STRESS AND WELL-BEING IN TEAMS

RESEARCH IN OCCUPATIONAL STRESS AND WELL-BEING

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Peter D. Harms
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Chu-Hsiang (Daisy) Chang
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RESEARCH IN OCCUPATIONAL STRESS AND
WELL-BEING VOLUME 22

STRESS AND WELL-BEING IN TEAMS

EDITED BY

PETER D. HARMS
University of Alabama, USA

AND

CHU-HSIANG (DAISY) CHANG
Michigan State University, USA

United Kingdom – North America – Japan
India – Malaysia – China

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ABOUT THE EDITORS

Peter D. Harms is the Frank Schultz Endowed Professor of Management at the University of Alabama's Culverhouse College of Business. His research focuses on the assessment and development of leadership, personality, and psychological Well-Being. He received his Ph.D. from the University of Illinois at Urbana–Champaign and has published more than 150 articles in leading journals as well as numerous chapters, technical reports, and books. This work has been cited over 20,000 times and featured in popular media outlets such as *CNN*, *Scientific American*, *Forbes*, and the *BBC*. Harms was selected as one of the "100 Knowledge Leaders of Tomorrow" by the St. Gallen Symposium, received the Mid-Career Standout Scholar Award from the Network of Leadership Scholars in 2021, and is a Fellow of both the Society of Industrial and Organizational Psychology (SIOP) and the Association for Psychological Science. He has twice received SIOP's Joyce and Robert Hogan Award for Personality and Work Performance Paper of the Year as well as the Academy of Management's Sage Publications/Robert McDonald Advancement of Organizational Research Methodology Award and several best paper awards from individual journals. Harms currently serves on the scientific advisory board of Hogan Assessment Systems and has engaged in research partnerships with the US Army, the National Aeronautics and Space Administration (NASA), and the US Department of Labor. Harms currently serves as Editor of both *Psychology of Leaders and Leadership* and *Research in Occupational Stress and Well-Being* as well as Associate Editor at *Journal of Business and Psychology*.

Chu-Hsiang (Daisy) Chang is a Professor at the Department of Psychology at Michigan State University. Prior to joining Michigan State, she was a Faculty Member at the Department of Environmental and Occupational Health of the University of South Florida, and the Department of Psychology of Roosevelt University. She received her Ph.D. in Industrial and Organizational Psychology from the University of Akron in 2005. Her research interests focus on occupational health and safety, leadership, and motivation. Specifically, she studies issues related to occupational stress, workplace violence, and how employee motivation and organizational leadership intersect with issues concerning employee health and Well-Being. Her work has been published in *Academy of Management Review*, *Academy of Management Journal*, *Journal of Applied Psychology*, *Journal of Organizational Behavior*, *Organizational Behavior and Human Decision Processes*, *Psychological Bulletin*, and *Work & Stress*.

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ABOUT THE CONTRIBUTORS

Laura Bauer is a Ph.D. student in the Organizational Psychology program at Michigan State University. Her research focuses on multiteam system functioning and adaptation in high-reliability organizations including NASA.

Elizabeth Bell is a second-year industrial organizational psychology Ph.D. student at Clemson University. She received a Bachelor's degree in Psychology with minors in Business Administration and Philosophy from DePauw University. Her research interests are in teams and diversity, equity, and inclusion.

Dr Alyssa Birnbaum is the founder of Teal Elephant LLC, an employee listening and organizational development consultancy, where she crafts ongoing listening strategies to capture employees' perceptions at work and creates bespoke solutions to foster positive work cultures. Her research centers on work engagement, burnout, high-quality work connections, and the evolving landscape of remote and hybrid work. She completed her Doctorate at Claremont Graduate University and resides in Claremont, California with her husband, Joe, and dog, Scottie.

Tiffany Bisbey is an Assistant Professor of Industrial/Organizational Psychology at The George Washington University in Washington DC. She has a B.S. in Psychology from the University of Central Florida and a Ph.D. in Industrial/Organizational Psychology from Rice University. Her research focuses on the science of teamwork, improving collaboration and resilience in high-risk organizations, and effective approaches to employee training and development.

C. Shawn Burke, Ph.D., is a Professor (Research) and Director of the TRACE lab at the Institute for Simulation and Training, University of Central Florida. Her expertise includes teams and their leadership, team adaptability, team training, measurement, evaluation, and team effectiveness. Dr Burke earned her Doctorate in Industrial/Organizational Psychology from George Mason University.

Dorothy R. Carter, Ph.D. (Georgia Institute of Technology) is an Associate Professor of Management in the Eli Broad College of Business at Michigan State University. Her research considers the phenomena that enable leaders, teams, and multiteam systems to tackle complex challenges in organizational contexts including the military, medicine, scientific research, and deep-space exploration.

Gabriela Fernández Castillo is a Ph.D. Student in Industrial-Organizational Psychology at Rice University. She holds her B.A. in Psychology and International Studies from Baylor University. Her research focuses on team efficiency, and so far, she has focused on team coaching and how it can help improve team effectiveness. She has published papers that appear in Industrial and Organizational Psychology, Oxford University Press and *Journal of Interprofessional Care*.

Sarah Davis is an Industrial/Organizational Psychologist and Senior Special Project Administrator at the Johns Hopkins Armstrong Institute for Patient Safety and Quality. She has a B.A. in Psychology from the University of Rochester and a Ph.D. in Industrial/Organizational Psychology from the University of Connecticut. Her research interests are in team effectiveness and communication in stressful environments, and understanding organizational change.

Jennifer Feitosa is an Associate Professor of the Psychological Science Department at Claremont McKenna College. Her main research interests include teamwork, DEI, and measurement. She answers questions, such as "How can we maximize the benefits of diversity in teams?" She is the recipient of a Fulbright U.S. Scholar for Research and Teaching in Spain as well as an International Research and Collaboration (IRC) grant from the Society of Industrial-Organizational Psychology. Her work has been published in the *Journal of Organizational Behavior*, *American Psychologist*, *Journal of Business Research*, *Human Resources Management Review*, and presented over 70 times at conferences.

Tyler N. A. Fezzey is a Doctoral student in the Culverhouse College of Business at the University of Alabama. Her research focuses on interpersonal competition, leadership, dark personality, and gender biases.

R. Gabrielle Swab is an Assistant Professor in the Department of Management at Georgia Southern University. She received her Ph.D. in Management from the University of Mississippi. Her research interests include individual-level competition, focusing on this influence in teams, entrepreneurs, and family firms.

Dr M. Gloria González-Morales is an Associate Professor of Organizational Psychology at Claremont Graduate University in California. Her research, funded by agencies like Fulbright Commission Spain and the Canadian SSHRC, focuses on occupational health psychology, positive psychology, and diversity. She is passionate about advancing feminist organizational scholarship that supports workers' Well-Being, flourishing, and belonging. As of 2024, she is the president-elect of the Society for Occupational Health Psychology and an Associate Editor of the *Journal of Business and Psychology*.

Maha Khalid is a Ph.D. student in the Human Factors and Human-Computer Interaction program at Rice University. She received her Undergraduate degree in Psychology from the George Washington University in Washington, DC. Prior to graduate school, she served as the Associate Director for the American

Psychological Association's Center for Psychology in Schools and Education. Her areas of research include human-autonomy teaming, team training, multidisciplinary teamwork, and team performance measurement and assessment.

Molly Kilcullen is a Senior Data Analyst at the Armstrong Institute at Johns Hopkins University in Baltimore, MD. She is also a Ph.D. candidate in the Industrial-Organizational program at Rice University in Houston, TX, working under the supervision of Dr Eduardo Salas. She received her Master's degree in Industrial-Organizational Psychology at George Mason University and her Undergraduate degree in Psychology from Virginia Tech. During her time in her graduate program at George Mason, she was a Research Fellow at the Army Research Institute at Fort Belvoir, VA. Her areas of expertise include teamwork, team training, leadership, and safety culture.

Dr Lauren Blackwell Landon is the Team Risk Discipline Scientist in the Human Factors and Behavioral Performance (HFBP) Element in NASA's Human Research Program, and a Scientist in NASA's Behavioral Health & Performance (BHP) Laboratory. Her research is focused on teams living and working in extreme environments, examining team composition and teamwork processes as it influences team performance and functioning over time. Dr Landon also trains team skills to astronauts and flight controllers and has supported the NASA Astronaut Selection Team.

Dr Saeed Loghman is a Lecturer in Management at the College of Business and Economics, School of Management, University of Tasmania. Saeed has obtained various awards such as the Australian and New Zealand Academy of Management (ANZAM) Best Doctoral Dissertation Award in 2021. Saeed is a quantitative researcher with expertise in meta-analysis, systematic review, and survey-based studies. His research focuses on organizational behavior, organizational psychology, and human resource management, and in particular, employee psychological capital, mental health, and Well-Being.

Lauren H. Moran MS, is a Ph.D. student in the Industrial and Organizational Psychology program at Georgia Tech. She graduated from Florida State University in May 2020 with a B.S. in both Psychology and International Affairs. Her research interests are broadly focused on worker health and Well-Being, with particular emphasis on work recovery and resilience.

Gavriella Rubin Rojas is a psychology Doctoral student at Claremont Graduate University specializing in positive and organizational psychologies. She also holds a Master's degree in Yoga Studies from Loyola Marymount University, where she specialized in yoga therapy. Her current research focuses on workplace Well-Being, stress, mindfulness, and interdependence.

Michael A. Rosen, Ph.D., is a Professor in the Department of Anesthesiology and Critical Care Medicine at the Johns Hopkins University School of Medicine with

appointments in the Schools of Public Health and Nursing. His research focuses on how teams and technology create safety in high-risk industries, with particular interest in the measurement of team interactions and the design, implementation and evaluation of system-based interventions to improve performance outcomes.

Gabrielle Rufrano graduated from Florida International University with her Bachelor's degree in Psychology and is currently a second-year Ph.D. student in the industrial-organizational psychology program at Clemson University. Gabrielle's research interests include teamwork and diversity in organizations. She is currently working on her Master's thesis where she is researching hireability amongst visibly tattooed women.

Eduardo Salas, Ph.D., is the Allyn R. & Gladys M. Cline Professor in Psychology at Rice University. His research interests are in uncovering what facilitates teamwork and team effectiveness in organizations; how and why does team training work; how to optimize simulation-based training; how to design, implement and evaluate training and development systems, and in generating evidence-based guidance for those in practice.

Allen Shorey is a Ph.D. student in the Industrial and Organizational Psychology program at the University of Central Florida. His research examines team composition, teams in extreme environments, occupational health, and adaptive performance. Allen earned his Bachelor of Science in Business Administration and Bachelor of Science in Psychology from Florida Southern College.

Allison M. Traylor, Ph.D., is an Assistant Professor in the Psychology Department at Clemson University. She holds her B.S. in Political Science and Business Administration from Northeastern University and her M.A. and Ph.D. in Industrial/Organizational Psychology from Rice University. Her research focuses on teamwork, training, and diversity in organizations.

Caton Weinberger is a Ph.D. student in the Organizational Psychology program at Michigan State University. His research considers social network and leadership factors that promote team performance in military and space exploration contexts.

Christopher W. Wiese, Ph.D., is an Assistant Professor and Director of the Foundation Lab in the School of Psychology at Georgia Institute of Technology. His overarching research mission is to improve human flourishing by conducting meaningful and transformational research. He takes an interdisciplinary, person-centric, future-looking approach to examining the human experience across various contexts. Specifically, his work is organized around two central themes: Well-Being and Teams. His work has been supported by both public (e.g., NASA, AFRL, NSF) and private (GTRI, Walton Foundation) funders, as well as spotlighted by the *New York Times, Washington Post,* and *WBUR's OnPoint.*

Dr Wiese earned his Doctorate in Industrial-Organizational Psychology from the University of Central Florida and completed a dual-institution postdoctoral fellowship between Purdue and the University of Pennsylvania.

Dr Azita Zahiriharsini is a Postdoctoral Fellow in Occupational Epidemiology at Université du Québec à Rimouski (UQAR). Her research interests include sex and gender considerations in occupational health; psychosocial stressors at work; epidemiology; occupational health and safety; work-related health problems and injury prevention; organizational behaviors; workers' health and Well-Being; quantitative and qualitative research methods.

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PREFACE

Volume 22 of *Research in Occupational Stress and Well-Being* (ROSWB) is focused on promoting theory and research concerning stress, Well-Being, and resilience in teams. There is widespread acknowledgment among organizational scholars that the modern workplace is becoming increasingly complex and characterized by work that requires teamwork. Moreover, there is considerable research documenting how members of one's work team can be both a source of stress and comfort. Consequently, our goal with this issue was to shine a spotlight on this critical area of research. To that end, we solicited a series of papers investigating how stress and crisis events might impact team functioning and performance as well as how team processes themselves might be a source of stress and Well-Being. To that end, we are immensely grateful for the enthusiastic, thoughtful, and timely contributions from our author teams. We could not have done this without them.

Our first chapter by Rosen, Kilcullen, Davis, Bisbey, and Salas reviews the state of the literature concerning team resilience, laying out conceptual developments concerning resilience in individuals and in teams, and then taking stock of the conceptual and methodological challenges and opportunities as it pertains to conducting research on team resilience in the field. Our next three chapters concern the role of individual differences and psychological processes in team resilience and Well-Being. In the second chapter, Fezzey and Swab address the nature of trait competitiveness and its implications for individual and team-level stress and Well-Being, introducing a dynamic, multi-level framework for integrating current research and suggesting new paths for future discoveries. The third chapter by Loghman and Zahiriharsini utilizes psychological capital (PsyCap) as a central focus of investigation. They review the state of the literature concerning PsyCap as an antecedent of individual-level performance and Well-Being and then build toward a model of team-level PsyCap and investigating its potential as an antecedent factor of team Well-Being and safety. The fourth chapter by Rubin Rojas, Feitosa, and González-Morales concerns mindfulness and, specifically, the potential for mindfulness interventions to strengthen team functioning. As with the preceding two chapters, the authors integrate the extant literature to develop a dynamic, multi-level model to facilitate future research and practice.

The next two chapters in the special issue advance our understanding of the interplay between team performance and Well-Being by investigating how relationships within the team can serve as a driver of team member Well-Being and team resilience. The fifth chapter by Birnbaum and González-Morales dives deeper into team processes by investigating how interpersonal dynamics might impact work engagement by utilizing a social network perspective. In the sixth chapter, Bell, Castillo, Khalid, Rufrano, Traylor, and Salas review how teams

and team functioning in high-stakes settings can impact the physical and psychological Well-Being of team members. Specifically, they document how emotional contagion within teams can serve as both a promotor and inhibitor of individual Well-Being.

The seventh chapter by Shorey, Moran, Wiese, and Burke sets out to expand the conversation surrounding team resilience and how it might be best embedded in the broader teams' literature. Specifically, they review conceptual definitions and operationalizations of team resilience in the literature, the range of outcomes they have been used to predict, and discuss the implications of these varying perspectives for future research and practice.

The final chapter of the special represents a unique case for the study of stress, resilience, and Well-Being at the team-level. Specifically, Bauer, Weinberger, Carter, and Blackwell Landon review the state of the literature concerning how teams on spaceflight missions manage stress and what earth-bound organizations can learn from advances surrounding stress management in this particularly challenging context.

The goal of this special issue of ROSWB on teams and team processes was to provide not only a place for documenting the many interesting and valuable advances being made in the teams' literature, but also to make available a foundation for future research concerning stress and Well-Being at the team level. Our author teams rose to the challenge, not only bringing together disparate topics and literatures, but also providing new models and frameworks for future research in this area. And, having documented and summarized the evidence of the importance of teams and the relationships within them for both sustained performance and Well-Being, we would once again thank both our author teams and the staff at Emerald who worked with us to put together this very special volume of ROSWB.

Peter D. Harms and Chu-Hsiang (Daisy) Chang

CHAPTER 1

MEETING THE CHALLENGE OF TEAM RESILIENCE IN THE FIELD

Michael A. Rosen[a], Molly Kilcullen[a,b], Sarah Davis[a], Tiffany Bisbey[c] and Eduardo Salas[b]

[a]*Johns Hopkins University, USA*
[b]*Rice University, USA*
[c]*The George Washington University, USA*

ABSTRACT

The practical need for understanding and improving team resilience has increased, and more research is needed to provide an evidence-base for guiding organizational practices and policies. In this chapter, the authors highlight what we see as critical challenges and opportunities for advancing the science of team resilience. We focus on conceptual and methodological challenges involved in conducting field-based research on team resilience, as the authors believe field-based research is a particularly critical approach for advancing the science of team resilience. The authors first provide a brief review of recent theoretical work in defining team resilience. Then the authors describe key challenges that must be managed in field studies seeking to refine and capitalize on this critical area of research to provide solutions capable of supporting individual, team, and organizational outcomes. These challenges include defining trajectories of resilient team performance, understanding the consequences of repeated episodes of team resilience, formal specifications of events precipitating resilient team performance, measuring the event appraisal

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and communication process, and adopting measurement methods with high temporal resolution. Finally, the authors provide directions for future research to address these gaps.

Keywords: Team resilience; unobtrusive measurement; field research; team dynamics; team performance measurement; communication analyses; computational linguistics

INTRODUCTION

It is difficult to state clearly the magnitude of concurrent trends disrupting work and life in recent years. Impending and ongoing technological revolutions (Yang & Gu, 2021), climate change (Fiedler et al., 2021), political polarization (Levin et al., 2021), wealth (Zucman, 2019) and health inequalities (Bor et al., 2017), workforce shortages in critical industries (Zhang et al., 2020), and the trailing edge of a global pandemic (Jiskrova, 2022; Peters et al., 2022) have created unique conditions which have heightened the salience of resilience as a capacity critical for survival. Listing these forces does little to convey the lived experience of them, or the way they impact and interact with work life. Stressors and adverse events abound, and individual, team, organizational, and societal resources to respond are strained. The science of teams can contribute solutions to navigating the manifestations of these challenges in daily work, at least within the bounds of organizations relying on collaborative work structures. Team resilience has matured greatly in recent years, with several important reviews and theory-building efforts (Gucciardi et al., 2018; Hartwig et al., 2020; Stoverink et al., 2020) advancing the field by highlighting the diverse ways in which team resilience has been studied and offering compelling conceptual integrations to inform future studies.

As the need for understanding and improving team resilience has increased, so too has the attention in the organizational and social sciences. However, more is needed to provide an evidence-base for guiding organizational practices and policies. To that end, we highlight here what we see as critical challenges and opportunities for advancing the science of team resilience. Our focus in this chapter is on conceptual and methodological challenges involved in conducting field-based research on team resilience. Understanding the complexity of social phenomenon like team resilience requires multi-method approaches, but we believe that field-based research is a particularly critical approach for advancing the science of team resilience given its temporal nature. As such, we have three goals in this chapter. First, we provide a brief review of recent theoretical work in defining team resilience. Second, we describe key challenges that must be managed in field studies seeking to refine and capitalize on this critical area of research to provide solutions capable of supporting individual, team, and organizational outcomes. Third, we provide directions for future research to address these gaps.

CONCEPTUAL ADVANCES IN TEAM RESILIENCE

In this section, we provide a brief overview of some of the key conceptual advances in team resilience in recent years. Specifically, we discuss its origins as an individual-level construct and recent theoretical frameworks for understanding team-level resilience.

Resilience in Individuals

The concept of resilience has been applied in various contexts and defined across conceptual levels (i.e., individual, team, and organization), resulting in a diverse set of definitions. Resilience is typically used to refer to the capacity of a person, team, or system to maintain functioning in the face of challenges and recover or bounce back from those challenges (Hodgson et al., 2015; Scheffer et al., 2018). Specifically, past work has defined resilience as the capacity of systems to successfully handle disturbances (Gomes et al., 2014), a capacity that teams require in order to overcome crises (Rodríguez-Sánchez et al., 2015), and the ability for individuals, groups, and organizations to absorb stress brought on by challenges, recover functioning, and grow from the adversity (Stephens et al., 2013). While resilience is most often characterized as an ability, it is also defined in terms of an individual or team's attitude, such as resilience being defined as a belief shared by the team that it can cope with disruptions (Maynard & Kennedy, 2016) or a shared belief held by the team that it can respond to challenging events, recover from setbacks, and thrive (Kennedy et al., 2016).

The vast majority of existing literature has considered resilience at the individual level (Hartmann et al., 2020; King et al., 2016), either considering it as a stable personality trait (Shin et al., 2012; Wanberg & Banas, 2000), a state-like, trainable capacity (Luthans, 2002), or a process (McLarnon & Rothstein, 2013). Despite conceptual similarities between individual, team, and organizational level resilience, scholars recommend that team constructs require consideration at both the lower and higher levels, as well as examination of the cross-level similarities and differences for these collective constructs (Kozlowski & Klein, 2000). Reviews on the topic of resilience recognize that while the function of resilience may be consistent across the organizational, team, and individual levels (i.e., bouncing back via adversity, detection, sensemaking, strategy formulation, and strategy execution), the structure of each level and resources necessary to promote resilience at each level vary (Stoverink et al., 2020). While much has been discovered at the individual level, there still exists a dearth of research examining the phenomenon of resilience beyond that, to that of the collective or team level (Estrada et al., 2022).

Team Resilience

Work teams operating in changing environments will likely experience adversity at some point in their lifecycle and this adversity will have an impact on important team processes and subsequently team performance. However, existing

research on team resilience is inconsistent, with resilience being conceptualized, defined, and operationalized in varying ways throughout the literature (Hartwig et al., 2020). This diversity in conceptualization of team resilience indicates that field has yet to fully coalesce around what team resilience is or how to measure or improve it. As such, team resilience remains at an intermediate level of maturity, where many constructs exist, but have not been fully integrated, though recent theoretical work has begun to address these issues.

Multilevel models of team resilience have been developed to offer conceptual clarification between individual, team, and organizational level resilience (Gucciardi et al., 2018; Hartwig et al., 2020). Gucciardi et al. (2018) conceptualize team resilience as distinct from individual resilience in that it operates at the team level, is exhibited via interactions among team members, is characterized by performance indices representative of collective goals/objectives, and there is a team objective that is organizationally relevant. Multilevel models of team resilience depict the inputs or antecedents to adversity, the emergent states that develop and processes that the team engages in after adversity, and the subsequent team outcomes. These concepts have been organized into team resilience input factors, resilient team processes, mediating team states, and team resilience outcomes (Hartwig et al., 2020). Team resilience input factors include individual-level factors (e.g., communication skills, team orientation), team-level factors (e.g., collective job demands, group structure, team adaptability, team norms), and contextual factors (e.g., leadership, organizational support, organizational culture). Team processes such as communication, cooperation, and coordination are related to team resilience, as well as minimizing behavior (e.g., anticipating challenges, addressing risks, preparing for adverse events), managing behavior (e.g., managing stress, seeking support), and mending behavior (e.g., learning from experience, recovering from a challenge) (Alliger et al., 2015). Mediating team states involved in team resilience include cohesion, psychological safety, team trust, and collective efficacy, while team resilience outcomes are categorized under health, performance, and team functioning (Hartwig et al., 2020).

Team resilience is distinct from the concept of team adaptation, as team adaptation focuses on the ability of a team to adapt, while the main function of team resilience is to bounce back from adversity and persist over time (Stoverink et al., 2020). While it's possible for the team to bounce back by adapting to new circumstances brought on by an event, adaptation is not the only response to adversity and is not always the optimal response (Christian et al., 2017; Johnson et al., 2006; Stoverink et al., 2020). Stoverink and colleagues argue that team adaptability provides a strategy for teams to overcome adversity, contributing to, but distinct from, resilience.

THE ROLE OF FIELD RESEARCH IN ADVANCING TEAM RESILIENCE RESEARCH

The broad interdisciplinary science of teams has employed a wide range of methods over past decades to develop and test theories. Controlled laboratory

experiments, quasi-experimental field research, cross-sectional and cohort studies, purely qualitative studies, and agent-based and other computational modeling approaches among many others have contributed to our understanding of teams. That same methodological triangulation will be key to advancing team resilience research; however, we argue that two features of team resilience as an area of inquiry heighten the importance of field research for team resilience, particularly at this phase of maturation. First, team resilience is inherently temporal, and the timescales involved (e.g., days, weeks, months) may preclude study in more controlled experimental settings commonly used to research teams over shorter timescales (e.g., hours). As detailed in the challenges below, there are important unanswered questions about temporal phenomenon in team resilience including how long a team must persist in the face of setbacks to be considered resilient. However, it is likely that resilience over shorter and longer timescales may be different in nature, and both may be of interest to researchers and of practical importance to organizations. Second, team resilience requires the team to experience an adversity. Experimental studies provide control over these adverse events, but they limit the magnitude of events teams can be exposed to and the personal investment of team members in the outcomes. For these reasons, field research can provide critical information to refine and mature frameworks of team resilience.

Field research is not a monolithic approach, however, and Edmondson & McManus' treatment of methodological fit in field research (Edmondson & McManus, 2007) provides a valuable framework for evaluating the types of field research that may be most beneficial for team resilience. Considering team resilience as a topic of intermediate maturity, appropriate field research questions may focus on connecting established and new concepts, using quantitative and qualitative data, with exploratory analyses yielding provisional theories that may integrate previously distinct literatures. The conceptual and methodological challenges and opportunities discussed below are in service of these aims of maturing the science of team resilience through questions asked and answered in the field. For example, a field study of team resilience within a healthcare setting could involve team members in a high intensity unit (e.g., a unit caring for critically ill patients, with high patient turnover) employing experience sampling and unobtrusive measures (e.g., physiological sensing and activity or location tracking systems), and administrative data (i.e., records of patient status, procedures and transfers) to understand the types of events and configurations of events that elicit resilient performance, and the interaction patterns that promote or inhibit resilience and associated outcomes over prolonged periods of time.

CONCEPTUAL CHALLENGES AND OPPORTUNITIES IN FIELD-BASED TEAM RESILIENCE RESEARCH

The brief review above highlights an active and rapidly evolving area of research. Multi-level theories of team resilience have taken form in recent years, but much remains to be done. Field research is a critical tool for advancing the science of

team resilience as the concept takes time to play out (more time than is usually practical in lab-based research), and requires an adverse event or events that disrupt the normal work process, the frequency and intensity of which may be limited in prospective experimental studies. While field research has its unique challenges in general, it can allow for higher fidelity research including the ability to consider the dynamic environment in which a team performs (Mathieu et al., 2018). Despite the argued benefit of field-based research for advancing the science of team resilience, there remains several conceptual challenges for conducting this type of research in the real-world. These challenges include defining the markers of resilience and the timeline that is needed to capture resilience, considering the potential cumulative effect of resilience on the individual or team, and identifying the adverse event(s) and pre-existing conditions that elicited the resilient team response. Challenges and opportunities are summarized in Table 1.

Table 1. Summary of Team Resilience Challenges, Their Relevance for Field Research, and Future Research Directions.

Team Resilience Challenge	Relevance to Field Research	Future Directions
Defining trajectories of resilient team performance	Field studies can capture a wide range of performance patterns within and across teams, and over longer time scales than may be feasible in more controlled environments.	Define trajectories (patterns of team resilience over time) and archetypes (patterns of trajectories across teams) using conceptually grounded dimensions of resilience (e.g., resistance, elasticity, latitude).
Understanding the consequences and costs associated with repeated episodes of team resilience	Repeated exposure to adversity creates "wear and tear" on individuals (and likely teams) stemming from repeated "hits," lack of adaptation or habituation to stressors, insufficient recovery, and insufficient response from one team member requiring compensatory responses from others. These conditions may be challenging to replicate meaningfully outside of field settings.	Explore relations between multi-level benefits and costs of repeated episodes of resilience team performance, as well as identifying protective factors and processes.
Formal specifications of the events eliciting resilient team performance	Experiments provide control over the events teams' experience; field studies require methods to capture and classify types and configurations of adversity teams overcome.	Drawing from event-system theory, advance a taxonomy of events precipitating resilient team performance, comprising event strength, space, and time.

Table 1. (*Continued*)

Team Resilience Challenge	Relevance to Field Research	Future Directions
Measuring event appraisal and communication processes	Sophisticated communication analysis methods have been developed and validated in controlled environments; their translation to field settings would provide researchers with a greatly expanded toolbox for understanding communication processes in team resilience.	Develop new and translate existing open and closed vocabulary approaches to analyzing communication and interactions in team resilience processes and validate their application to detecting changes in team interaction patterns in field settings.
Methods with higher temporal resolution	Wearable and environmental sensors can augment traditional methods to unpack temporal dynamics of resilient team performance without imposing additional burdens on participants engaged in real work.	Explore measurement fit between team resilience constructs and unobtrusive measures including team physiological dynamics, emotional contagion and synchrony, and burstiness of interaction patterns.

Defining Trajectories of Resilient Team Performance

Resilience is inherently dynamic. Demonstrating resilience requires experience of and reactions to events. Additionally, persistence, an inherently temporal concept, has been identified as a key feature differentiating team resilience from team adaptation, the latter requiring only a change after adversity but not sustained effort following that change. Less formally, it has been posited that true team resilience may require overcoming many obstacles or setbacks in sequence, concurrently, or both (Hartwig et al., 2020). Anyone can overcome one or two setbacks, but only resilient teams can consistently survive and thrive in response to repeated adverse events (Alliger et al., 2015). Therefore, to understand or measure team resilience, some form of longitudinal approach is necessary. However, it is not clear how much is enough. How much time do you need to know that you have observed resilience? Answering these basic questions is key to advancing the science of team resilience. Any single approach to a complex phenomenon like team resilience will be limited, but, with few exceptions (e.g., NASA's long-duration spaceflight exploration analog environments; Bell et al., 2019), evaluating teams over long time frames in controlled experimental environments that have been the bedrock of much the science of teams is impractical as these designs are often limited to timeframes of hours, and these processes may play out over days, weeks, or longer.

Team trajectories (i.e., patterns of performance over time; Mathieu & Rapp, 2009) have been used to unpack temporal dynamics within teams, and more recently, the idea of "archetypes" of team performance trajectories (i.e., patterns of change over time across teams; Quigley et al., 2018) has been introduced to

help support theorizing about temporal phenomena in teams. Applying these concepts to team resilience research involves conceptual and empirical approaches for more clearly defining and measuring attributes of team resilience trajectories (Kazi et al., 2020). Three separate components of resilience trajectories have been defined in the broader systems science, including resistance, elasticity, and latitude (Hodgson et al., 2015). *Resistance* is the inherent ability that a person or system has to deflect disturbances (Hodgson et al., 2015). For example, an individual might be more resistant to burnout in high-stress work environments than others. *Elasticity* refers to the rate at which a person or system recovers after experiencing a challenge (Grimm & Wissel, 1997). When teams experience conflict or a setback, how quickly they bounce back and resume normal functioning determines their elasticity. *Latitude* is the distance from the stable state to a tipping point, past which the person or system moves back to the original stable state or to a new state of stability (Hodgson et al., 2015). Essentially, the smaller the latitude, the higher the risk of the team tipping into unfavorable states when faced with disturbances. For example, a research team with low latitude would likely be less likely to resubmit a manuscript to another journal after facing a rejection. Resistance, elasticity, and latitude can all be considered together to characterize a team's resilience trajectory. For example, team cohesion has been hypothesized to be a mediating team state in theories of team resilience (Hartwig et al., 2020). A highly cohesive team may be unaffected by disturbances (high resistance) and have a low risk of tipping into an unfavorable state when they do experience a disturbance (large latitude), but if significant conflict happens the team may be slow to recover to their baseline cohesive state (elasticity).

Building from these and other concepts, descriptive work on what team trajectories look like as they encounter and manage adverse events in real-world settings could inform theory and measurement approaches. Central to this, is the use of a common language to describe the features of these trajectories (e.g., resistance, elasticity, and latitude) that allow for comparison across settings and contexts.

Exploring the Consequences and Costs Associated with Repeated Episodes of Team Resilience

Research on teams often focuses on the team performance episode (i.e., "…distinguishable periods of time over which performance accrues and feedback is available," p. 359), typically comprising several input, process, and outcome cycles (Marks et al., 2001). However, teams facing environments requiring resilience may repeatedly experience acutely or chronically stressful conditions. This is a relatively unexplored area of team resilience. In the biological sciences, allostasis is defined as the process an organism employs to return to a homeostatic state after experiencing a perturbation. This process is analogous to resilience, and the amount of wear and tear that an individual accumulates from exposure to repeated stress and strain – known as *allostatic load* – has been shown to have a direct effect on human health and performance (McEwen, 1998). More recently, the concepts of collective or social allostatic load (Davaslioglu et al., 2019, 2021;