

APPLIED PSYCHOLOGY

# Tackling adversity with open minds: Team personality composition facilitates shared leadership and team resilience

Rebecca Mitchell<sup>1</sup> | Shauna von Stieglitz<sup>1</sup> | Jun Gu<sup>1</sup> | Brendan Boyle<sup>2</sup> | Anna Carmella G. Ocampo<sup>3</sup>

<sup>1</sup>Department of Management, Macquarie University, Sydney, New South Wales, Australia

<sup>2</sup>Department of Management, Newcastle Business School, The University of Newcastle, Newcastle, New South Wales, Australia

<sup>3</sup>Department of People Management and Organisation, ESADE Business School, Universitat Ramon Llull, Barcelona, Spain

#### Correspondence

Anna Carmella G. Ocampo, Department of People Management and Organisation, ESADE Business School, Universitat Ramon Llull, Barcelona, Spain. Email: annacarmella.ocampo@esade.edu

#### **Funding information**

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

#### Abstract

Resilient teams can efficiently resolve disruption and overcome adversity. Despite growing interest in building and maintaining resilient teams, our understanding of the factors that promote team resilience necessitates further theorizing and empirical testing. Based on conservation of resources and shared leadership theories, we propose that team member personality (i.e., mean openness to experience) serves as a resource that facilitates team resilience via shared leadership. Further, we argue that the strength of influence of shared leadership on team resilience is contingent on the variance of openness to experience scores among team members. We draw our conclusions from three studies (i.e., two recall experiments and a multi-source field study) involving working professionals in virtual teams. Our findings shed light on the interactive role of team member personality in explaining team resilience, thereby extending our knowledge of the personality predictors of shared leadership and team resilience.

#### **KEYWORDS**

openness to experience, personality, shared leadership, team resilience

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Author(s). Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

#### INTRODUCTION

In the advent of globalization, technological revolution, and socioeconomic unrests, adversity has become a prevalent feature that seeps into organizational life. Managers are recognizing the importance of designing workplace teams that can have a collective capacity to withstand and overcome adverse events, reflected in the concept of team resilience. Flint-Taylor and Cooper (2017) defined team resilience as "managing pressure effectively across the team as a whole [...], that further strengthen the capacity of the team to deal with future challenges in adversity" (p. 130). Considering its growing importance, management scholars have focused on uncovering the role of team resilience in contributing to team success (Gucciardi et al., 2018; Hartmann et al., 2019; Hendrikx et al., 2022; Stoverink et al., 2020). As Hartwig et al. (2020) highlight, team resilience is a form of team capacity or resource that enables better maintenance of performance trajectories and constructive team dynamics especially in the presence of adversity. For instance, team resilience is found to facilitate team dynamics and structure (e.g., roles, affect, and processes) that nurture team performance, cohesion, and functioning (Hartmann et al., 2019).

However, despite its value as an asset that limits the negative impact of adversity, knowledge of the factors that contribute to team resilience remain underexplored, particularly when compared to individual resilience (Degbey & Einola, 2020; King et al., 2024). Our limited understanding of the antecedents of team resilience reflects a significant omission in the literature (Chai & Park, 2022; Degbey & Einola, 2020) as it deters theoretical progress and practical applications. Theoretically, it restricts our knowledge of the conditions, processes, and outcomes associated with resilient teams. Practically, a lack of evidence to guide organizations in designing and managing resilient teams lends them vulnerable to the negative consequences of adversity considering that organizations rely heavily on teams to accomplish complex challenges and novel tasks (Driskell et al., 2018).

To expand our understanding of team resilience, we build on research in psychology that has alluded to the conservation of resources theory (COR) in capturing resilience at the individual level (Bardoel & Drago, 2021; Chen et al., 2015; Halbesleben et al., 2014; Hobfoll, 2011). In particular, the conceptualization of resilience as a capacity to respond effectively to adversity (Stoverink et al., 2020) points to the importance of team resources that build such capacity (Brykman & King, 2021; Fisher et al., 2023). Based on COR theory, individuals seek to conserve their current resources and to acquire new resources to enable personal strengths and social bonds (Hobfoll et al., 2018; Hobfoll & Shirom, 2000). Individuals are likely to perceive stress when resources are insufficient or when they fail to acquire desired new resources (Gorgievski & Hobfoll, 2008). Conversely, they show resilient when they have access to appropriate and sufficient resources that enable them to overcome challenges (Chen et al., 2015).

Applying these insights to workplace teams, COR provides an explanatory framework in which resilience is linked to team inputs as job- and task-related resources promote their capability to build knowledge and skills essential in managing goal-oriented activities or adverse circumstances (Hartmann et al., 2019; Hobfoll et al., 2018; Stoverink et al., 2020). Recent theorizing on team resilience underpinned by COR posits that individual attributes can be conceptualized as team resources that further strengthen resilience as a team capacity (Fisher et al., 2023). Although the characteristics of team members are held by the individual, such attributes, in aggregate, reflect a depiction of the team (e.g., average or mean level).

Prior research has identified a range of team member attributes that, in aggregate, influence team dynamics and performance, including personality variables such as agreeableness,

conscientiousness, and openness to experience (Mohammed & Angell, 2003; Prewett et al., 2018). We argue that openness to experience is a crucial personality characteristic that encompasses an individual's consciousness and reflective capacity, evident in their curiosity, imagination, and sensitivity (Schwaba et al., 2018). Previous research suggests that being in novel and challenging situations for an extended period may increase openness to experience, allowing individuals to gain more cognitive content by building on the boundaries of their previous experiences (Zimmermann & Neyer, 2013). Oishi and colleagues (2018) found that openness to experience is strongly and positively related to resilience. Although this research has yet to connect team aggregate personality and increased team resilience, we posit that mean openness to experience, reflecting the average openness across team members, will provide teams with increased flexibility and capacity to improvise, learn, and adapt (Barrick et al., 1998; LePine et al., 2000), thereby rendering a direct influence on team resilience (Stoverink et al., 2020).

In addition, building on emerging interest in shared leadership and resilience, we further theorize an indirect path between openness to experience and resilience through shared leadership. Shared leadership, defined as a dynamic process of reciprocal influence, whereby different team members take on leadership role based on the team's work and requirements (D'Innocenzo et al., 2016; Nicolaides et al., 2014; Zhu et al., 2018). Shared leadership enhances perceived research availability and the accessibility of such resources (Mitchell & Boyle, 2021; Wu & Cormican, 2016). Given its association with self-direction, striving for autonomy, and receptivity to the expertise of others, we posit openness to experience as an antecedent to shared leadership (Mount et al., 2005), leading us to predict a mediated path between team average openness to experience and team resilience through shared leadership.

Building on research suggesting that the aggregate influence of member attributes is likely to be influenced by their pattern of distribution (Prewett et al., 2009), we further argue that openness to experience variance moderates this relationship. Together this leads us to explore a moderated mediated path as depicted in Figure 1.

The current study makes several important contributions to the literatures on team resilience and shared leadership. First, by drawing on COR to explore the role of team openness to experience, we broaden understanding of the role of dispositional antecedents to team resilience (King et al., 2016). Much of the research on resilience has focused on individual-level



FIGURE 1 Conceptual model.

predictors and implications of resilience (Oshio et al., 2018), often ignoring that employees operate interdependently, building the overall personality composition of their teams (Bell et al., 2018; Bradley et al., 2013). Team openness to experience as a resource-dependent team capacity can therefore help illuminate team member attributes that facilitate leader and follower interactions. Second, by exploring the moderating role of personality variance, we contribute a more comprehensive understanding of when shared leadership enhances resilience and confirm the value of trait mean level and variance in teams. This is important considering that growing diversity in the workforce demands a clear understanding of how team composition may contribute to team effectiveness (Mathieu et al., 2014). Third, by examining how team resilience is fostered in the context of virtual teams (i.e., a work arrangement wherein employees are geographically dispersed and coordinate their roles and functions primarily through electronic communications), we provide evidence that help support discussions of when and how organizations can leverage the benefits of having virtual teams (Dulebohn & Hoch, 2017). We argue that team resilience is becoming even more pertinent now more than ever as societal changes brought by globalization and technological transformations have accelerated the rise of virtual teams. Taken together, our research represents a significant advancement of how team personality and shared leadership interact to foster team resilience. Specifically, we highlight the critical nature of team member personality in determining why shared leadership may emerge as well as when shared leadership enhances team resilience.

## THEORY AND HYPOTHESIS DEVELOPMENT

#### **Openness to experience and team resilience**

Team personality has been conceptualized as reflective of both team level effects and the influence of individual members within teams. Arguments based on the former argue that the confluence of member personalities influences team dynamics and outcomes, while the latter argue that individual member's personality impacts team processes which, in turn, may affect team performance (LePine et al., 2011). Research based on member aggregate personality has evidenced a significant impact on team dynamics and outcomes (LePine et al., 2011), including on team resilience (Dierdorff & Fisher, 2022). The trait of openness to experience emphasizes cognitive intellect (Goldberg, 1993) and reflects the attribute of individuals who are curious, creative, imaginative, and often have a diverse range of interests and perspectives (Barrick et al., 1998; Matz, 2021). Those individuals who are high in openness tend to have a greater ability to analyze and understand experiences, which enhances positive adaptation and learning (King & Rothstein, 2010; LePine, 2003; Zhang & Ziegler, 2016). Further, openness precipitates the inclination to consider a broad range of perspectives and options when evaluating a given situation and deciding on the most appropriate strategy when resolving problems (Connor-Smith & Flachsbart, 2007). These tendencies provide a resource for individual team members who consequently have higher self-awareness and a greater understanding of their environment and circumstances (Backmann et al., 2019). Amplified by a sense of coherence, openness to experience provides team members with the knowledge-related resources that they need to adjust to challenges and changes (King & Rothstein, 2010).

Another central facet of openness to experience is flexibility that provides a substantial resource when faced with a challenge (Backmann et al., 2019). Flexibility assists in solving

complex challenges, a process which is facilitated not only at the individual level but also enabled by other team members (Prewett et al., 2018). Similarly, openness to experience enables teams to improvise by crafting novel responses to unpredicted changes in their environment (LePine et al., 2000; 2003) which predicts resilience (Stoverink et al., 2020). Openness provides teams with greater capacity to improvise, allowing them to harness learning from past experiences to effectively respond to unforeseen demands, often through the deployment of past knowledge together with novel ideas (Stoverink et al., 2020; Vera & Crossan, 2005). Further, team openness to experience increases creativity (McCrae, 1987; Sacramento et al., 2023) which provides resources to solve non-routine problems and unforeseen challenges (Mitchell & Walinga, 2017), strongly linked to resilience (Metzl & Morrell, 2008). This capacity of openness to experience to bestow resources that enable agile adjustment to change and creative solutions to new challenges provides justification for the following hypothesis:

**Hypothesis 1.** Team mean openness to experience will be positively related to team resilience.

## Openness to experience, shared leadership, and team resilience

In addition to a direct relationship with resilience, the impact of openness to experience on interpersonal relations suggests merit in exploring its indirect impact through shared leadership. Openness to experience is related to both autonomy and self-determination at the individual level (Mount et al., 2005). Individuals with high openness to experience are driven to influence others, make decisions, and effect change, which suggests that members who are high in openness to experience will be motivated to engage in behaviors that guide and shape the team's work (Mount et al., 2005). Such members are motivated to persuade others as they place high value on the capacity to make or shape decisions (Hogan & Holland, 2003). This tendency, we argue, will precipitate a desire to influence the team's direction and choices, realized through engagement in leadership behaviors within the team (Hoch & Dulebohn, 2017). Thus, where teams are composed of individuals with high openness to experience, members will be more likely to take on leadership roles, thereby increasing the potential for shared leadership behaviors within the team.

Openness to experience also has a strong positive influence on social interactions and connections, as individuals who are curious and open-minded are keen to develop networks and higher quality work relationships (Griffin & Hesketh, 2003; Hoch & Dulebohn, 2017). Relative to those with low openness to experience, team members with high openness to experience will be motivated toward achieving the team's goals and involve others toward this end (Hoch & Dulebohn, 2017). In other words, individuals with high openness to experience tend to engage in behaviors that influence and guide others, reflective of shared leadership (Scott-Young et al., 2019; Zhu et al., 2018). Further, the flexibility that is associated with openness to experience allows individuals to adjust their actions to suit changing situations, particularly interpersonal settings (Driskell et al., 2006). This is likely to be advantageous as individuals can adapt to be assertive or deferential as the situation requires (Driskell et al., 2006). As shared leadership involves the distribution of leadership functions among team members (Dierdorff & Fisher, 2022), it requires individuals not only to influence the direction of the team but also to accept leadership from other members (Carson et al., 2007). The interpersonal flexibility that is associated with high openness to experience, enables members to take on both leader and follower roles inherent in shared leadership (Driskell et al., 2006). These individuals also tend to be viewed as leaders and are more likely to engage others in discussions (Van Vianen & De Dreu, 2001). Thus, elevated openness to experience is argued to be positively associated with shared leadership leading to the following hypothesis:

**Hypothesis 2.** Team mean openness to experience will be positively related to shared leadership.

Taking a functional perspective on shared leadership (Morgeson et al., 2010; Muethel et al., 2012; Muethel & Hoegl, 2013), we propose that teams in which leadership is shared have increased access to the team's resources, which enhances learning, adaptation and, thus, team resilience (Muethel & Hoegl, 2013; Stoverink et al., 2020). According to COR, resources tend to aggregate and sustain one another (Hobfoll et al., 2018). Conditions that support, foster, and enrich resources are reflected in the resource caravan passageways (Hobfoll, 2011), facilitating resilience from a collective pool of accessible resources (Chen et al., 2015). Shared leadership as an interactive process of mutual influence has been shown to increase the availability of expertise for task accomplishment in teams (Mitchell & Boyle, 2021; Zhu et al., 2018) as well as other capability-related resources that advance goal accomplishment (Scott-Young et al., 2019; Sweeney et al., 2019). Shared leadership not only increases the perceived availability of these resources to accomplish tasks but also enhances the internal transaction and accessibility of such resources (Mitchell & Boyle, 2021; Wu & Cormican, 2016).

When faced with adversity, shared leadership thus enables teams to draw on different resources, including diverse expertise as well as psychological and social support, helping them resolve challenges (D'Innocenzo et al., 2016; Salas-Vallina et al., 2022; Vandavasi et al., 2020). When leadership is shared, team members are more likely to impart their relevant experience and knowledge in their efforts to guide the team to overcome adversity, increasing their likelihood to integrate and implement their expertise through their membership (Mitchell & Boyle, 2021). The consequent increase in the accessibility and utilization of team resources is likely to have a positive impact on team resilience (Fisher et al., 2023; Salas-Vallina et al., 2022).

In addition to knowledge-related effects, shared leadership reflects a relational context that contributes to resilience. As shared leadership emerges, it promotes relational bonds that encourage the effort and coordination required to achieve the goals of the group (Drescher et al., 2014). This effect and mechanism contribute to team resilience by facilitating increased adaptation to adverse and changing situations (Stephens et al., 2013). In addition, shared leadership creates additional resources in terms of enhanced team satisfaction, trust, and cohesion (Zhu et al., 2018). Such team resources have also been associated with increased capacity to adapt and cope with challenges (Degbey & Einola, 2020). Further, recent extensions to COR theory posit that positive emotions reflect important resources that enhance capacity to cope with stress and thus build resilience (Chen et al., 2015). As shared leadership has been demonstrated to foster positive emotions and facilitate the transfer of such emotions throughout team members (Hmieleski et al., 2012; Salas-Vallina et al., 2022; Sanfuentes et al., 2021), we predict its associated with increased team resilience, reflected in the following hypothesis:

Hypothesis 3. Shared leadership will be positively related to team resilience.

We have argued that mean openness to experience will increase shared leadership and that shared leadership, which in turn will increase team resilience. This leads us to hypothesize an indirect, mediated path between mean openness to experience and team resilience through shared leadership in the following hypothesis:

**Hypothesis 4.** Shared leadership will mediate the positive relationship between team mean openness to experience and team resilience.

### **Openness to experience variance**

When evaluating team personality composition, Van Vianen and De Dreu (2001) identified that both homogeneity as well as team variance might be important when considering team level attributes. It has been proposed that variability in personality in teams may lead to enhanced team functioning as heterogeneity creates a broader range of team member behavioral resources (den Hartog et al., 2020). However, diversity in team composition has also been linked to conflict and dysfunction (Chatzi et al., 2022). The authors note that conflict may arise when team members fail to take on complementary roles or engage in more criticisms that likely provoke disagreements. Anderson (2009) suggests that within team variance for openness to experience will likely be associated with increased conflict which, we posit, may detract from the positive impact of shared leadership on resilience (Stoverink et al., 2020).

While individuals with high openness will strive to explore alternatives and creative solutions, those with lower openness may be less willing to openly consider such solutions (den Hartog et al., 2020). Indeed, there is evidence that, while those high on openness to experience have higher capability of adapting to challenges and changes through creativity, members who are lower on openness are likely to discount novelty and prefer solutions that are narrow and conventional, potentially leading to discord and dispute (Brandt et al., 2015; Cui et al., 2023). In times of adversity, such discord is unlikely to support the agility of action necessary for resilience (Stoverink et al., 2020). In contrast, conflict may be less likely to arise among teams with less variation in openness to experience. Consistent with similarity-attraction research (Byrne, 1971), working with members with similar personality profiles is not only likely to be preferred but may increase the team's capacity to make use of its knowledge-related resources (Liang et al., 2015). Thus, we propose the following:

**Hypothesis 5.** Openness to experience variance will moderate the positive relationship between shared leadership and team resilience. The moderated relationship will be such that the positive impact of shared leadership on team resilience will be stronger when openness to experience variance is low rather than high.

Consequent to its relational and interpersonal flexibility aspect, we have argued that high mean openness to experience among team members is likely to be associated with shared leadership. Subsequently, we propose that shared leadership will enhance team resilience by facilitating access to a breadth of resources. Further, we argue that this effect of shared leadership will be amplified when teams are characterized by low variance in openness to experience given the likely discord associated with greater personality trait diversity. In combination, this leads us to predict a moderated mediation model in which the positive impact of mean openness to experience will increase team resilience through shared leadership and contingent on low openness to experience variance.

**Hypothesis 6.** Openness to experience variance will moderate the positive relationship between mean openness to experience and team resilience through shared leadership. The moderated relationship will be such that the positive impact of mean openness to experience on team resilience through shared leadership will be stronger when openness to experience variance is low rather than high.

## METHOD

We develop a multi-study design to test our hypothesized model and to establish robustness and generalizability in our results across and beyond the study samples (Wright & Sweeney, 2016).<sup>1</sup> We conducted all three studies in the context of virtual teams, because virtual teams represent the most widely used form of teamwork (Dulebohn & Hoch, 2017) and involve unique challenges and barriers, such as working remotely and coordinating with one another while navigating varying time zones and locations, all of which have implications for team resilience (Morrison-Smith & Ruiz, 2020).

In Studies 1 and 2, we aimed to establish the causal relationships in our model using a causal chain design (Spencer et al., 2005) by manipulating the independent variable and the mediating variable in two separate experiments (e.g., Hill et al., 2021; Vincent & Kouchaki, 2016). In Study 1, we manipulated team openness to experience mean in a recall experiment to test its effect on shared leadership within a virtual team. In Study 2, we manipulated shared leadership and team openness to experience variance in an additional recall experiment to test their interactive effects on team resilience. Together these two independent recall experiments provide stronger causal evidence for our conceptual model relative to a traditional experimental design in which only team openness to experience mean is manipulated and all other key variables are self-reported by participants (Spencer et al., 2005). Finally, to address limitations of Studies 1 and 2 and to increase generalizability of our findings, we conducted a multi-source field survey of virtual teams in the United Kingdom in Study 3 to test our complete model comprehensively.

# STUDY 1: TEAM OPENNESS MEAN AND SHARED LEADERSHIP

#### Sample and procedure

Study 1 aims to provide a direct test of whether team openness mean causally influences shared leadership using a randomized recall experiment. Working professionals from the United States with experience working in virtual teams were recruited to complete the recall experiment via CloudResearch, a participant-sourcing platform (formerly known as TurkPrime; Litman et al., 2017) that provides higher-quality data compared to Amazon's Mechanical Turk because of effective pre-screening and filtering of participants (Peer et al., 2021).

Participants completed a recall experiment, which integrated an experimental design with the critical incident technique (Flanagan, 1954) and randomly assigned participants to recall

different actual events or experiences at work and describe them in detail. The recall method has been shown to be effective in capturing psychological variables (Howard, 2011) and has been used in applied psychology research to capture stable characteristics such as leader humility (Qin et al., 2020) and abusive supervision (Shen et al., 2023), as well as episodic experiences and events (e.g., Belschak & Den Hartog, 2009; Urbach & Fay, 2021). To utilize this method fully, we required that all participants should have extensive experience in virtual teams (i.e., participants reported that they engage in hybrid work most days of the week or work with other colleagues remotely). To ensure this, we strictly qualify our participants in the recruitment stage and at the beginning of the experiment and explicitly require that the participants have experience working in multiple virtual teams. For example, in the study description posted on CloudResearch we emphasized in both the study title and the study introduction that only individuals with extensive experience working in multiple virtual teams are qualified to participate.

Before data collection, we conducted a power analysis (G\*Power; Faul et al., 2009) based on an estimated medium effect size for team openness mean (Do & Minbashian, 2020). Given our design, to ensure 95% power in one-tail *t* test to detect an effect size d = .5 (at  $\alpha = .05$ ), a total number of 88 participants is required. To account for participant inattentiveness and dropout rates (Hauser & Schwarz, 2016), we aimed to recruit 130 participants in total.

A total of 126 participants chose to start the study via the link on CloudResearch. Before the recall task, they were again asked to confirm that they had previously worked in multiple virtual teams. Sixteen participants reported not having such experiences and were disqualified immediately. The remaining 110 participants were randomly assigned into one of the two experimental conditions (high versus low team openness mean) to recall a virtual team with either high or low mean team openness. Six participants could not recall a virtual team required by their experimental conditions and were disqualified. Finally, throughout the experiment we have implemented multiple manipulation checks (e.g., "for this item, please pick '5'") and six participants failed these checks and were removed from the analysis.

The final sample of 98 participants ( $M_{age} = 38.19$  years, SD = 10.91, 41% female) come from various industries, such as education, professional services, finance, manufacturing, banking, government, and retail. After recalling a virtual team as required, the participants were asked to provide as many details as possible about the team (e.g., the main team tasks), especially on the high (versus low) level of team openness mean. They then reported shared leadership within the team, control variables and finally demographics.

#### Manipulations and measures

Across all our studies, unless otherwise specified, a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) was used.

#### Team openness mean manipulation

Drawing on Soto and John's (2017) 15-item personality measure, we adapted the three items related to openness to experience to manipulate team openness mean. Specifically, the participants in the high/(low) openness condition recalled a team where, on average, team members

Are fascinated by/(Have no interest in) art, music, and literature. Are/(Are not) original, come up/(Cannot come up) with new ideas. Have great/(little) interest in abstract ideas.

## Shared leadership

Participants completed seven items adapted from Muethel et al. (2012). Sample items include, "All team members proactively made constructive suggestions for improving how things operate within the team," "All team members initiated actions to make the team more effective," and "All team members sought information from other team members about aspects of their work accomplishment that could affect their own work" ( $\alpha = .96$ ).

Low team openness to experience	<ul> <li>These people are desert dry, with almost no humor.</li> <li>They take everything literally and are always serious.</li> <li>They love to analyze everything and rarely venture outside their narrow scopes of interest.</li> <li>Nobody wanted to do anything outside of the box.</li> <li>Team members were a bunch of squares.</li> <li>I could not keep a conversation with any of them because they had no interests.</li> <li>They lacked a great deal in creativity and did not come up with any interesting ideas.</li> <li>The team members I was working with were very unoriginal, and I did most of the work coming up with the ideas since they were all pretty dull people.</li> <li>They evidenced very little knowledge of or interests.</li> <li>They were very monotone and singular type of individuals.</li> <li>The members could not come up with anything creative so it was a lot of dead air while we tried to think of answers.</li> </ul>
High team openness to experience	<ul> <li>We all came up with multiple creative and new ideas each, and then combined the ideas together as a team.</li> <li>Everyone had differing backgrounds and was capable of coming up with creative ideas that were novel and unique.</li> <li>We were always able to find humor in certain things and most people are fans of the arts.</li> <li>The members like abstract ideas and love music.</li> <li>They are driven by abstract ideas and can think out of the box.</li> <li>The more abstract thinkers in the group made the project interesting.</li> <li>The artistic members brought a sense of style to the project.</li> <li>We all had a love for music and we were able to be creative and had fun while designing advertisements.</li> <li>Most people on the team were able to come up with abstract ideas and be creative.</li> <li>The team members were all very artistic and great at coming up with out-of-the-box ideas.</li> <li>Team members are fascinated by art, music and literature, and also have great interest in abstract ideas.</li> </ul>

TABLE 1 Example statements from participants' description of recalled team.

# Control variables<sup>2</sup>

We controlled for team average age, team gender composition (i.e., the percentage of women), and team size because they have been shown to predict shared leadership (Wu et al., 2020). To eliminate alternative explanations and to test whether the effects of team openness mean goes above and beyond other team personality composition variables that might predict shared leadership (Do & Minbashian, 2020), we also measured and controlled for team extraversion ( $\alpha = .87$ ), agreeableness ( $\alpha = .88$ ), conscientiousness ( $\alpha = .87$ ) and neuroticism ( $\alpha = .89$ ) using the corresponding items from Soto and John's (2017) personality scale.

# Study 1 results and discussion

## Recalled team openness mean

We summarized quotes from participants in the high and low team openness mean conditions in Table 1 to help illuminate the overall phenomenon.

# Team openness mean manipulation check

After reporting the main study variables, the participants rated the average openness of the team members using the three openness items from Soto and John's scale ( $\alpha$  = .97). Compared to the participants in the low team openness condition (M = 2.57, SD = 1.86), the participants in the high team openness condition reported higher team openness mean (M = 6.09, SD = .73), t(64) = 12.43, p < .001.

Descriptive statistics and correlations are presented in Table 2.

Variable	M	SD	2	3	4	5	6	7	8	9
1. Team openness mean	.49	.50	.60***	.16	12	.03	.58***	.41***	.36***	.001
2. Shared leadership	4.51	1.65		.28**	03	05	.76***	.73***	.71***	.09
3. Team age	37.57	12.65			.20*	.37***	.25*	.30**	.27**	.33***
4. Team gender composition	.45	.30				.12	03	.11	.05	.06
5. Team size	8.23	7.60					.06	.08	.03	.23*
5. Team extraversion	4.39	1.58						.60***	.53***	.30**
6. Team agreeableness	4.77	1.52							.70***	.09
7. Team conscientiousness	4.88	1.46								.02
8. Team neuroticism	2.92	1.46								

**TABLE 2** Descriptive statistics and correlations among key variables in Study 1.

*Note:* N = 98; team openness mean (0 = low, 1 = high). \*p < .05, \*\*p < .01, and \*\*\*p < .001.

TABLE 3	Results of an ANOVA	of shared leadership	in Study 1.
---------	---------------------	----------------------	-------------

Variable	B (SE)	t	р
Team openness	.58 (.21)	2.76	.007
Team age	.01 (.008)	1.32	.19
Team gender composition	21 (.29)	73	.47
Team size	03 (.01)	-2.29	.025
Team extraversion	.38 (.08)	4.72	<.001
Team agreeableness	.27 (.08)	3.17	.002
Team conscientiousness	.30 (.08)	3.63	<.001
Team neuroticism	05 (.07)	74	.46

## Shared leadership

Compared to the participants in the low team openness condition (M = 3.55, SD = 1.66), the participants in the high team openness condition reported greater shared leadership (M = 5.51, SD = .85), t(74) = 7.43, p < .001, supporting Hypothesis 2. We further tested Hypothesis 2 with an ANOVA of shared leadership with team openness mean as the predictor and the control variables as covariates. Results show that team mean openness predicts shared leadership above and beyond team demographics and other team personality means, F(1,89) = 7.59, p = .007 (see Table 3 for full result details).

Study 1 provided supportive evidence for the causal effect in the first stage of our conceptual model, showing that team openness mean increases shared leadership within a team. Now that we have established the first half of the causal chain (Spencer et al., 2005), we continue to test the second half in a separate recall experiment where we manipulated shared leadership and team openness variance to test whether they interact to influence team resilience.

## STUDY 2: SHARED LEADERSHIP, TEAM OPENNESS VARIANCE, AND TEAM RESILIENCE

## Sample and procedure

Consistent with Study 1, we sought to recruit a minimum of 200 participants following the effect size estimates on shared leadership (Klasmeier & Rowold, 2020) and team composition (Bell, 2007) in the literature and to account for participant inattentiveness and dropout rates (Hauser & Schwarz, 2016). A total of 190 working adults (45% female;  $M_{age} = 41.24$ ;  $SD_{age} = 12.02$ ) who satisfied similar participant recruitment requirements as in Study 1 completed the study for \$2.50 (approximately \$12/h). A sensitivity power analysis using G\*Power revealed that we could detect an effect size of 0.26 at  $\alpha = .05$ .

A 2 (high vs. low shared leadership)  $\times$  2 (high vs. low team openness variance) factorial design was used, and participants were randomly assigned to one of the four experimental conditions to recall a virtual team that they were working/had worked in, which characterized the level of shared leadership and team openness variance as prescribed by the experimental condition. We used the same procedure as in Study 1 to ensure that all participants have a rich

APPLIED PSYCHOLOGY

experience working in virtual teams and could recall a team that satisfied the requirements of their experimental conditions. A total of 208 participants responded to our study invitation on CloudResearch, but 10 of them were directed to exit the study because they had little experience working in virtual teams or could not recall a virtual team with the levels of shared leadership as required by their experimental conditions. Furthermore, eight participants failed the attention checks leaving a final sample size of 190.

Aligned with Study 1, participants wrote a short essay to provide as many details as they could about the team that they have just recalled, emphasizing the level of shared leadership within the team and the team's openness variance. Participants then reported team resilience, manipulation checks, controls, and demographics and were debriefed and paid.

## Shared leadership manipulation

Consistent with Study 1, we drew on the shared leadership scale from Muethel et al. (2012) and selected two items with the highest factor loadings to create the shared leadership manipulation. Specifically, the participants in the high/(low) shared leadership conditions were asked to recall a team where "almost all/(none of the) team members proactively institute new work methods to improve team performance and/(or) seek information from other team members about aspects of their work accomplishment that could affect their own work."

## Team openness variance manipulation

Following Study 1, we used the three openness items from Soto and John's (2017) personality scale to manipulate team openness variance. Specifically, the participants in the low/(high) team openness variance conditions were required to recall a team wherein "members are very diverse or very different from each other/(very homogeneous or very similar to each other) in their tendency to be fascinated by art, music and literature, be original and come up with new ideas, and have great interest in abstract ideas."<sup>3</sup>

## Team resilience

On a 7-point Likert scale (1 = not at all, 7 = a great deal), participants completed the threeitem resilience scale of Stephens et al. (2013; e.g., "This team is/was able to cope with difficult times";  $\alpha = .95$ ).

# Control variables<sup>4</sup>

Consistent with Study 1, we controlled for team average age, gender composition (i.e., percentage of women), and team size. In addition, existing team resilience research has highlighted the critical role of positive emotions in promoting resilience at both individual and team levels (Hartmann et al., 2019). Therefore, we measured and controlled for team collective positive emotions to demonstrate that the effect of shared leadership is above and beyond team positive emotions. Specifically, on a 7-point bipolar scale, participants rated the collective

emotional states of the team using "disinterested- enthusiastic," "pessimistic-optimistic," "unsatisfied-satisfied," "uncomfortable-comfortable," and "agitated-relaxed" ( $\alpha = .91$ ; Meneghel et al., 2016).

#### Study 2 results and discussion

#### Manipulation checks

Drawing on the definition of Zhu et al. (2018) on shared leadership, we asked participants to rate the extent to which the team members in the recalled team try to lead one another to the achievement of group goals on a 7-point Likert scale (1 = not at all, 7 = very much so). The participants in the high shared leadership conditions reported greater shared leadership (M = 5.87, SD = 1.03) compared to those in the low shared leadership conditions (M = 3.99, SD = 1.99), t(137) = 8.16, p < .001. Furthermore, on a 7-point Likert scale (1 = very similar, 7 = very different), participants rated the extent to which team members are different in openness. The participants in the high variance conditions reported higher team openness variance (M = 5.32, SD = 1.46) compared to those in the low variance conditions (M = 3.46, SD = 1.86), t(176) = 7.68, p < .001. The manipulations were effective.

Descriptive statistics and correlations are presented in Table 4.

#### Team resilience

We used PROCESS (Model 1; Hayes, 2015; all bootstrap analyses across all the studies used 5000 resampling iterations) to test whether shared leadership and team openness variance interact to predict team resilience. Shared leadership and team openness variance were mean centered and control variables were standardized. Results revealed a significant interaction between shared leadership and team openness variance when predicting team resilience, B = -.83, SE = .32, t = -2.64, p = .009. Specifically, when team openness variance is high, shared leadership does not predict team resilience (B = .07, SE = .23, t = .31, p = .76,  $CI_{95\%} = [-.38, .52]$ ). In contrast, when team openness variance is low, shared leadership positively

Variable	M	SD	2	3	4	5	6	7
1. Shared leadership	.50	.50	.01	.36***	.02	.03	08	.33***
2. Team openness variance	.50	.50		.02	.09	05	10	10
3. Team resilience	5.40	1.38			.07	.02	.04	.60***
4. Team age	34.89	9.63				.09	08	07
5. Team gender composition	.44	.28					.02	.04
6. Team size	11.89	11.39						.08
7. Team collective positive emotions	5.44	1.23						

TABLE 4 Descriptive statistics and correlations among key variables in Study 2.

*Note:* N = 190; shared leadership (0 = low, 1 = high); team openness variance (0 = low, 1 = high). \*p < .05, \*\*p < .01, and \*\*\*p < .001.

APPLIED PSYCHOLOGY 15 of 28

1 .



FIGURE 2 Shared leadership and team openness variance interact to predict team resilience in Study 2.

predicts team resilience (B = .90, SE = .23, t = 3.91, p < .001,  $CI_{95\%} = [.45, 1.36]$ ). Figure 2 illustrates the interaction pattern.

The results of Study 2 provide support for the second causal link in our conceptual model, showing that shared leadership and team openness variance interact to predict team resilience. Together, Studies 1 and 2 have provided strong support for the causal chain in our conceptual model. Although the quality of crowdsourced data has been supported (Peer et al., 2021), one limitation in Studies 1 and 2, which were conducted online, was that we still need to replicate the findings using actual teams in a field setting. Therefore, to increase confidence in our findings, we aim to conduct a comprehensive test of the complete model in a multi-source field survey in Study 3.

## **STUDY 3: MULTI-SOURCE FIELD SURVEY**

#### Procedure and sample

The sample included a range of different workplace virtual teams that were located within the United Kingdom. A total number of 200 teams were approached initially to participate in the research and 40 team leaders, and 251 employees made up the respective respondents (response rate = 53%). The teams worked in range of different service-based industries including finance, human resources, information technology, sales, and healthcare. All teams were identified as being virtual, with 100% of teams working from home for the most part of the week, with the average distance between team members when at work of 2.90 kms (SD = 1.06). As a result, team members all worked at different sites from one another throughout the week and used electronic media in order to communicate with their respective team members.

#### APPLIED

Due to work from home orders as a direct result of COVID-19 restrictions, all teams were considered to be completely virtual rather than working on a continuum of virtuality where some teams would meet regularly face-to-face while others would have none. Most teams all had team members who all worked in the same country and time zone except for two teams which had team members who worked in different time zones or in different countries. In terms of communication media used to communicate within teams, 93% used video conferencing multiple times a week, 95% used email to communicate more than once a day with 90% of respondents meeting face to face less than once a month. The average team size was 13 (SD = 2.78, range 6–15 members) with the average number of responses per group being 7.27. Team tenure average was 26.5 months (SD = 21.20, range 2–94 months). The average age of the team leader was 37 years (SD = 8.42, range 25–59 years). The team members gender split team was 50% female, 49% males and 1% unspecified. The average age of the team members was 31 years (SD = 7.36, range 18–48 years).

Dawson's selection rate was calculated using the formula ([N-n]/Nn) where (N) is a function of the number of the group size and (n) is the number of responses per group (Dawson, 2003). Dawson's selection rate is used when teams comprised varying numbers of whom had varied response rates to ensure that the statistical accuracy in group responses was not related to the number of responses received or the proportions of respondents in each team (Dawson, 2003). Drawing on previous research, the cut-off point was 0.32 (Richter et al., 2006) as scores that were less than 0.32 have been shown to correlate with true scores of 0.95 or higher (Dawson, 2003). All teams were included as they were all below the cut-off point of 0.32. Data from 40 teams were included in our analysis.

Data collection occurred through an online internet based-survey from teams within the United Kingdom. Using a built-in software algorithm, teams were randomly selected according to the minimum requirements of the team, which was at least two members as well as a team leader, and then invited by email to participate in the research. Team leaders were asked to complete a survey answering questions regarding team resilience, team geographical location and their perceptions of shared leadership in the team. Team members were also invited to participate via email and asked to answer a survey regarding communication media and frequency as well as questioning pertaining to individual personality. Both anonymity and confidentiality were assured.

#### Measures

#### Openness to experience

Consistent with Studies 1 and 2, three openness items ( $\alpha = .58$ ) from the 15-item personality scale (Soto & John, 2017) were used. As we expected openness to experience to vary between different individual team members, we were unable to use a direct consensus method of aggregation (Chan, 1998). Instead, we operationalized openness to experience based on the team's task (Homan et al., 2008), based on Steiner's (1972) model of disjunctive, conjunctive and additive tasks (Steiner, 1972). Our participant teams were involved in complex tasks in which performance required all members to draw upon their skills and knowledge, reflective of an additive task (Molyneux, 2001). We therefore used the average of member scores as our measure of openness to experience at the team level (Prewett et al., 2018). Although we expected

variation within each team, an investigation of inter-rater agreement revealed the median  $R_{wg}$  for openness to be 0.8 (LeBreton & Senter, 2008).

# Shared leadership

Consistent with Studies 1 and 2, the seven-item scale ( $\alpha = 0.89$ ) from Muethel et al. (2012) was used and rated by the team leader.

# Team resilience

Same as Study 2 ( $\alpha = 0.89$ ).

# Control variables

We controlled for gender (Stephens et al., 2013), as well as team size as previous research has highlighted that it may significantly impact team resilience capacity (Brykman & King, 2021). Tenure was controlled because it is proposed that the longer team members are in a team, they are more likely to become familiar with one another which can help them cope with adversity (Stephens et al., 2013).

## RESULTS

Table 5 shows the means, standard deviations, and correlations among the study variables.

We first investigated the discriminant validity of our measures using AMOS (Arbuckle, 2014). To support measurement model fit, we expected CFI and IFI values that are close to one (Byrne, 2001) and SRMR values of .08 or less (DiLalla, 2000). Our full model analysis generated  $\chi^2 = 80$  (df = 51), p = .005 with fit indices that suggest good fit to the data (CFI = .87; SRMR = .07). We compared our measurement model to a comparative model in which shared leadership and resilience were combined. Analysis suggested poorer fit ( $\chi^2 = 99$ , df = 53, p < .001; CFI = .82; SRMR = .08). We also compared a single factor model, which also suggested poorer fit to the data ( $\chi^2 = 103$ ; df = 54, p < .001; CFI = .81; SRMR = .08) providing support of discriminant validity. As our results were somewhat low (Iacobucci, 2010), and to ensure adequate discriminant validity, additional analysis was conducted using the heterotraitmonotrait (HTMT) ratio. As outlined by Henseler et al. (2015), the analysis involves assessing the averages of the heterotrait-monotrait ratio of the correlations relative to the geometric means of the monotrait-heteromethod correlations. The criterion of 0.9 was applied to assess the discriminant validity, which indicates a sensitivity of <95%; however, a more conservative approach of 0.85 has been suggested which has the lower specificity of the two (Henseler et al., 2015). The results in Table 6 based on Smart PLS provide further support for discriminant validity, showing all the HTMT ratios below the most conservative criterion .85.

Table 7 summarizes the hypotheses testing results. The analyses revealed support for a significant path between mean openness and team resilience supporting Hypothesis 1 ( $\beta$  = .41, t = 2.78, p = .01, 95% CI = [.20, 1.27]) and between mean openness and shared leadership

#### TABLE 5 Descriptive statistics correlations among key variables in Study 3.

Variable	Mean	SD	1	2	3
1. Team openness	5.00	.68			
2. Team openness variance	1.38	.44	677**		
3. Shared leadership	3.03	1.06	.374*	267	
4. Team resilience	2.60	1.23	.410**	250	.734**

Note:  $N_{leaders} = 40$  and  $N_{employees} = 251$ .

\*Correlation is significant at the .05 level (two-tailed).

\*\*Correlation is significant at the .01 level (two-tailed).

#### TABLE 6 HTMT analysis Study 3.

	1	2	3
1. Team openness			
2. Team openness variance	.68		
3. Shared leadership	.38	.27	
4. Team resilience	.43	.27	.78

Note:  $N_{leaders} = 40$  and  $N_{employees} = 251$ .

#### TABLE 7 Regression results Study 3.

	Mediator model Shared leadership	Dependent model Resilience	Dependent model Resilience
Predictor variables			
Team openness	.37*	.16	.25
Shared leadership		.68**	.55**
Team openness variance (TOV)			.03
Interaction variables			
Shared leadership X TOV			25*
<i>R</i> <sup>2</sup> change	.14*	.56**	.05*

Note:  $N_{leaders} = 40$  and  $N_{employees} = 251$ . Values reported in this table are standardized parameter estimates. \*p < .05, and \*\*p < .01.

supporting Hypothesis 2 ( $\beta = .37$ , t = 2.49, p = .02, 95% CI = [.11, 1.05]). A significant coefficient was found for the path between shared leadership and resilience lending support to Hypothesis 3 ( $\beta = .73$ , t = 6.66, p < .001, 95% CI = [.59, 1.11]). A confidence interval for the indirect effect of mean openness and resilience through shared leadership did not include zero, 95% CI = [.12 to .76], providing support for Hypothesis 4.

We found support for a moderating effect of openness variance on the path between shared leadership and team resilience ( $\beta = -.25$ , t = -2.02, p = .05), providing support for Hypothesis 5. The interaction pattern is illustrated in Figure 3. Further investigation using the

APPLIED PSYCHOLOGY 19 of 28



FIGURE 3 Shared leadership, openness to experience variance, and team resilience in Study 3.

Johnson-Neyman technique found that shared leadership increased resilience when openness variance values were below 1.71, 78% of our teams' reported values.

We also found support for Hypothesis 6, which predicts a moderated mediated relationship between mean openness and resilience through shared leadership contingent on openness variance. Specifically, the indirect effect of mean openness on team resilience via shared leadership was significant at low values of openness variance (B = .52, SE = .18, 95% CI = [.14 to .83]). However, this indirect path was not significant when openness variance was high (B = .21, SE = .17, 95% CI = [-.09, .59]).

#### **GENERAL DISCUSSION**

The goal of this study was to explore the impact of team openness to experience in predicting both shared leadership and team resilience. Our findings suggest that team openness is a critical antecedent to team resilience directly and to shared leadership, which mediates a significant indirect path to team resilience. We also find support for the role of variance in openness as a second stage moderator of this mediated relationship. We thus contribute to a richer understanding of the role of member personality as determinant of shared leadership emergence and advance our knowledge of factors that predict team resilience.

Scholars have long sought to understand the dispositional basis of resilience and, while extant research contributes considerable insight into the role of individual personality attributes to individual resilience (Hartmann et al., 2019), the impact of personality on team resilience has, until now, remained theoretically and empirically unexplored (Hartmann et al., 2019; Raetze et al., 2021). We contribute to this literature by theoretically and empirically evidencing the role of member personality, specifically team aggregate openness to experience, as an important predictor of resilience, particularly within virtual teams. Drawing on COR theory, we interpret our data as supporting the value of aggregate openness to experience as a significant

team resource that increases team capacity to deal with adversity (Hobfoll et al., 2018). Though not directly investigated in our studies, our theoretically derived argumentation suggests that higher aggregate openness to experience provides teams with greater ability to analyze and understand experiences, enhances learning, and facilitates improvization. We see value in future study that investigates these explanatory factors as greater understanding of the distinctive role of openness on knowledge-related team dynamics might enhance both efforts to enhance resilience as well as innovation and team creativity (Sacramento et al., 2024).

We further extend current models of team resilience (Gucciardi et al., 2018; Hartwig et al., 2020; Stoverink et al., 2020) by evidencing the importance of both mean and variance as personality dimensions that interactively influence resilience in teams. The capacity of openness to experience variance to determine when aggregate openness enhances team resilience strongly recommends the inclusion of both trait mean and trait variance in future group-level resilience research. In particular, high aggregate openness might equally reflect a clustered or dispersed pattern of team member attributes and, without attending to this variance, the mechanism and impact of openness remains opaque. For example, while high aggregate openness with low variance suggests that most or all members share higher levels of openness, contributing to enhanced capacity to learn and improvise (contributing to resilience) as well as common motivation to shape team decisions (contributing to shared leadership), high aggregate openness with high variance may reduce the opportunity for shared leadership, resilience, or other valued outcomes (den Hartog et al., 2020). We suggest further research that better elucidates the impact of various levels of variance on team aggregate personality, particularly combined with investigation into consequent dynamics as well as outcomes.

Our findings also extend recent research into the role of team member personality in shared leadership (Chiu et al., 2016; Hoch & Dulebohn, 2017) by demonstrating the impact of openness to experience as a dimension argued to drive enthusiasm toward the team's goal as well as socialized collaboration (Hoch & Dulebohn, 2017; McCrae, 1996), which engenders shared leadership. Further, we find evidence that shared leadership has a direct, moderated influence on team resilience. Since our findings were obtained from teams engaged in challenging environments such as virtual work, we advance our understanding of shared leadership scholarship, which has, until now, tended to exclude performance during times of adversity (Han & Hazard, 2022; Sweeney et al., 2019; Zhu et al., 2018). Our findings that low variance in openness is crucial to realizing the beneficial effect of shared leadership on team resilience provides further contribution. While past research has investigated the role of member personality in team performance, the moderating role of personality variance, though indubitably relevant, has remained underexplored (Han & Hazard, 2022; Scott-Young et al., 2019). We add to suggestions that the influence of shared leadership may not be straightforward (Mitchell & Boyle, 2021) and suggest benefit in extending current models of shared leadership to include member personality variance as a critical moderator.

Our findings have substantial managerial implications. Understanding the mechanisms through which team openness to experience influences shared leadership and team resilience is practically important, given the benefits that accrue to teams (Hartmann et al., 2019). For team leaders, our findings point to the value of explicitly considering team member attributes in the context of potential adversity. Where teams are likely to be faced with obstacles and challenges, our results suggest merit in the explicit consideration of member openness and aggregate team openness. Our findings also highlight the benefit of development programs that may increase openness to experience (Jackson et al., 2012).

# Limitations, suggestions for future research, and conclusions

Our research is not without limitations. Although we tested our hypotheses in three different studies that build on the strengths of the previous one, we still obtained our findings from crowdsourcing data in Studies 1 and 2. While we ensured high data quality in these studies, we acknowledge that the results can still be further validated by future recall experiments with virtual team members recruited from organizations. Furthermore, the sample size in Study 3 (40 teams) is relatively small, which can result in a lack of statistical power as a larger sample is more likely to depict a true result (Abraham & Russell, 2008). Further research can provide more insights on the validity of our model using larger samples of teams in the field.

In addition, due to logistical constraints, we used the extra-short form of the Big Five inventory, which may raise questions regarding construct validity (Soto & John, 2017). Although we chose the extra-short form to allow space for other variables in our studies and more importantly because our focus was on personality domains rather than facets (Soto & John, 2017), future research can replicate our findings using alternative measures of Big Five inventory or other relevant personality instruments to ensure consistency in our findings (e.g., see Costa & McCrae, 1992; Gosling et al., 2003; Loehlin et al., 1998). Further, we encourage future scholars to extend the findings of our research by extending theory through the inclusion of other personality traits beyond openness to experience. While our focus on openness was justified based on its link to learning and adaptability, we acknowledge that traits such as proactivity may also enhance team capacity to deal with adversity. Drawing on insights from Judge et al. (2013) that moving from broad personality domains to narrower facets when predicting work performance will produce significant gains in prediction, we recommend that future research investigate facet-level traits in influencing shared leadership and team resilience.

In conclusion, our research advances knowledge of team personality effects on shared leadership and resilience within the context of virtual teams. We provide consistent evidence that highlights the factors that facilitate team resilience. In particular, we demonstrate that team openness to experience facilitates the development of team resilience through shared leadership. We note, however, that the extent to which shared leadership supports team resilience is contingent upon the variance in openness to experience within teams. We therefore highlight the pivotal role of team personality and shared leadership in determining not only when resilience is likely to emerge in virtual teams but also the mechanism of its effect.

## CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

# DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the correspondingauthor upon reasonable request.

## ETHICS STATEMENT

All the studies we report in this research received ethics clearance from the Human Research Ethics Committee of a public Australian university.

# ORCID

Rebecca Mitchell D https://orcid.org/0000-0002-2059-5449 Anna Carmella G. Ocampo D https://orcid.org/0000-0001-9380-227X

#### MITCHELL ET AL.

## ENDNOTES

- <sup>1</sup> All studies conducted received ethical clearance from a public Australian university and none of our studies were pre-registered. Due to ethical considerations, data are available from the authors upon request.
- <sup>2</sup> The pattern of our results did not change when these control variables were removed from the analyses.
- <sup>3</sup> Participants only recalled one team, which had to satisfy the requirements of both the shared leadership manipulation and the team openness variance manipulation.
- <sup>4</sup> Removing the control variables from our analyses did not change our results.

### REFERENCES

- Abraham, W. T., & Russell, D. W. (2008). Statistical power analysis in psychological research. Social and Personality Psychology Compass, 2(1), 283–301.
- Anderson, M. H. (2009). The role of group personality composition in the emergence of task and relationship conflict within groups. *Journal of Management & Organization*, 15(1), 82–96. https://doi.org/10.5172/jmo. 837.15.1.82
- Arbuckle, J. (2014). *IBM<sup>®</sup> SPSS<sup>®</sup> Amos™ 23 User's Guide*. IBM, Amos Development Corporation. Retrieved from https://public.dhe.ibm.com/software/analytics/spss/documentation/amos/23.0/en/Manuals/IBM\_SPSS\_Amos\_User\_Guide.pdf
- Backmann, J., Weiss, M., Schippers, M. C., & Hoegl, M. (2019). Personality factors, student resiliency, and the moderating role of achievement values in study progress. *Learning and Individual Differences*, 72, 39–48. https://doi.org/10.1016/j.lindif.2019.04.004
- Bardoel, E. A., & Drago, R. (2021). Acceptance and strategic resilience: An application of conservation of resources theory. Group & Organization Management, 46(4), 657–691. https://doi.org/10.1177/ 10596011211022488
- Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, 83(3), 377–391. http://search. ebscohost.com/login.aspx?direct=true&db=epref&AN=JAP.HC.CGG.BARRICK.RMAPWP&site=bsi-live, https://doi.org/10.1037/0021-9010.83.3.377
- Bell, S. T. (2007). Deep-level composition variables as predictors of team performance: A meta-analysis. Journal of Applied Psychology, 92(3), 595–615. https://doi.org/10.1037/0021-9010.92.3.595
- Bell, S. T., Brown, S. G., Colaneri, A., & Outland, N. (2018). Team composition and the ABCs of teamwork. American Psychologist, 73(4), 349–362. https://doi.org/10.1037/amp0000305
- Belschak, F. D., & Den Hartog, D. N. (2009). Consequences of positive and negative feedback: The impact on emotions and extra-role behaviors. *Applied Psychology*, 58(2), 274–303. https://doi.org/10.1111/j.1464-0597. 2008.00336.x
- Bradley, B. H., Klotz, A. C., Postlethwaite, B. E., & Brown, K. G. (2013). Ready to rumble: How team personality composition and task conflict interact to improve performance. *Journal of Applied Psychology*, 98(2), 385–392. https://doi.org/10.1037/a0029845
- Brandt, M. J., Chambers, J. R., Crawford, J. T., Wetherell, G., & Reyna, C. (2015). Bounded openness: The effect of openness to experience on intolerance is moderated by target group conventionality. *Journal of Personality* and Social Psychology, 109(3), 549–568. https://doi.org/10.1037/pspp0000055
- Brykman, K. M., & King, D. D. (2021). A resource model of team resilience capacity and learning. Group & Organization Management, 46(4), 737–772. https://doi.org/10.1177/10596011211018008
- Byrne, D. (1971). *The attraction paradigm*. Academic Press. http://search.ebscohost.com/login.aspx?direct= true&db=epref&AN=AP.BYRNE.ACADEMIC.AIGA&site=bsi-live
- Byrne, B. (2001). *Structural equation modeling with Amos: Basic concepts, applications, and programming.* Lawrence Erlbaum Association-Publisher.
- Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal*, *50*(5), 1217–1234.
- Chai, D. S., & Park, S. (2022). The increased use of virtual teams during the covid-19 pandemic: Implications for psychological well-being. *Human Resource Development International*, 25(2), 199–218. https://doi.org/10. 1080/13678868.2022.2047250

- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83(2), 234–246. https://doi.org/ 10.1037/0021-9010.83.2.234
- Chatzi, S., Nikolaou, I., & Anderson, N. (2022). Team personality composition and team innovation implementation: The mediating role of team climate for innovation. *Applied Psychology*, 72(2), 769–796. https://doi.org/ 10.1111/apps.12408
- Chen, S., Westman, M., & Hobfoll, S. E. (2015). The commerce and crossover of resources: Resource conservation in the service of resilience. *Stress and Health*, 31(2), 95–105. https://doi.org/10.1002/smi.2574
- Chiu, C., Owens, B., & Tesluk, P. (2016). Initiating and utilizing shared leadership in teams: The role of leader humility, team proactive personality, and team performance capability. *Journal of Applied Psychology*, 101(12), 1705–1720. https://doi.org/10.1037/apl0000159
- Connor-Smith, J., & Flachsbart, C. (2007). Relations between personality and coping: A meta-analysis. Journal of Personality and Social Psychology, 93(6), 1080–1107. https://doi.org/10.1037/0022-3514.93.6.1080
- Costa, P. T., & McCrae, R. R. (1992). The NEO PI-R professional manual. Psychological Assessment Resources.
- Cui, G., Wang, F., & Zhang, Y. (2023). Buffer or boost? The role of openness to experience and knowledge sharing in the relationship between team cognitive diversity and members' innovative work behavior. *Current Psychology*, 42(29), 25233–25245.
- Dawson, J. F. (2003, August). Do we have enough? The accuracy of incomplete data from small groups. In Academy of management proceedings (Vol. 2003, pp. A1–A6). Academy of Management. https://doi.org/ 10.5465/ambpp.2003.13792311
- Degbey, W. Y., & Einola, K. (2020). Resilience in virtual teams: Developing the capacity to bounce back. *Applied Psychology*, *69*(4), 1301–1337. https://doi.org/10.1111/apps.12220
- Dierdorff, E. C., & Fisher, D. M. (2022). Problematic personalities in teams: Implications for performance trajectories and resilience to unexpected change. *Personnel Psychology*, 75(3), 589–617. https://doi.org/10. 1111/peps.12481
- DiLalla, L. F. (2000). Structural equation modeling: Uses and issues. In H. E. A. Tinsley & S. D. Brown (Eds.), Handbook of applied multivariate statistics and mathematical modeling (pp. 439–464). Academic Press. https://doi.org/10.1016/B978-012691360-6/50016-1
- D'Innocenzo, L., Mathieu, J. E., & Kukenberger, M. R. (2016). A meta-analysis of different forms of shared leadership-team performance relations. *Journal of Management*, 42(7), 1964–1991. https://doi.org/10.1177/ 0149206314525205
- Do, M. H., & Minbashian, A. (2020). Higher-order personality factors and leadership outcomes: A meta-analysis. Personality and Individual Differences, 163, 110058. https://doi.org/10.1016/j.paid.2020.110058
- Driskell, J. E., Goodwin, G. F., Salas, E., & O'Shea, P. G. (2006). What makes a good team player? Personality and team effectiveness. *Group Dynamics: Theory, Research, and Practice, 10*(4), 249–271. https://doi.org/10. 1037/1089-2699.10.4.249
- Driskell, J. E., Salas, E., & Driskell, T. (2018). Foundations of teamwork and collaboration. *American Psychologist*, *73*(4), 334–348.
- Dulebohn, J. H., & Hoch, J. E. (2017). Virtual teams in organizations. Human Resource Management Review, 27(4), 569–574. https://doi.org/10.1016/j.hrmr.2016.12.004
- Peer, E., Rothschild, D., Gordon, A., Evernden, Z., & Damer, E. (2021). Data quality of platforms and panels for online behavioral research. *Behavior Research Methods*, 54, 1643–1662.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using g\* power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149–1160. https://doi.org/10.3758/ BRM.41.4.1149
- 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. https://doi.org/10.1111/apps.12419
- Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51(4), 327-358.
- Flint-Taylor, J., & Cooper, C. L. (2017). Team resilience: Shaping up for the challenges ahead. In Managing for Resilience (pp. 129–149). Routledge.
- Goldberg, L. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48(1), 26–34. https://doi.org/10.1037/0003-066X.48.1.26

- Gorgievski, M., & Hobfoll, S. E. (2008). Work can burn us out and fire us up. In J. R. Halbesleben (Ed.), Handbook of stress and burnout in health care (pp. 7–22). Nova Science Publishers.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. Jr. (2003). A very brief measure of the big-five personality domains. *Journal of Research in Personality*, 37(6), 504–528.
- Griffin, B., & Hesketh, B. (2004). Why openness to experience is not a good predictor of job performance. International Journal of Selection and Assessment, 12(3), 243–251. https://doi.org/10.1111/j.0965-075X.2004. 278\_1.x
- Gucciardi, D. F., Crane, M., Ntoumanis, N., Parker, S. K., Thøgersen-Ntoumani, C., Ducker, K. J., Peeling, P., Chapman, M. T., Quested, E., & Temby, P. (2018). The emergence of team resilience: A multilevel conceptual model of facilitating factors. *Journal of Occupational and Organizational Psychology*, 91(4), 729–768.
- Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR" understanding the role of resources in conservation of resources theory. *Journal of Management*, 40(5), 1334–1364. https://doi.org/10.1177/0149206314527130
- Han, S. J., & Hazard, N. (2022). Shared leadership in virtual teams at work: Practical strategies and research suggestions for human resource development. *Human Resource Development Review*, 22(3), 300–323. https:// doi.org/10.1177/15344843221093376
- Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2019). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology*, 69(3), 913–959. https://doi.org/10.1111/apps.12191
- den Hartog, S. C., Runge, J. M., Reindl, G., & Lang, J. W. (2020). Linking personality trait variance in selfmanaged teams to team innovation. *Small Group Research*, 51(2), 265–295. https://doi.org/10.1177/ 1046496419865325
- Hartwig, A., Clarke, S., Johnson, S., & Willis, S. (2020). Workplace team resilience: A systematic review and conceptual development. Organizational Psychology Review, 10(3–4), 169–200. https://doi.org/10.1177/ 2041386620919476
- Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods*, 48, 400–407.
- Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate Behavioral Research*, 50(1), 1–22.
- Hendrikx, I. E., Vermeulen, S. C., Wientjens, V. L., & Mannak, R. S. (2022). Is team resilience more than the sum of its parts? A quantitative study on emergency healthcare teams during the covid-19 pandemic. *International Journal of Environmental Research and Public Health*, 19(12), 6968. https://doi.org/10.3390/ ijerph19126968
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variancebased structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135.
- Hill, E. T., Matta, F. K., & Mitchell, M. S. (2021). Seeing the glass as half full or half empty: The role of affectinduced optimistic and pessimistic states on justice perceptions and outcomes. Academy of Management Journal, 64(4), 1265–1287. https://doi.org/10.5465/amj.2018.1282
- Hmieleski, K. M., Cole, M. S., & Baron, R. A. (2012). Shared authentic leadership and new venture performance. Journal of Management, 38(5), 1476–1499. https://doi.org/10.1177/0149206311415419
- Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman (Ed.), *The oxford handbook of stress, health, and coping* (pp. 127–147). Oxford University Press.
- Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology* and Organizational Behavior, 5, 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640
- Hobfoll, S. E., & Shirom, A. (2000). Conservation of resources theory. In R. Golembiewski (Ed.), Handbook of organizational behavior (pp. 57–81). Marcel Dekker Inc.
- Hoch, J. E., & Dulebohn, J. H. (2017). Team personality composition, emergent leadership and shared leadership in virtual teams: A theoretical framework. *Human Resource Management Review*, 27(4), 678–693. https://doi. org/10.1016/j.hrmr.2016.12.012
- Hogan, J., & Holland, B. (2003). Using theory to evaluate personality and job-performance relations: A socioanalytic perspective. *Journal of Applied Psychology*, 88(1), 100–112. https://doi.org/10.1037/0021-9010. 88.1.100

- Homan, A. C., Hollenbeck, J. R., Humphrey, S. E., Van Knippenberg, D., Ilgen, D. R., & Van Kleef, G. A. (2008). Facing differences with an open mind: Openness to experience, salience of intragroup differences, and performance of diverse work groups. *Academy of Management Journal*, 51(6), 1204–1222. https://doi.org/10. 5465/amj.2008.35732995
- Howard, R. W. (2011). Testing the accuracy of the retrospective recall method used in expertise research. *Behavior Research Methods*, 43, 931–941. https://doi.org/10.3758/s13428-011-0120-x
- Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. Journal of Consumer Psychology, 20(1), 90–98. https://doi.org/10.1016/j.jcps.2009.09.003
- Jackson, J. J., Hill, P. L., Payne, B. R., Roberts, B. W., & Stine-Morrow, E. A. (2012). Can an old dog learn (and want to experience) new tricks? Cognitive training increases openness to experience in older adults. *Psychol*ogy and Aging, 27(2), 286–292. https://doi.org/10.1037/a0025918
- Judge, T. A., Rodell, J. B., Klinger, R. L., Simon, L. S., & Crawford, E. R. (2013). Hierarchical representations of the five-factor model of personality in predicting job performance: Integrating three organizing frameworks with two theoretical perspectives. *Journal of Applied Psychology*, 98(6), 875–925.
- King, E., Branicki, L., Norbury, K., & Badham, R. (2024). Navigating team resilience: A video observation of an elite yacht racing crew. *Applied Psychology*, 73(1), 240–266. https://doi.org/10.1111/apps.12474
- King, D. D., Newman, A., & Luthans, F. (2016). Not if, but when we need resilience in the workplace. Journal of Organizational Behavior, 37(5), 782–786. https://doi.org/10.1002/job.2063
- King, G. A., & Rothstein, M. G. (2010). Resilience and leadership: The self-management of failure. In M. G. Rothstein & R. J. Burke (Eds.), Self-management and leadership development. Edward Elgar Publishing. https://doi.org/10.4337/9781849805551.00021
- Klasmeier, K. N., & Rowold, J. (2020). A multilevel investigation of predictors and outcomes of shared leadership. Journal of Organizational Behavior, 41(9), 915–930. https://doi.org/10.1002/job.2477
- LeBreton, J. M., & Senter, J. L. (2008). Answers to 20 questions about interrater reliability and interrater agreement. Organizational Research Methods, 11(4), 815–852. https://doi.org/10.1177/1094428106296642
- LePine, J. A. (2003). Team adaptation and postchange performance: Effects of team composition in terms of members' cognitive ability and personality. *Journal of Applied Psychology*, 88(1), 27–39. https://doi.org/10. 1037/0021-9010.88.1.27
- LePine, J. A., Buckman, B. R., Crawford, E. R., & Methot, J. R. (2011). A review of research on personality in teams: Accounting for pathways spanning levels of theory and analysis. *Human Resource Management Review*, 21(4), 311–330. https://doi.org/10.1016/j.hrmr.2010.10.004
- LePine, J. A., Colquitt, J. A., & Erez, A. (2000). Adaptability to changing task contexts: Effects of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology*, 53(3), 563–593. https://doi.org/10.1111/j.1744-6570.2000.tb00214.x
- Liang, H.-Y., Shih, H.-A., & Chiang, Y.-H. (2015). Team diversity and team helping behavior: The mediating roles of team cooperation and team cohesion. *European Management Journal*, 33(1), 48–59. https://doi.org/ 10.1016/j.emj.2014.07.002
- Litman, L., Robinson, J., & Abberbock, T. (2017). Turkprime. Com: A versatile crowdsourcing data acquisition platform for the behavioral sciences. *Behavior Research Methods*, 49(2), 433–442. https://doi.org/10.3758/s13428-016-0727-z
- Loehlin, J. C., McCrae, R. R., Costa, P. T. Jr., & John, O. P. (1998). Heritabilities of common and measure-specific components of the big five personality factors. *Journal of Research in Personality*, 32(4), 431–453. https://doi. org/10.1006/jrpe.1998.2225
- Mathieu, J. E., Tannenbaum, S. I., Donsbach, J. S., & Alliger, G. M. (2014). A review and integration of team composition models: Moving toward a dynamic and temporal framework. *Journal of Management*, 40(1), 130–160.
- Matz, S. C. (2021). Personal echo chambers: Openness-to-experience is linked to higher levels of psychological interest diversity in large-scale behavioral data. *Journal of Personality and Social Psychology*, 121(6), 1284–1300. https://doi.org/10.1037/pspp0000324
- McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. Journal of Personality and Social Psychology, 52(6), 1258–1265. https://doi.org/10.1037/0022-3514.52.6.1258
- McCrae, R. R. (1996). Social consequences of experiential openness. Psychological Bulletin, 120(3), 323–337. https://doi.org/10.1037/0033-2909.120.3.323

- Meneghel, I., Salanova, M., & Martínez, I. M. (2016). Feeling good makes us stronger: How team resilience mediates the effect of positive emotions on team performance. *Journal of Happiness Studies*, 17(1), 239–255. https://doi.org/10.1007/s10902-014-9592-6
- Metzl, E. S., & Morrell, M. A. (2008). The role of creativity in models of resilience: Theoretical exploration and practical applications. *Journal of Creativity in Mental Health*, 3(3), 303–318. https://doi.org/10.1080/ 15401380802385228
- Mitchell, R., & Boyle, B. (2021). Too many cooks in the kitchen? The contingent curvilinear effect of shared leadership on multidisciplinary healthcare team innovation. *Human Resource Management Journal*, 31(1), 358–374. https://doi.org/10.1111/1748-8583.12309
- Mitchell, I. K., & Walinga, J. (2017). The creative imperative: The role of creativity, creative problem solving and insight as key drivers for sustainability. *Journal of Cleaner Production*, 140, 1872–1884. https://doi.org/10. 1016/j.jclepro.2016.09.162
- Mohammed, S., & Angell, L. C. (2003). Personality heterogeneity in teams: Which differences make a difference for team performance? Small Group Research, 34, 651–677.
- Molyneux, J. (2001). Interprofessional teamworking: What makes teams work well? Journal of Interprofessional Care, 15(1), 29–35. https://doi.org/10.1080/13561820020022855
- Morgeson, F. P., DeRue, D. S., & Karam, E. P. (2010). Leadership in teams: A functional approach to understanding leadership structures and processes. *Journal of Management*, 36(1), 5–39. https://doi.org/10.1177/ 0149206309347376
- Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: A literature review. SN Applied Sciences, 2(6), 1096. https://doi.org/10.1007/s42452-020-2801-5
- Mount, M. K., Barrick, M. R., Scullen, S. M., & Rounds, J. (2005). Higher-order dimensions of the big five personality traits and the big six vocational interest types. *Personnel Psychology*, 58(2), 447–478. https://doi.org/10. 1111/j.1744-6570.2005.00468.x
- Muethel, M., Gehrlein, S., & Hoegl, M. (2012). Socio-demographic factors and shared leadership behaviors in dispersed teams: Implications for human resource management. *Human Resource Management*, 51(4), 525–548. https://doi.org/10.1002/hrm.21488
- Muethel, M., & Hoegl, M. (2013). Shared leadership effectiveness in independent professional teams. European Management Journal, 31(4), 423–432. https://doi.org/10.1016/j.emj.2012.11.008
- Nicolaides, V. C., LaPort, K. A., Chen, T. R., Tomassetti, A. J., Weis, E. J., Zaccaro, S. J., & Cortina, J. M. (2014). The shared leadership of teams: A meta-analysis of proximal, distal, and moderating relationships. *The Leadership Quarterly*, 25(5), 923–942. https://doi.org/10.1016/j.leaqua.2014.06.006
- Oshio, A., Taku, K., Hirano, M., & Saeed, G. (2018). Resilience and big five personality traits: A meta-analysis. Personality and Individual Differences, 127, 54–60. https://doi.org/10.1016/j.paid.2018.01.048
- Prewett, M. S., Brown, M. I., Goswami, A., & Christiansen, N. D. (2018). Effects of team personality composition on member performance: A multilevel perspective. *Group & Organization Management*, 43(2), 316–348. https://doi.org/10.1177/1059601116668633
- Prewett, M. S., Walvoord, A. A. G., Stilson, F. R. B., Rossi, M. E., & Brannick, M. T. (2009). The Team Personality–Team Performance Relationship Revisited: The Impact of Criterion Choice, Pattern of Workflow, and Method of Aggregation. *Human Performance*, 22, 273–296.
- Qin, X., Chen, C., Yam, K. C., Huang, M., & Ju, D. (2020). The double-edged sword of leader humility: Investigating when and why leader humility promotes versus inhibits subordinate deviance. *Journal of Applied Psychology*, 105(7), 693–712. https://doi.org/10.1037/apl0000456
- Raetze, S., Duchek, S., Maynard, M. T., & Kirkman, B. L. (2021). Resilience in organizations: An integrative multilevel review and editorial introduction. *Group & Organization Management*, 46(4), 607–656. https://doi. org/10.1177/10596011211032129
- Richter, A. W., West, M. A., Van Dick, R., & Dawson, J. F. (2006). Boundary spanners' identification, intergroup contact, and effective intergroup relations. *The Academy of Management Journal*, 49(6), 1252–1269. https:// doi.org/10.5465/amj.2006.23478720
- Sacramento, C., Lyubovnikova, J., Martinaityte, I., Gomes, C., Curral, L., & Juhasz-Wrench, A. (2023). Being open, feeling safe and getting creative: The role of team mean openness to experience in the emergence of team psychological safety and team creativity. *Journal of Product Innovation Management*, 41(1), 12–35. https://doi.org/10.1111/jpim.12699

- Sacramento, C., Lyubovnikova, J., Martinaityte, I., Gomes, C., Curral, L., & Juhasz-Wrench, A. (2024). Being open, feeling safe and getting creative: The role of team mean openness to experience in the emergence of team psychological safety and team creativity. *Journal of Product Innovation Management*, 41(1), 12–35.
- Salas-Vallina, A., Rofcanin, Y., & Las Heras, M. (2022). Building resilience and performance in turbulent times: The influence of shared leadership and passion at work across levels. *BRQ Business Research Quarterly*, 25(1), 8–27. https://doi.org/10.1177/23409444211035138
- Sanfuentes, M., Valenzuela, F., & Castillo, A. (2021). What lies beneath resilience: Analyzing the affectiverelational basis of shared leadership in the Chilean miners' catastrophe. *Leadership*, 17(3), 255–277. https:// doi.org/10.1177/1742715020986061
- Schwaba, T., Luhmann, M., Denissen, J. J. A., Chung, J. M., & Bleidorn, W. (2018). Openness to experience and culture-openness transactions across the lifespan. *Journal of Personality and Social Psychology*, 115(1), 118–136. https://doi.org/10.1037/pspp0000150
- Scott-Young, C. M., Georgy, M., & Grisinger, A. (2019). Shared leadership in project teams: An integrative multilevel conceptual model and research agenda. *International Journal of Project Management*, 37(4), 565–581. https://doi.org/10.1016/j.ijproman.2019.02.002
- Shen, W., Evans, R., Liang, L. H., & Brown, D. J. (2023). Bad, mad, or glad? Exploring the relationship between leaders' appraisals or attributions of their use of abusive supervision and emotional reactions. *Applied Psychology*, 72(2), 647–673. https://doi.org/10.1111/apps.12394
- Soto, C. J., & John, O. P. (2017). Short and extra-short forms of the big five inventory–2: The bfi-2-s and bfi-2-ss. *Journal of Research in Personality*, *68*, 69–81. https://doi.org/10.1016/j.jrp.2017.02.004
- Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, 89(6), 845–851. https://doi.org/10.1037/0022-3514.89.6.845
- Steiner, I. D. (1972). Group process and productivity. Academic Press.
- Stephens, J. P., Heaphy, E. D., Carmeli, A., Spreitzer, G. M., & Dutton, J. E. (2013). Relationship quality and virtuousness: Emotional carrying capacity as a source of individual and team resilience. *The Journal of Applied Behavioral Science*, 49(1), 13–41. https://doi.org/10.1177/0021886312471193
- Stoverink, A. C., Kirkman, B. L., Mistry, S., & Rosen, B. (2020). Bouncing back together: Toward a theoretical model of work team resilience. Academy of Management Review, 45(2), 395–422. https://doi.org/10.5465/ amr.2017.0005
- Sweeney, A., Clarke, N., & Higgs, M. (2019). Shared leadership in commercial organizations: A systematic review of definitions, theoretical frameworks and organizational outcomes. *International Journal of Management Reviews*, 21(1), 115–136. https://doi.org/10.1111/ijmr.12181
- Urbach, T., & Fay, D. (2021). Leader member exchange in leaders' support for voice: Good relationships matter in situations of power threat. *Applied Psychology*, *70*(2), 674–708. https://doi.org/10.1111/apps.12245
- Van Vianen, A., & De Dreu, C. K. (2001). Personality in teams: Its relationship to social cohesion, task cohesion, and team performance. In. European Journal of Work and Organizational Psychology, 10, 97–120. https://doi. org/10.1080/13594320143000573
- Vandavasi, R. K. K., McConville, D. C., Uen, J.-F., & Yepuru, P. (2020). Knowledge sharing, shared leadership and innovative behaviour: A cross-level analysis. *International Journal of Manpower*, 41(8), 1221–1233. https://doi.org/10.1108/IJM-04-2019-0180
- Vera, D., & Crossan, M. (2005). Improvisation and innovative performance in teams. Organization Science, 16(3), 203–224. https://doi.org/10.1287/orsc.1050.0126
- Vincent, L. C., & Kouchaki, M. (2016). Creative, rare, entitled, and dishonest: How commonality of creativity in one's group decreases an individual's entitlement and dishonesty. Academy of Management Journal, 59(4), 1451–1473. https://doi.org/10.5465/amj.2014.1109
- Wright, T. A., & Sweeney, D. A. (2016). The call for an increased role of replication, extension, and mixedmethods study designs in organizational research. *Journal of Organizational Behavior*, 37(3), 480–486. https://doi.org/10.1002/job.2059
- Wu, Q., & Cormican, K. (2016). Shared leadership and team creativity: A social network analysis in engineering design teams. Journal of Technology Management & Innovation, 11(2), 2–12. https://doi.org/10.4067/S0718-27242016000200001

- Wu, Q., Cormican, K., & Chen, G. (2020). A meta-analysis of shared leadership: Antecedents, consequences, and moderators. Journal of Leadership and Organizational Studies, 27(1), 49–64. https://doi.org/10.1177/ 1548051818820862
- Zhang, J., & Ziegler, M. (2016). How do the big five influence scholastic performance? A big five-narrow traits model or a double mediation model. *Learning and Individual Differences*, 50, 93–102. https://doi.org/10. 1016/j.lindif.2016.07.011
- Zhu, J., Liao, Z., Yam, K. C., & Johnson, R. E. (2018). Shared leadership: A state-of-the-art review and future research agenda. *Journal of Organizational Behavior*, 39(7), 834–852. https://doi.org/10.1002/job.2296
- Zimmermann, J., & Neyer, F. J. (2013). Do we become a different person when hitting the road? Personality development of sojourners. *Journal of Personality and Social Psychology*, *105*(3), 515–530. https://doi.org/10. 1037/a0033019

**How to cite this article:** Mitchell, R., von Stieglitz, S., Gu, J., Boyle, B., & Ocampo, A. C. G. (2025). Tackling adversity with open minds: Team personality composition facilitates shared leadership and team resilience. *Applied Psychology*, *74*(1), e12568. https://doi.org/10.1111/apps.12568