuances of teams operating in these conditions. Leveraging archival data collected from 36 Antarctic winteroverers, the relationships between challenge characteristics, team dynamics, affective states, and individual differences are investigated. The data's nuanced nature shows the effect of task challenges on teamwork outcomes and the related increased negative affect. Furthermore, the strong effect of within-person factors on the ICE experience is illustrated in the qualitative and quantitative data. In line with this variability, the study reveals how both higher-level personality facets, as well as their subscales, influence individuals' experiences in ICE environments. Exploring the connections between a set of challenges characteristics on three affective variables and eight discreet emotions, nine component variables of two latent teamwork constructs, and a suite of individual differences variables, the study contributes to the field by demonstrating the value of combining qualitative and quantitative data within small samples, allowing for in-depth insights into teamwork experiences in ICE. The manuscript also provides insight into temporal aspects of key relationships in ICE and how a set of individual differences relate to the use of journaling as a research methodology.

Käosaar, A., Fiore, S., Gomez, C.A., & Burke, C.S. (2024). Understanding team cognition in support of long-distance space missions. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 68(1), 1837-1842.

Abstract

Future long-distance space missions (LDSM) present formidable challenges due to prolonged isolation, communication delays, and extreme conditions, which affect individual and team cognitive functions, crucial for mission success. This necessitates a higher degree of autonomy, emphasizing the importance of team cognition in managing the complexities of LDSMs. Although prior research has largely focused on individual cognition, the collective cognitive processes that support effective team performance in space have been less studied. This oversight is critical as factors like microgravity and isolation can impair individual level cognitive functions vital for teamwork, such as attention and working memory. This paper employs the Macro cognition in Teams Model to study publicly available transcripts from the Apollo space missions to understand the challenges to collaborative problem-solving in these complex and high stress environments.

Lehmann, M., Pery, S., Kluger, A. N., Hekman, D. R., Owens, B. P., & Malloy, T. E. (2023). Relationship-specific (dyadic) Humility: How Your Humility Predicts My Psychological Safety and Performance. *Journal of Applied Psychology*, 108(5), 809–825.
<https://doi.org/10.1037/apl0001059>

Abstract

A leader's expressed humility has a favorable influence on subordinates' job satisfaction, creativity, and performance. However, we know little about how humility affects one's same-level coworkers. Shifting focus away from leader's humility, we suggest that coworker humility can also produce positive effects but has a relationship-specific component. Some coworker relationships are characterized by greater expression of humility than others. Specifically, we hypothesize that when a coworker expresses a uniquely high degree of humility to another coworker (i.e., relationship-specific humility), the latter coworker experiences a uniquely high level of psychological safety (i.e., relationship-specific psychological safety), which in turn leads that coworker to perform better (i.e., relationship-specific performance). Pilot Study 1 (N = 155, in 32 teams, yielding 823 relationship-specific ratings) showed that humility has a substantial relationship specific variance component, even in unacquainted teams. Pilot Study 2 (N = 180, in 39 teams, yielding 854 relationship-specific ratings) built on these results in a sample of moderately acquainted teams and showed that relationship-specific humility is associated with relationship-specific perceptions of performance. The Main Study (N = 133, in 32 well-acquainted work teams, yielding 555 relationship-specific ratings) tested our full model. It demonstrated that the association between relationship-specific humility and relationship-specific performance is mediated by relationship-specific psychological safety. We discuss how our findings advance humility research in the workplace by showing that a portion of humility expression is relationship-specific and stems from each employee's unique interaction with another specific person, and that such relationship-specific humility affects relationship-specific performance.

Locklear, L. R., **Kane, M. E.**, & Ehrhart, M. G. (in press). Grateful leaders and attentive followers: How cascading gratitude expressions influence coworker relationships through grateful attention. *Journal of Applied Psychology*.

Abstract

Leader gratitude expressions are widely viewed as a powerful tool to build relationships with and foster the well-being of followers. The present research moves beyond the immediate impact of that gratitude to address whether and how leader gratitude spreads beyond immediate subordinates to influence others throughout the organizational hierarchy. Existing perspectives suggest that leader behaviors may spread via behavioral imitation or emotional contagion, yet gratitude—an appraisal-dependent emotion—likely requires distinct cognitive processes to propagate. Integrating gratitude research with social information processing theory (Salancik&Pfeffer, 1978), we propose a novel pathway of gratitude trickle-down effects, grateful attention, defined as the allocation of attention toward gratitude-inducing stimuli in the workplace, including interpersonal and environmental cues. We argue that witnessing leader gratitude expressions shapes followers' attentional deployment, increasing followers' recognition of benefaction events and promoting their own gratitude expressions, which subsequently improves the quality of their relationships with coworkers. Across two preregistered field studies and a preregistered yoked experimental causal chain study, we competitively test grateful attention alongside social learning (leader emulation) and emotional contagion (felt gratitude). Results consistently demonstrate that grateful attention uniquely transmits the cascading effects of leader gratitude expressions beyond traditional behavioral and emotional explanations. These findings advance theory by identifying an information processing function of gratitude and clarify how leader gratitude expressions can catalyze the spread of gratitude throughout organizations.

Shorey, A., Moran, L. H., Wiese, C. W., & Burke, C. S. (2024). From performance to well-being: Broadening the team resilience discourse (pp.145-169). In P. D. Harms & D. Chang (Eds.), *Research in occupational stress and well-being: Stress and well-being in teams*, Vol. 22. UK: Emerald Publishing.

Abstract

Over the past two decades, the study of team resilience has evolved from focusing primarily on team performance to recognizing its importance in various aspects of team functioning, including psychological health, teamwork, and overall Well-Being. This evolution underscores the need for a broader, more inclusive understanding of team resilience, advocating for a shift from a narrow performance-centric view to a holistic perspective that encompasses the multifaceted impact of resilience on teams.

In advocating for this holistic perspective, this chapter reviews the extant literature, highlighting that resilience is not merely about sustaining performance but also about fostering a supportive, adaptive, and psychologically safe environment for team members. Significant areas for further exploration, including the nuanced nature of adversities teams face, the processes underpinning resilient behaviors, and the broad spectrum of outcomes resilience can influence beyond task performance are also discussed.

The chapter serves as a call to action for a more inclusive examination of how resilience manifests and benefits teams in organizational settings. The proposed shift in perspective aims to deepen understanding of team resilience, promoting strategies for building resilient teams that thrive not only in performance but in all aspects of their functioning.

Szabo, K., & Burke, C. S. (2026). The dark side of personality: Examining narcissism in virtual teams. In J. Nemiro (Ed.). *Cultivating creative collaboration in student virtual teams in higher education: Design and climate* (pp.127-160). Hershey, PA: IGI Global Scientific Publishing.

Abstract

In this chapter the authors discuss how team personality composition (ie, team narcissism) influences virtual team performance via team processes (ie, information sharing and team conflict). Evidence was found for the negative impact of team narcissism on information sharing. The relationship between narcissism and team conflict was not supported. Information sharing predicted virtual team performance. Practical implications regarding staffing and virtual team collaboration in higher education are discussed at the end of the chapter.

Williams, N. J., Aarons, G. A., Ehrhart, M. G., Esp, S., Vega, N., Sklar, M., Carandang, K., Brookman-Frazee, L., & Marcus, S. C. (2025). Effects of an organizational implementation strategy on sustainment of measurement-based care in community mental health. *Psychiatric Services*, 76, 358–365.

Abstract

Objective: Little is known about how to sustain evidence-based interventions with fidelity in community mental health settings. Phase 1 of the Working to Implement and Sustain Digital Outcome Measures (WISDOM) trial showed that an organizational strategy improved the implementation of measurement-based care (MBC) in mental health services for youths 1–12 months after clinician MBC training. The authors report results from phase 2 of the trial, in which the strategy's effects on MBC sustainment 13–26 months after clinician MBC training were examined.

Methods: Twenty-one outpatient mental health clinics were randomly assigned to MBC training and technical assistance plus the Leadership and Organizational Change for Implementation (LOCI) strategy (11 clinics) or to training and technical assistance only (10 clinics). In phase 2, the primary outcomes of MBC completion rate, youth symptom improvement, and MBC fidelity were examined for 452 youths who entered treatment 13–26 months after clinician MBC training.

Results: No differences were found in MBC completion rate or symptom improvement between the two conditions; however, among the 81 youths who received MBC, fidelity was significantly higher at LOCI sites relative to control sites (24%, SE=11.1 vs. 1%, SE=1.0, respectively; $p=0.003$).

Conclusions: During phase 2, LOCI sites (vs. control sites) sustained superior MBC fidelity when MBC was used; however, superior MBC completion rates and clinical outcomes were not sustained. Sustainment of MBC may require strategies that improve its fit with regulatory and reimbursement environments in addition to strategies that develop clinic infrastructure.

Williams, N. J., Ehrhart, M. G., Aarons, G. A., Esp, S., Sklar, M., Carandang, K., Vega, N. R., Brookman-Frazee, L., & Marcus, S. C. (2024). Improving measurement-based care implementation in youth mental health through organizational leadership and climate: A mechanistic analysis within a randomized trial. *Implementation Science*, 19, 29.

Abstract

Background: Theory and correlational research indicate organizational leadership and climate are important for successful implementation of evidence-based practices (EBPs) in healthcare settings; however, experimental evidence is lacking. We addressed this gap using data from the WISDOM (Working to Implement and Sustain Digital Outcome Measures) hybrid type III effectiveness-implementation trial. Primary outcomes from WISDOM indicated the Leadership and Organizational Change for Implementation (LOCI) strategy improved fidelity to measurement-based care (MBC) in youth mental health services. In this study, we tested LOCI's hypothesized mechanisms of change, namely: (1) LOCI will improve implementation and transformational leadership, which in turn will (2) mediate LOCI's effect on implementation climate, which in turn will (3) mediate LOCI's effect on MBC fidelity.

Methods: Twenty-one outpatient mental health clinics serving youth were randomly assigned to LOCI plus MBC training and technical assistance or MBC training and technical assistance only. Clinicians rated their leaders' implementation leadership, transformational leadership, and clinic implementation climate for MBC at five time points (baseline, 4-, 8-, 12-, and 18-months post-baseline). MBC fidelity was assessed using electronic metadata for youth outpatients who initiated treatment in the 12 months following MBC training. Hypotheses were tested using longitudinal mixed-effects models and multilevel mediation analyses.

Results: LOCI significantly improved implementation leadership and implementation climate from baseline to follow-up at 4-, 8-, 12-, and 18-month post-baseline (all $ps < .01$), producing large effects (range of $ds = 0.76$ to 1.34). LOCI's effects on transformational leadership were small at 4 months ($d = 0.31$, $p = .019$) and nonsignificant thereafter ($ps > .05$). LOCI's improvement of clinic implementation climate from baseline to 12 months was mediated by improvement in implementation leadership from baseline to 4 months (proportion mediated [pm] = 0.82 , $p = .004$). Transformational leadership did not mediate LOCI's effect on implementation climate ($p = 0.136$). Improvement in clinic implementation climate from baseline to 12 months mediated LOCI's effect on MBC fidelity during the same period (pm = 0.71 , $p = .045$).

Conclusions: LOCI improved MBC fidelity in youth mental health services by improving clinic implementation climate, which was itself improved by increased implementation leadership. Fidelity to EBPs in healthcare settings can be improved by developing organizational leaders and strong implementation climates.

Williams, N. J., Marcus, S. C., Ehrhart, M. G., Sklar, M., Esp, S., Carandang, K., Vega, N., Gomes, A., Brookman-Frazee, L., & Aarons, G. A. (2024). Randomized trial of an organizational implementation strategy to improve measurement-based care fidelity and youth outcomes in community mental health. *Journal of the American Academy of Child & Adolescent Psychiatry*, 63, 991-1004.

Abstract

Objective: Measurement-based care (MBC), which collects session-by-session symptom data from patients and provides clinicians with feedback on treatment response, is a highly generalizable evidence-based practice with significant potential to improve the outcomes of mental health treatment in youth when implemented with fidelity; however, it is rarely used in community settings. This study tested whether an implementation strategy targeting organizational leadership and organizational implementation climate could improve MBC fidelity and clinical outcomes for youth in outpatient mental health clinics.

Method: In a cluster randomized trial, 21 clinics were assigned to the Leadership and Organizational Change for Implementation strategy plus training and technical assistance in MBC ($k = 11$, $n = 117$) or training and technical assistance only ($k = 10$, $n = 117$). Primary outcomes of MBC fidelity (assessed via electronic metadata) and youth symptom improvement (assessed via caregiver-reported change on the Shortform Assessment for Children Total Problem Score) were collected for consecutively enrolled youths (ages 4-18 years) who initiated treatment in the 12 months following MBC training. Outcomes of each youth were assessed for 6 months following baseline.

Results: A total of 234 youths were enrolled and included in intent-to-treat analyses. At baseline, there were no significant differences by condition in clinic, clinician, or youth characteristics. Youths in clinics using the Leadership and Organizational Change for Implementation strategy experienced significantly higher MBC fidelity compared with youths in control clinics (23.1% vs 3.4%, $p = .014$), and exhibited significantly greater reductions in symptoms from baseline to 6 months ($d = 0.31$, 95% CI: 0.04-0.58, $p = .023$).

Conclusion: Implementation strategies targeting organizational leadership and focused implementation climate can improve fidelity to evidence-based practices and clinical outcomes of youth mental health services.