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Psychological Safety Comes of Age: Observed Themes in an Established Literature

Amy C. Edmondson and Derrick P. Bransby

Harvard Business School, Harvard University, Boston, Massachusetts, USA; email: aedmondson@hbs.edu, dbransby@hbs.edu

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Abstract

Since its renaissance in the 1990s, psychological safety research has flourished—a boom motivated by recognition of the challenge of navigating uncertainty and change. Today, its theoretical and practical significance is amplified by the increasingly complex and interdependent nature of the work in organizations. Conceptual and empirical research on psychological safety—a state of reduced interpersonal risk—is thus timely, relevant, and extensive. In this article, we review contemporary psychological safety research by describing its various content areas, assessing what has been learned in recent years, and suggesting directions for future research. We identify four dominant themes relating to psychological safety: getting things done, learning behaviors, improving the work experience, and leadership. Overall, psychological safety plays important roles in enabling organizations to learn and perform in dynamic environments, becoming particularly relevant in a world altered by a global pandemic.

INTRODUCTION

Today's organizations face greater uncertainty and complexity than ever before. As the novel coronavirus pandemic moved into its third year, companies around the world found themselves in a state of profound flux, with diminished clarity about future market opportunities, operations, and staffing models. This tumult has given rise to new risks and new demands for innovation and experimentation in organizations. As a result, the need to inspire and enable people to contribute their knowledge in a timely, candid way has moved to the top of the organizational agenda for research and practice.

Psychological safety describes a work environment where people believe that such candor is expected and possible. We believe that this combination of context and construct has contributed to a dramatic growth in psychological safety research in recent years. Since the publication of a prior review of the psychological safety literature in this journal a decade ago (see Edmondson & Lei 2014), the number and reach of studies has grown exponentially, creating an opportunity to step back and consider what has been learned. Much of this research has taken place in specific industry contexts, most notably in healthcare delivery; nonetheless, we believe that the cumulative results of these varied studies inform theory in organizational behavior more broadly.

For this article, we conducted a systematic search of empirical research on psychological safety and identified 185 articles in organizational behavior and psychology published in the past nine years that measured and identified antecedents and consequences of this important construct. For the purposes of this review, we focused primarily on research published in peer-reviewed journals in organization studies, to assess the cumulative knowledge and its contribution to the field of organizational behavior. In so doing, we observed that psychological safety research has turned from a nascent area of work in the 1990s to one that today qualifies as mature theory. Mature theory presents high agreement about construct definition and measurement, frequent cross-referencing across studies, points of broad agreement, and the potential for accumulated knowledge (Edmondson & McManus 2007). In short, psychological safety research has come of age.

Most of this work implicitly or explicitly recognizes the collaborative nature of work as a factor in motivating the study of psychological safety. As was true a decade ago, work today is profoundly interdependent, and effective collaboration is necessary for achieving results. Furthermore, collaboration depends on the timely and candid sharing of information, opinions, questions, and concerns. Increasingly, diverse expertise across disciplinary boundaries must be combined effectively to accomplish organizational goals. Spanning expertise boundaries is challenging when people are reluctant to speak up, due to the inherent risk of being seen as ignorant, incompetent, or intrusive. This is true for product design, patient care, strategy formulation, scientific research, and rescue operations; in each of these contexts, moreover, organizational behavior research has identified psychological safety as a factor in predicting success (Edmondson 1999, 2019).

We conceptualize psychological safety as a perception related to the consequences of taking interpersonal risks, most notably at work (Edmondson 1999, Kahn 1990). Across decades and levels of analysis, psychological safety research has been shown to enable the contribution of ideas and actions to a shared enterprise (for a prior review, see Edmondson & Lei 2014 and Edmondson 2019, chapter 2). Studies conducted over the past decade have produced findings consistent with that research, especially in terms of finding relationships between leadership, psychological safety, and learning behavior. However, reflecting its status as an increasingly established literature, psychological safety research has become more nuanced and detailed in its findings. The aim of this article is to review the accumulated findings, identify dominant themes, suggest implications of these for theory and practice, and offer directions for future research.

Our article unfolds as follows. We first describe our search methods, which led us to identify a set of categorical themes in recent psychological safety research. This is our approach to assessing what has been learned from this body of work over the past decade. To put this review in context, we provide, a quick look at psychological safety research over five decades, pulling from prior reviews of this history (Edmondson 1999, Edmondson & Lei 2014; see also the sidebar titled A Brief History of Psychological Safety in Organizational Behavior). Finally, we suggest managerial implications and identify opportunities for future research on psychological safety.

METHODS

We performed a keyword search in four databases (Business Source Complete, PsychINFO, Web of Science, and ABI/INFORM), emphasizing journals specializing in business and psychology, to identify papers for our review. We supplemented our search by examining the reference lists of recent meta-analyses (Frazier et al. 2017) and reviews (Newman et al. 2017, O'Donovan & McAuliffe 2020a). Given space constraints and our aim for this review, we limited the search to studies published in peer-reviewed journals that explicitly used the phrase "psychological safety" in their title or abstract. We further restricted our review to articles published in the past nine years (2013–2021), to pick up where Edmondson & Lei's (2014) review of psychological safety left off. We emphasized quantitative, qualitative, and multimethod empirical research published in top journals. We excluded research that was not consistent with the characterization of psychological safety as a belief that an environment is safe for interpersonal risk-taking (Edmondson 1999, Kahn 1990) or did not substantively address psychological safety. This approach yielded 185 papers.

From each study, we extracted data about study characteristics, such as design, setting, and sample, as well as about dependent and independent variables, the measurement and conceptualization of psychological safety, and key findings. To help us characterize the selected literature, we qualitatively assigned up to five tags [e.g., codes based on the list of organizational behavior topics identified by Heath & Sitkin (2001), which we modified slightly for this review] to each article based on its keywords and variables. There were 51 tags in all (**Table 1**).

To help organize our review, we used bibliometric methods to expose the literature's underlying topography. Specifically, we applied co-word analysis to map associations between tags (i.e., topics)

A BRIEF HISTORY OF PSYCHOLOGICAL SAFETY IN ORGANIZATIONAL BEHAVIOR

In organizational behavior, mentions of psychological safety trace back to early studies of organizational change, when Edgar Schein and Warren Bennis noted that psychological safety was essential for making people feel secure and capable of changing (see Schein & Bennis 1965). Schein (1993) later discussed psychological safety for helping people overcome defensiveness and learning anxiety at work, to focus on achieving shared goals and solving problems without excessive self-protection.

William Kahn (1990) brought psychological safety into the modern era with a qualitative study of a summer camp and an architecture firm, connecting psychological safety to engagement. Kahn (1990) argued that psychological safety helped people "employ or express themselves physically, cognitively, and emotionally during role performances," rather than disengage, or "withdraw and defend their personal selves" (p. 694). People expected to be given the benefit of the doubt—a defining characteristic of psychological safety—in groups with trust and respect. In 1996, the first author of this review published a dissertation followed by an article (Edmondson 1999) on qualitative and quantitative research in a manufacturing company showing relationships between team psychological safety, team learning, and team performance. A 2014 article in this journal reviewed this literature from the 1990s until 2012 (Edmondson & Lei 2014).

Table 1 Topic occurrences among included papers ($n = 185$)[a]

Topic	Occurrences	Topic	Occurrences	Topic	Occurrences
Leaders/leadership	52	Conflict	10	Norms	4
Performance	51	Team/group	10	Networks	4
Culture/climate	30	Interdependence	9	Decision making/decision	3
Creativity[b]	29	Power/status[b]	9	Cross-cultural	3
Learning	28	Stress/strain	8	Thriving[b]	3
Communication	27	Trust	8	Organizational change	3
Cooperation	20	Burnout	6	Job satisfaction	2
Relationship	20	Incivility[b]	6	Risk	2
Voice[b]	19	Personality	6	Politics	1
Diversity/inclusion[b]	18	Commitment	5	Organizational citizenship	1
Emotion/affect	17	Feedback	5	Workplace safety[b]	1
Supervisors/supervision	15	Knowledge[b]	5	Family	1
Structure	13	Turnover	5	Mentoring[b]	1
Identity	12	Coordination[b]	4	Socialization	1
Self-efficacy	12	Motivation	4	Respect[b]	1
Innovation	11	Improvement[b]	4	Problem solving[b]	1
Participation/engagement	11	Justice/fairness	4	Psychological contract	1

[a]This table has been modified from Heath & Sitkin (2001).
[b]Selected topics indicate our additions to Heath & Sitkin's (2001) original list.

to produce a conceptual map of the domain. Our analysis was conducted in VOSviewer, a software tool for bibliometric analysis. In addition to bringing structure to a broad body of research, these methods helped to improve our objectivity and mitigate the risk of bias (Zupic & Čater 2015). This analysis did not lead to definitive categories but rather helped us identify themes and relationships in the cumulative studies. We used judgement to create the final list of research clusters (see **Table 4**).

FINDINGS

Study Characteristics

Psychological safety is the subject of inquiry across many scholarly disciplines. In total, our review includes 95 peer-reviewed journals. Although most speak to subfields of business and psychology, others specialize in particular domains including health services, hospitality, construction, and engineering. Likewise, many industries are represented, with the service sector being particularly well-represented. Overall, 39 countries are represented in our review with the United States (48 studies) and China (42 studies) being the most prominent research locales.

Psychological safety has received steadily increasing attention from scholars over the past decade. More than half of the studies included in our review were published in the past three years (2019–2021). This work was overwhelmingly quantitative with focused theoretical contributions, symbolic of its mature state (Edmondson & McManus 2007). Of the 185 papers included in our review, 153 are quantitative, 24 are qualitative, and 8 are multimethod. A large share of the work relied on cross-sectional data. **Table 2** summarizes the characteristics of the selected literature.

Despite essential similarities, psychological safety presents some variations in conceptualization (**Table 3**) and measurement. Consistent with Edmondson's (1999) definition of psychological

Table 2 Characteristics of the included papers (n = 185)

	n (%)		*n* (%)
Publication year		**Setting (top 10)**	
2013	10 (5.4)	Multiple industries	33 (17.8)
2014	14 (7.6)	Health care	33 (17.8)
2015	14 (7.6)	Manufacturing	17 (9.2)
2016	16 (8.6)	Technology	14 (7.6)
2017	12 (6.5)	Higher education	13 (7.0)
2018	25 (13.5)	Financial services	10 (5.4)
2019	28 (15.1)	Hospitality	8 (4.3)
2020	31 (16.8)	Engineering and construction	6 (3.2)
2021[a]	35 (18.9)	Pharmaceuticals	3 (1.6)
		Telecommunications	3 (1.6)
Country (top 5)		**Methods**	
United States	48 (25.9)	Quantitative	153 (82.7)
China	42 (22.7)	Qualitative	24 (13.0)
Pakistan	6 (3.2)	Multimethod	8 (4.3)
Netherlands	6 (3.2)		
Germany	6 (3.2)		

[a]2021 data include data from January to August.

Table 3 Levels of analysis and measurement in quantitative studies (n = 153)

Dependent variable	Level of psychological safety measure				Total
	Individual	Group	Organization	Unspecified	
Individual	34	39	17	5	**95**
Group	4	36	1	0	**41**
Organization	0	1	10	1	**12**
Multilevel	2	3	0	0	**5**
Total	**40**	**79**	**28**	**6**	**153**

safety as a shared belief among team members, conceptualization at the group level was the most common formulation (79 studies) in our review; her 1999 seven-item scale also was the most widely used measure. Yet, researchers also drew on Baer & Frese's (2003) and Liang et al.'s (2012) work, to conceptualize psychological safety at the organizational and individual level, respectively. Commonly used measures at these levels included Liang et al.'s (2012) five-item scale, Carmeli et al.'s (2010) five-item scale, and Baer & Frese's (2003) seven-item scale.

A Map of the Literature

Bibliometric co-word analysis allowed us to construct a topical map of the 185 studies included in our review. The resulting diagram consists of 51 nodes with ties reflecting the degree of co-occurrence between topics (see **Figure 1**). The size of each node reflects the number of articles tagged with a given topic; thick ties represent the most common linkages among topics. Colors reflect non-overlapping clusters (produced by the VOS clustering technique in the VOSviewer software). Using the results of our co-word analysis and intuition as a guide, we identified four themes in the recent psychological safety literature and used them to organize our review (**Table 4**). Bear in mind that this analysis was used to help us identify patterns and develop

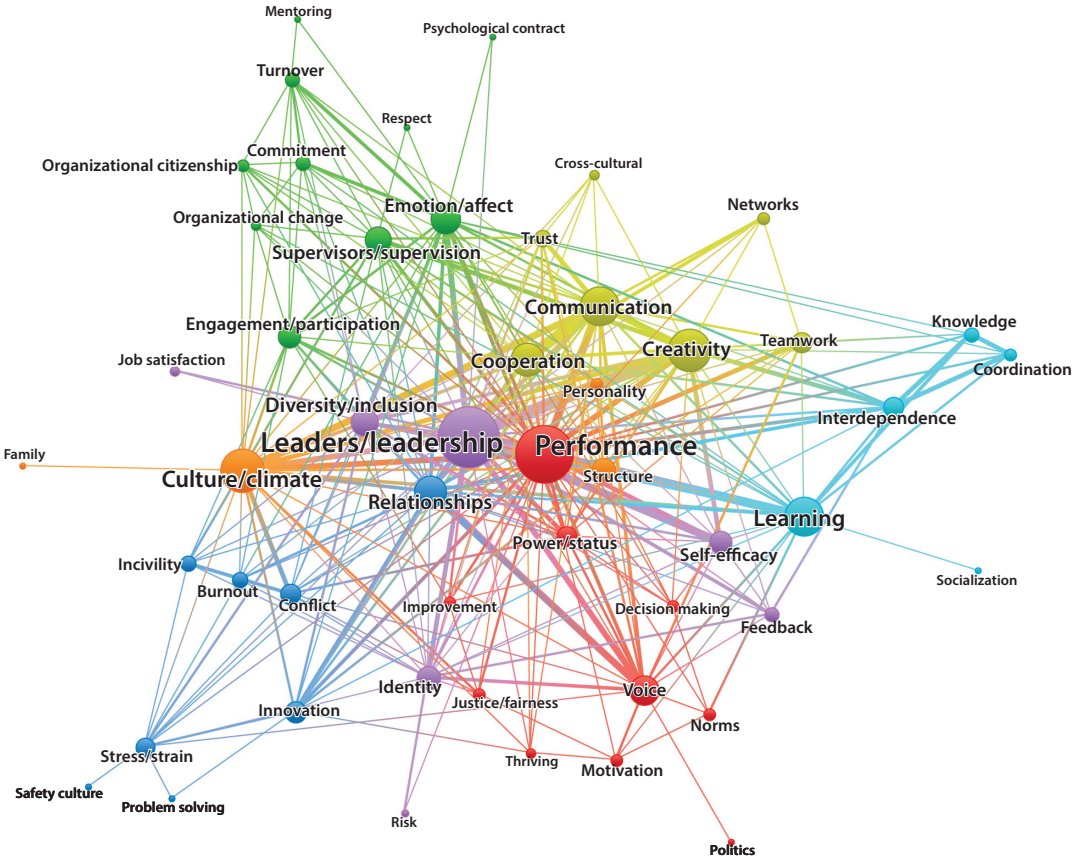

Figure 1

Bibliometric co-word network of selected psychological safety literature. Circles represent topics and circle size reflects the number of articles tagged with a given topic. Ties between circles reflect co-occurrence among topics and tie width reflects the degree of co-occurrences between topics. Colors reflect clusters (produced by the VOS clustering technique in the VOSviewer software). Node position does not necessarily reflect centrality.

insights about the literature rather than to generate or prove an underlying structure in the literature. The themes we identified were qualitatively derived, based on our review of selected articles. Note that some topics arguably fit into more than one cluster; we made assignments based on our judgment of the primary emphasis and best fit for each.

Table 4 Clusters of research in the psychological safety literature

Cluster	Topics (from Table 1)
1. Getting things done	Performance, cooperation, structure, self-efficacy, team/group, networks, interdependence, coordination, decision making/decision, organizational change, problem solving
2. Fostering learning behaviors	Creativity, learning, communication, voice, innovation, knowledge, improvement, socialization
3. Improving the work experience	Culture/climate, relationship, emotion/affect, diversity/inclusion, identity, participation/engagement, conflict, stress/strain, trust, burnout, incivility, commitment, turnover, personality, justice/fairness, norms, cross-cultural, thriving, job satisfaction, risk, politics, organizational citizenship, respect, workplace safety, psychological contract
4. Leaders and leadership	Leaders/leadership, supervisors/supervision, power/status, feedback, mentoring, motivation

Table 5 Top 15 ties by co-occurrence among included papers (n = 185)

Tie	Occurrence	Tie	Occurrence
Creativity–leader/leadership	11	Communication–culture/climate	6
Leader/leadership–performance	11	Relationships–voice	6
Communication–cooperation	10	Creativity–performance	5
Learning–performance	8	Culture/climate–leader/leadership	5
Communication–performance	8	Culture/climate–performance	5
Leader/leadership–learning	8	Emotion/affect–leader/leadership	5
Leader/leadership–self-efficacy	7	Leader/leadership–voice	5
Communication–creativity	6		

Table 1, in conjunction with our co-word network, reveals some sense of the literature's underlying structure. As we show, "leaders/leadership" and "performance"—the first and second most frequently occurring tags in our review—are central features of the landscape. Leadership refers to leader behavior, usually leaders of teams but also of organizations. Performance relates to the entity's ability to achieve its goals. The frequency of both variables in our review is unsurprising in that considerable research in organizational behavior identifies leadership as an important factor in shaping beliefs and behavior; furthermore, the field has long emphasized performance as a dependent variable. Other commonly occurring tags such as "culture/climate," "creativity," and "learning" are prominent landmarks in our map of the field. **Table 5** presents prominent edges (i.e., frequently co-occurring topic pairs). Not surprisingly, "leaders/leadership" and "performance" are conspicuously present in these pairings.

Getting Things Done

Psychological safety plays a significant role in enabling performance. By creating conditions favorable to speaking up, sharing ideas, and asking questions, psychological safety helps individuals and teams get things done. That we start here should be unsurprising: Organizational behavior research has long been concerned with factors that enable performance. We study, almost exclusively, organizations whose purpose is the production of products and services for customers, and our research questions often pertain to achieving greater understanding of the drivers of effectiveness. Psychological safety has emerged as a factor that matters, because of its role in facilitating communication and coordination. Across studies, we found significant empirical evidence for the direct, mediating, and moderating roles of psychological safety with performance outcomes at individual, group, and organization levels. At all levels, psychological safety emerged as a vital ingredient for overcoming obstacles to teamwork and unleashing potential in individuals and organizations.

Unlocking individual performance. Research focused on individual performance emphasized the role of psychological safety in unlocking individuals' latent potential to achieve goals. For instance, by helping people frame demands as a positive challenge, psychological safety encouraged employees to interpret them as opportunities to explore new ideas and take action (Espedido & Searle 2021).

Psychological safety climate was found to affect individual performance in a survey study of employees in US companies focused on diversity and race (Singh et al. 2013). The researchers found that psychological safety mediated the relationship between diversity climate and employee performance, and that race moderated these effects. Specifically, the relationships between diversity climate and psychological safety and between psychological safety and performance were stronger for minorities than for Whites (Singh et al. 2013). In a study of more than 300 frontline

hospitality workers in Turkey, Wang et al. (2020) revealed that both self-efficacy and psychological safety helped explain how error tolerance influenced employee learning behavior that improved their performance. They found that tolerance for errors positively influenced psychological safety, which helped people frame errors as opportunities to learn rather than as a threat to their image (Wang et al. 2020). Likewise, Hora et al. (2021) found that psychological safety established parity in creative self-efficacy between men and women, the key to unlocking the full creative potential of employees in a US-based food manufacturer.

Given the malleable nature of the psychological safety climate, several studies examine the role of supervisors in amplifying individual performance (Castro et al. 2018, Frazier & Tupper 2018, Tu et al. 2019), operating through psychological safety. For example, Frazier & Tupper (2018) found that supervisor prosocial motivation had a positive, indirect effect on employee psychological safety that provided the cognitive and emotional nutriments necessary for thriving, leading to better performance.

Overcoming barriers to effective teamwork. A key stream of research probes the function of psychological safety in overcoming barriers to team performance like hierarchy, functional diversity, and professional boundaries (Chen et al. 2017, De Hoogh et al. 2015, Malhotra et al. 2017, Martins et al. 2013). In a study of 61 Chinese workgroups, Chen et al. (2017) found that psychological safety diminished the effect of faultlines—hypothetical, individually perceived dividing lines among subgroups—on team performance. Likewise, Malhotra et al. (2017) found that a strong psychological safety climate helped mitigate the negative impact of functional dominance on group performance in cross-functional process improvement teams. Across studies, we found considerable support for the claim that psychological safety enhances team performance by mitigating obstacles to teamwork. However, some proposed a contingent perspective, finding that low psychological safety was not strictly associated with lower performance in professionally diverse teams (Martins et al. 2013). In a study of 700 French graduate students, Martins et al. (2013) found that when team psychological safety was low, expertise diversity (e.g., variation in the types of knowledge, skills, and capabilities of team members) was negatively related to performance, yet expertness diversity (e.g., the extent to which team members differ in level of expertise) was positively related to performance.

Qualitative research also portrays psychological safety as an essential attribute for surmounting barriers to team performance. In a study of 24 management groups in an American academic medical center, Singer et al. (2015) reported that high-performers "valued the opportunity to learn as a group and invested time to create capacity for collective learning" (p. 310) and sought to ensure mutual respect, support, and psychological safety. By doing so, they overcame hierarchy and status differences that impeded discussion in low-performing groups. True et al. (2014) reported similar findings in an extensive qualitative study of 101 healthcare teams in the United States Veterans Health Administration. They found that "mature and open communication characterized by psychological safety" (True et al. 2014, p. 636) allowed team members to interact across hierarchies and professional boundaries—a key characteristic of effective and engaged primary healthcare teams.

Nearly all research at the group level was conducted within teams, with Bienefeld & Grote's (2014) study being a notable exception. Studying status, inclusive leadership, and speaking up among nearly 1,500 aircrews in a European airline, the researchers considered an ad hoc multiteam system that showed differences in the role of psychological safety within and across teams. While crewmembers' perceptions of psychological safety mediated the relationship between status and speaking up within teams, it had no effect across teams. Instead, it was the within-team psychological safety of boundary spanners (i.e., pursers, the aircraft's cabin managers) that

partially mediated status and speaking up in external relationships. A crew members' experiences of psychological safety within their home team is what mattered most in boundary-spanning work. Differences between the mechanisms involved in speaking up within and across teams, the authors elucidated, could be explained by structural differences across teams and variation in leader effectiveness, both of which affected the team's psychological safety climate (Bienefeld & Grote 2014).

Some group-level research addressed fundamental questions about the dynamics of psychological safety. For example, Koopmann et al. (2016) challenged the prevailing view in the team literature that team tenure has a positive linear association with psychological safety. In a study of creative and task performance in 115 research and development teams, investigators found a curvilinear relationship between team tenure and team psychological safety climate and climate strength (Koopmann et al. 2016). These measures were higher in new and longer tenured teams than in moderately tenured teams. Moreover, the results supported an indirect curvilinear relationship between team tenure and creative performance, moderated by psychological safety. They found that task performance was only improved by greater tenure when the psychological safety climate was strong. These findings suggest that the dynamics of team psychological safety are, perhaps, "more complex than currently depicted in the literature" (Koopmann et al. 2016, p. 940).

Enhancing enterprise performance. The focus of research in this stream was the moderating role of psychological safety on the performance of small- and medium-sized enterprises. Here, evidence suggested that psychological safety helps steady organizations against internal and external pressures that threaten performance. For example, a study of South Korean firms found a curvilinear relationship between entrepreneurial orientation and firm performance (where entrepreneurial orientation promoted firm performance except when very low or very high), and psychological safety mitigated the effect of entrepreneurial orientation on financial performance (Yoon & Solomon 2017). In the case of more than 2,250 Norwegian exporters, Andersson et al. (2020) demonstrated a direct, positive association between firm psychological safety and innovative performance. Moreover, they found that environmental dynamism moderated the effect of psychological safety on a firm's innovation capabilities (Andersson et al. 2020). Similarly, qualitative evidence from a Dutch home care organization showed that structural empowerment fostered organizational resilience but only when psychological safety was present and top management commitment to empowerment was steady (van den Berg et al. 2022). Just as at the individual and group levels, these organizational-level studies showed that psychological safety can help organizations leverage the diversity of their members to achieve outcomes (Kirkman et al. 2013).

Fostering Learning Behaviors

Learning behaviors remain a prominent theme in the psychological safety literature. Although often enacted by individuals, the learning behaviors emphasized in this research typically involve interactions between one or more people, for which lowering interpersonal risk improves the quality of their interactions. This is what makes psychological safety particularly relevant for learning behaviors, including knowledge transfer, knowledge sharing, speaking up, and creativity.

Learning and knowledge transfer. Many studies explore the role of psychological safety as a mechanism for learning and knowledge transfer at the individual, group, and organization levels. We found considerable quantitative support for its role as a mediator (Bresman & Zellmer-Bruhn 2013, Cajiao & Burke 2016, Harvey et al. 2019, Hassan & Jiang 2021, Liu et al. 2014, Ortega et al. 2014) and moderator (Gerpott et al. 2019, Najafi-Tavani et al. 2018, Wilhelm et al. 2019).

A substantial stream of research considered the function of psychological safety in overcoming barriers to learning by better leveraging diversity (Creon & Schermuly 2019, Gerpott et al. 2019, Guchait et al. 2016).

Qualitative studies also depict a positive relationship between psychological safety and learning. Given that learning is a core activity in socialization, Lyman et al. (2020b) noted the importance of psychological safety as an aid to learning during the transition of newly graduated registered nurses to professional practice. In another study, these authors described psychologically safe relationships as "foundational to successful experiences of organizational learning" (Lyman et al. 2020a, p. 1244) and suggested it has an outsized influence on learning. At the group level, Cauwelier et al. (2019) echoed these sentiments with their contention that engineering teams with high psychological safety engage in more learning and create more knowledge than teams with low psychological safety.

Papers identified for this review studied psychological safety and learning at the group level more frequently than at the individual or organizational levels. Furthermore, only a few studies examined cross-level effects of psychological safety on learning (Cajiao & Burke 2016, Harms 2015, Liu et al. 2014, Wang et al. 2020). To illustrate, a study of 42 teams with 218 employees in a German chemical company found that employees were more likely to learn from failure when they worked in teams with medium to high levels of psychological safety (Wilhelm et al. 2019). Moreover, the authors found that learning from failure was stimulated by a well-developed transactive memory system (TMS)—a shared cognition developed in groups for sharing knowledge among members. Several studies in our review sought to integrate research on psychological safety and TMS. This work showed that psychological safety mediated the association between negative affectivity and TMS (Hood et al. 2016) and moderated the association between TMS, knowledge integration, and team performance (Huang & Chen 2018).

Several studies in our review identified potentially detrimental effects of psychological safety (Deng et al. 2019, Pan et al. 2020, Stühlinger et al. 2021), including for learning. For example, a study of 80 groups in various Chinese organizations proposed a dual-pathway model for psychological safety (Deng et al. 2019). In this model, psychological safety exerted a positive effect on group learning by reducing fear of failure, as well as a negative effect by reducing motivation to work. In a follow-up study, they found the salience of each pathway varied based on the group's tendency toward collectivistic or individualistic norms. In more collectivistic teams the "reducing fear of failure" pathway was dominant; in individualistic teams the "loss of motivation to work" pathway prevailed (Deng et al. 2019).

Knowledge sharing and hiding. A substantial stream of the quantitative research on psychological safety pertains to knowledge sharing and knowledge hiding. Generally, studies find that psychological safety promotes knowledge sharing, especially when it involves high interpersonal risk (Liu & Keller 2021, Mura et al. 2016, Rivera et al. 2021, Yeo & Marquardt 2015). In a study of three Italian healthcare organizations, for example, Mura et al. (2016) demonstrated that knowledge sharing that exposed flaws or limitations—such as sharing mistakes or seeking feedback—were particularly affected by psychological safety. Conversely, knowledge sharing that lacked interpersonal risk or affirmed one's status, such as sharing best practices, was unaffected by psychological safety (Mura et al. 2016). This elegant result reinforces the essence of the psychological safety construct: It facilitates behavior that brings interpersonal risk. But for sharing good news or best practices, or for any behavior lacking in interpersonal risk, psychological safety's role is minimal.

Knowledge hiding—that is, holding back ideas and observations at work—may do more than simply constrain communication. In a two-part study of employees in multiple industries,

Jiang et al. (2019) found that those who engaged in knowledge hiding experienced a reduced sense of psychological safety that resulted in "faded thriving." In other words, holding back harmed people's subjective experience at work, in addition to potentially negatively affecting the quality of their work. Employees who engaged in knowledge hiding tended to "recall unsafe perceptions and feelings as an attempt to legitimate their behavior" (Jiang et al. 2019, p. 813), and this low psychological safety negatively impacted their ability to thrive.

Voice and speaking up. Considerable research, spanning multiple industries, supports the notion that psychological safety facilitates candid, upward-directed communication (Edmondson & Lei 2014). Substantial evidence from the healthcare sector showed that psychologically safe environments allowed providers to raise concerns about their patients (Baik & Zierler 2019, Smith et al. 2018), report adverse events (Appelbaum et al. 2016), and communicate across professional boundaries (True et al. 2014). We found support for both a mediating (Kong et al. 2020; Li et al. 2014; W. Liu et al. 2015, 2017; Unler & Caliskan 2019) and a moderating (Romney 2020, Starzyk & Sonnentag 2019, Tangirala et al. 2013) role of psychological safety related to voice and speaking up. Likewise, psychological safety was negatively associated with silence behaviors that were rooted in a motive to protect oneself from consequences of speaking up (Brinsfield 2013). Indeed, Sherf et al.'s (2021) research suggested that because psychological safety is associated with behavioral inhibition it may be more strongly associated with silence behavior than voice behavior.

Creativity and innovation. Creativity and innovation remain prominent topics in psychological safety research due to their importance to modern knowledge work. As such, many researchers were interested in how companies might foster them. Many of the studies in this stream connect leadership to creativity or innovative behavior, through psychological safety, offering ample quantitative evidence for the mediating role of psychological safety. For example, these studies identified behaviors like being transparent (Han et al. 2017) and listening (Castro et al. 2018) as having a positive effect on creativity, mediated by psychological safety. Binyamin et al. (2018) similarly demonstrated that a caring relationship with subordinates enhanced individual innovative behavior, through psychological safety. Researchers explained that psychological safety freed cognitive and emotional resources and thus put employees "in a better position to invest these resources in innovative behavior" (Iqbal et al. 2020, p. 822).

The role of psychological safety in fostering creativity and innovation at the group and organization levels was identified in several studies in our review. This research recognized the function of psychological safety in forming favorable conditions for team creativity (Agarwal & Farndale 2017, Greenbaum et al. 2020, Liu et al. 2021) and innovation (Gu et al. 2013) and in encouraging risk taking behavior in organizations engaged in innovative work in highly dynamic environments (Andersson et al. 2020). The work also highlighted the role of psychological safety in enhancing creative and innovative outcomes in diverse groups and organizations (Hora et al. 2021, Moake et al. 2019, Spoelma & Ellis 2017).

At the individual level, in contrast, researchers reported both positive and negative effects of psychological safety on creativity (Chen et al. 2020, Hu et al. 2018, Li et al. 2018). In a study of 350 Chinese scientists, Pan et al. (2020) proposed that although psychological safety was not itself detrimental, it may have had an inhibiting effect on creativity when interacting with other factors, such as the need for cognition (e.g., the extent to which individuals desire to engage in cognitive work). They find that need for cognition is more positively associated with individual creativity under low levels of psychology safety, which they attribute to the presence of risk that might be lacking in the "comfort" of a psychologically safe environment (Pan et al. 2020).

Improving The Work Experience

In light of shifting expectations about work, it is worth examining what psychological safety research has found related to improving employees' experience at work. Although this stream of research finds that individuals vary in their perceptions of psychological safety based on personal characteristics and past experience (Bani-Melhem et al. 2021, O'Donovan et al. 2021), it also demonstrates the consistent role of psychological safety in shaping one's experience at work, along with the consistent tendency to vary more between groups than within them (e.g., Edmondson 1999). By creating an environment where candor is expected and possible, psychological safety helps to encourage open and authentic interpersonal behaviors, increase job engagement and satisfaction, cope with stress and strain on the job, and create a supportive and inclusive team climate.

Being oneself. Some studies show that perceptions of psychological safety shape behaviors at work related to being authentic, open, or willing to help others. For instance, employees with high psychological safety were more likely to engage in helping behaviors (Lin et al. 2020) and more likely to seek feedback from their peers (De Stobbeleir et al. 2020). Moreover, evidence suggests that psychological safety shapes how individuals engage with group norms. For example, Moake et al. (2019) found that psychological safety moderated the relationship between age and innovation behavior in South Korean teams in a variety of industries. Here, a strong psychological safety climate encouraged younger team members to engage in innovation-related behaviors despite norms that might have otherwise dictated deference to older team members (Moake et al. 2019). Likewise, in a study of more than 200 Swiss physicians, Stühlinger et al. (2021) found that psychological safety moderated the effect of attitudes on intention to get vaccinated. Here, high psychological safety rendered individuals more comfortable to act according to their attitudes and beliefs, which could be detrimental if organizational norms and individual attitudes are not well aligned (Stühlinger et al. 2021).

Engagement and satisfaction. Several quantitative studies showed that the experience of psychological safety mediated the relationship between various antecedent conditions and outcomes like job engagement (Basit 2017, Rabbanee et al. 2019) and job satisfaction (Ahmad & Umrani 2019). At the group level, Johnson & Avolio (2019) considered how initial perceptions of psychological safety affected team identification—a perceived sense of oneness with the group—and subsequent satisfaction. Through a nine-month study of American graduate students, researchers found that team identification depended on the interaction between initial perceptions of psychological safety and subsequent levels of relationship conflict. If a student reported a high initial psychological safety, followed by increasing relationship conflict, then they reported lower team identification later in the team's life. In turn, the interaction had a negative effect—mediated by identification—on satisfaction. However, for students who reported low initial psychological safety, increasing conflict had no effect on identification. These results suggest that consistency between initial perceptions of psychological safety and subsequent experiences matters, and that psychological safety may signal what type of interpersonal relationships can be expected in a group.

Coping with stress and strain. Psychological safety might aid in coping with stress and strain on the job. In our review, we found considerable support for a negative association between psychological safety and emotional exhaustion stemming from work expectations (Grant et al. 2014, Vogus et al. 2016) and with reports of moral distress in demanding environments like social work (He et al. 2021) and health care (Ahmed et al. 2021). Researchers also reported significant negative associations with incivility and bullying (Arnetz et al. 2019, Klingberg et al. 2018). The work

also suggested that psychology safety was the strongest significant predictor of receiving support after experiencing occupational violence and aggression (Shea et al. 2018) and that it was positively associated with the decision to discuss bullying with colleagues (MacCurtain et al. 2018). Importantly, psychological safety was negatively associated with burnout (Edwards et al. 2021) and mediated the relationship between mentoring and turnover (Chen et al. 2014).

Creating an inclusive climate. This research examines psychological safety as an important factor in developing a supportive diversity and inclusion climate (Gonzalez et al. 2020, Singh et al. 2013). In a study of Turkish immigrant employees in Germany, Ulusoy et al. (2016) found that psychological safety enhanced immigrant employees' attitudes toward work, interpreting it as a "sign of social belonging" (p. 639). They revealed that the effect of immigration background on mental health, work engagement, and turnover all depended on perceived psychological safety (Ulusoy et al. 2016). Other studies demonstrated that psychological safety mediated the relationship between diversity climate and outcomes like group learning (Guchait et al. 2016) and individual performance (Singh et al. 2013). Moreover, we found evidence that psychological safety was effective in mitigating the effect of boundaries created by individual differences. For example, psychological safety helped restore parity in creative self-efficacy between men and women (Hora et al. 2021) and buffered against the potentially negative effects of age diversity (Gerpott et al. 2019, Moake et al. 2019).

Leaders and Leadership

Leadership and supervision have continued to receive substantial attention in the psychological safety literature. A preponderance of these studies focused on the mediating role of psychological safety, especially in associations between various leadership styles and desirable behavior at the individual level. In particular, research has emphasized the mediating role of psychological safety in governing employee creativity (Carmeli et al. 2014, Chen et al. 2020, Tu et al. 2019), innovative behavior (Binyamin et al. 2018, Iqbal et al. 2020), job satisfaction (Ahmad & Umrani 2019), and voice (Chughtai 2016, Liu et al. 2017). For example, in a cross-level study of nearly 600 employees in a Chinese telecommunications company, S. Liu et al. (2015) found that team psychological safety partially meditated the association between authentic leadership and employees speaking up about difficult issues. The authors suggested that by building a psychologically safe climate, authentic leaders played a positive role in encouraging voice in a cultural context where concerns over disturbing harmony prevailed. Just one study in this stream addressed the moderating role of psychological safety (Erkutlu & Chafra 2016), finding that psychological safety enhanced the effect of benevolent leadership on psychological well-being.

Many leadership studies at the group level find that psychological safety plays a mediating role. Specifically, researchers have studied associations between leadership styles, like servant, ethical, and transformational leadership, and outcomes such as team creativity (Tu et al. 2019), team learning (Liu et al. 2014), and team performance (Hassan & Jiang 2021, Miao et al. 2019, Ortega et al. 2014). Likewise, qualitative research suggests that team psychological safety was closely related to leader attitudes and behaviors like inviting participation, supporting conversation, and resolving conflict (O'Donovan & McAuliffe 2020b, Remtulla et al. 2021). Work at the organization level was notably absent in studies that connect leadership to psychological safety and other outcomes.

Leader behaviors. Some studies have examined specific leader attributes that enhance or weaken the psychological safety climate (**Table 6**). In particular, leaders who listened (Castro et al. 2018) and demonstrated competence and transparency enhanced psychological safety (Han et al. 2017,

Table 6 Leader behaviors that enhance psychological safety

Source	Attribute	Definition	Findings
Castro et al. 2018	Listening	The presence of attention, comprehension, and good intention toward the speaker	Perceived supervisor listening was positively associated with psychological safety.
Mao et al. 2019	Competence	Demonstrating individual capability in performing one's job	Leader competence was positively associated with team psychological safety when self-serving behaviors were low.
Han et al. 2017	Transparency	Sharing relevant information, being open to feedback, and being forthcoming about motives and reasoning behind decisions	Leadership transparency had a positive relationship with psychological safety, which in turn affected one's ability to focus attention and creativity.

Mao et al. 2019). In contrast, self-serving behaviors—those that put a leader's interests above those of their team or organization—were shown to reduce psychology safety (Mao et al. 2019, Peng et al. 2019). This research accentuated the role of supervisors in creating and maintaining psychological safety (e.g., Li & Tan 2013).

Recent psychological safety research has paid special attention to feedback seeking and feedback sharing as effective strategies for increasing psychological safety. For example, in their multimethod investigation of leaders in a variety of settings, Coutifaris & Grant (2021) found that leaders' feedback sharing had a lasting, positive impact on psychological safety whereas feedback seeking did not. In contrast to leaders who sought feedback from subordinates, leaders who shared feedback within their team—who openly discussed criticisms and suggestions that they received in the past—normalized and crystalized vulnerability, opening the doors for reciprocal behavior that allowed psychological safety to endure (Coutifaris & Grant 2021). De Stobbeleir et al. (2020) found that psychological safety moderated the relationship between task interdependence and seeking feedback from peers. Employees who experienced high psychological safety engaged in more feedback seeking from peers and were perceived as high performers by their supervisors (De Stobbeleir et al. 2020).

Power. An adjacent stream of research addresses the intersection of psychological safety, power, and leadership. Although power (and specifically power distance) is considered a cultural variable that varies across nations, we include it here because of its role in shaping how people perceive and experience leadership. Power distance shapes how people experience hierarchy, with clear implications for leadership. Broadly, the research shows that high power distance—the extent to which an individual perceives power to be unequally distributed—is negatively associated with psychological safety at the individual and group levels (Appelbaum et al. 2016, Fleştea et al. 2017, Hu et al. 2018). In a study of resident physicians, Appelbaum et al. (2016) showed that power distance was negatively related to psychological safety, which mediated the relationship with a resident's intention to report adverse events. Likewise, Hu et al. (2018) found that in teams with high power distance, leader humility was negatively related to team psychological safety. They suggest this might be caused by a mismatch between the actions of humble leaders and expectations of leader dominance in a group. However, De Hoogh et al. (2015) argued that power disparities need not always have detrimental effects on team psychological safety. In a study of 60 retail outlets in the finance industry, they found that when power struggles—competition for positions of power—were low (e.g., when team members accepted the hierarchy), autocratic leadership was positively related to psychological safety. Yet, when power struggles were high, the association between autocratic leadership and psychological safety was negative.

DISCUSSION

Our review of the psychological safety literature allows us to make two major observations. First, cumulative knowledge about psychological safety in organizations at this point is considerable—an observation we elaborate in this section. Moreover, this knowledge offers compelling implications for practice. Second, important opportunities for further research exist, based on our identification of gaps in this work. Later in this section, we suggest possibilities for advancing knowledge about psychological safety for both theory and practice.

A Mature Construct

The title of our article captures an initial overarching conclusion about the work. In the past decade, psychological safety research has come of age. No longer a novel construct in need of theoretical and empirical justification, psychological safety has taken its place as a mainstream construct in the organizational behavior literature. It touches almost every other topic in the organizational behavior literature, being included in research on all but 10 of the 49 topics identified by Heath & Sitkin (2001). It has been widely used in both general and industry-specific studies. Research in healthcare delivery settings is particularly extensive, developing evidence for the role of psychological safety in such outcomes as quality improvement and patient safety. Furthermore, although outside the scope of this article, psychological safety receives wide attention in practitioner communities, including among consultants, coaches, regulatory agencies, and corporate executives. Across domains, psychological safety enjoys a high level of agreement as a construct related to interpersonal risk climate, despite modest variations in conceptualization and measurement. Overall, the findings are remarkably similar across industries and countries, with some interesting nuances that create opportunities for further research.

Although empirical research on psychological safety has taken place at the individual, group, and organizational levels of analysis, group-level research comprises a dominant stream. This is not surprising but rather indicative of the essential nature of the construct as an emergent property of a social system. In that most work in today's organizations is carried out by teams, whether stable or fluid, the social system that is most salient for many employees is the group. People who work closely together over some period of time (even if very brief) develop similar perceptions of the degree to which candor, creativity, dissent, or requests for help are acceptable. Groups vary in size and stability but nonetheless tend to develop a shared interpersonal climate. When tasks are interdependent and thus require coordination and knowledge sharing, psychological safety plays a role in enabling that work. Nonetheless, half of the studies we reviewed were concerned with individual outcomes, as highlighted in **Table 3**; most of these examine individual outcomes of group-level psychological safety. Notably, voice and silence are still primarily studied as individual-level phenomena.

Most studies at the individual or organizational level neither explicitly disavow psychological safety as an emergent property of a group nor claim it as an inherent individual or organizational property. Rather, they typically leverage data that come either from individuals (working in organizations) or representatives from multiple organizations, with study designs that allow conclusions to be drawn about the individuals or organizations. Relatedly, many studies that take place at the individual level do so because a dependent variable, such as job satisfaction, is meaningful as an individual-level construct. Nonetheless, psychological safety, as an interpersonal phenomenon, is most clearly understood to characterize small social systems like work groups in which individuals interact with each other. Measures of psychological safety typically rely on surveys, necessarily capturing individual perceptions of their team or other relevant work context, along with intraclass correlations that demonstrate higher agreement within teams than between them, justifying

aggregation in studies at the group level. Whether or not individual perceptions should be aggregated to a group-level measure is a matter of remaining consistent with the context. For stable teams, it is likely sensible to aggregate and report a team-level measure; for individuals who collaborate with different people at different times and lack team stability, reporting individual-level measures of psychological safety might make more sense. Psychological safety can only be an emergent property of a group if there is a meaningful group being studied.

Recent interest in psychological safety among organizational behavior researchers can be seen as driven by the changing nature of work. Work has become ever more uncertain and knowledge-intensive, increasingly dominated by knowledge tasks rather than physical tasks. This makes mitigating interpersonal risk and the need for impression management behaviors more important to performance outcomes. When people cannot speak up easily—for example, to offer ideas or test assumptions—preventable failures are likely and innovation suffers. In the aftermath of a global pandemic, uncertainty at work has continued to increase, whereas the emphasis on employee work experiences has never been greater. For these reasons alone, the research we reviewed in this article is vitally important to the field of organizational behavior.

Interrelated Clusters

Our bibliometric analysis led us to four clusters of research—getting things done, learning behaviors, work experience, and leadership. Some studies could easily fit into more than one of our cluster topics, and very few of the articles we reviewed lacked conceptual connections to the others; our allocations were primarily a matter of emphasis.

We chose this approach, rather than simply sorting studies by level of analysis, for two reasons. First, identifying areas with consistent conceptual findings seemed to us to offer the most information to readers. Becoming aware, for example, that psychological safety improves the employee work experience stands as a memorable insight with practical implications. The same can be said of recognizing how leaders affect desired outcomes—from performance to creativity—by fostering psychological safety in their teams. Second, within each cluster, research at different levels of analysis offered similar findings, such that arbitrarily sorting by level of analysis would have generated more repetition in our review. With one exception (there were no organizational-level leadership studies), each cluster included similar findings at each level of analysis.

Limitations of This Review

Space limitations, along with an upper limit on the number of references we could include, necessarily restricted the size and scope of our review. Likewise, limiting ourselves to databases that emphasize psychology and business leaves out research that speaks specifically to other disciplines. For example, a PubMed keyword search for "psychological safety" returns more than 400 articles published between 2013 and 2021. Given our finding that psychological safety research spans many industries, it is likely that more psychological safety research resides in journals outside the scope of our search. Furthermore, limiting ourselves to peer-reviewed research leaves out countless articles in the management literature read by practitioners. We do not believe that these restrictions reduce the quality and usefulness of our review, but the popularity of psychological safety among practitioners means that new knowledge is being generated constantly by those in the field working closely with employees and managers around the world. Future reviews may wish to learn more from these efforts. We believe that valuable insights will be coming from the action research of skilled professionals operating in multiple industries.

Directions for Future Research

Although the cumulative research on psychological safety has provided robust findings related to leadership, learning behaviors, performance and work experience, several future research opportunities are evident. First, we believe that the most glaring gap in the literature pertains to how to create psychological safety. Even with the heavy emphasis in the literature on leadership effects on psychological safety, more research on specific interventions leaders can use to build psychological safety in teams or organizations would be valuable. Likewise, we lack research that examines the role other team members play in creating psychological safety. It is possible that any individual in a work setting can alter others' perceptions of the acceptability of speaking up openly, or of asking for help, or other potentially interpersonally risky behaviors. We propose that action research—especially field experiments that test specific interventions systematically—is needed to deepen understanding of factors that alter the interpersonal climate at work. Going beyond cross-sectional studies to demonstrate causality through random assignment of leaders to conditions would be particularly valuable.

Second, despite prior calls for longitudinal research to better understand the dynamics of psychological safety, studies that collect data at multiple points in time in the field or classroom remain few and far between. This is understandable, given practical challenges faced by all organizational behavior researchers. Gaining access to data from multiple comparable teams over time is difficult. Nonetheless, learning about how psychological safety forms, erodes, gets destroyed, or rebuilt remains an area of critical consideration. The organizational behavior literature will benefit from research that illuminates the dynamics of psychological safety, especially in real organizational settings. Contemporary work arrangements are increasingly dynamic with fast-paced task cycles that change over time. The literature on psychological safety thus far provides relatively little insight on how interpersonal climates change over time and on how to intervene productively. Moreover, it stands to reason that factors that matter early in a team or organization's life may differ from those that matter later. Future work thus may need to examine psychological safety as a dynamic phenomenon.

Third, our review reveals that researchers over the past decade have been quite responsive to calls in prior articles on psychological safety for research outside of North America. A sizable portion of the studies in this review were conducted in non-US locations. Reassuringly, the essential findings were similar to those in prior work. However, studies with data from multiple countries at the same time remain sorely needed. Research studying groups or organizations across countries at the same time could shed light on whether and how the levels of psychological safety differ across countries, as well as whether and how psychological safety's antecedents and outcomes differ. A similar point can be made about race and gender. We know little about differences in the nature and effects of psychological safety across demographic groups. We need greater understanding of whether meaning and measurement of psychological safety across cultures is consistent. Several studies in our review expressed related limitations, especially regarding measurement in non-Western countries. Encouragingly, the similarity of findings across non-US locations in our review suggests that the essence of psychological safety, and its significance, carries similarities across boundaries. However, future work may need to refine the measures to ensure that they reflect the cultures in which the research is conducted.

Fourth, we see opportunities for more precise contingency theories related to psychological safety. Fortunately, since Edmondson & Lei's (2014) review of this construct, many more studies have examined the moderating effects of psychological safety. Although Edmondson (1999) presented team psychological safety as a predictor of team learning behavior, in turn a predictor of team performance, many papers since have considered psychological safety a moderator of other

independent variables (e.g., Edmondson 2003). Consistent with this, an impressive meta-analysis by Sanner & Bunderson (2015) showed that the effects of psychological safety on team performance were greater in more knowledge-intensive task settings (those with more complexity and creativity) than for more routine work. But other salient factors may also moderate (or serve as boundary conditions) for the effects of psychological safety. We believe this remains an area ripe for further exploration.

Fifth, despite growing awareness in the literature of the fluidity of modern work teams, psychological safety research has largely studied old-fashioned intact teams. Some of this is pragmatic. Studying fluid teams presents immense methodological challenges (Kerrissey et al. 2020). However, consistent with studies of any relatively nascent phenomenon (Edmondson & McManus 2007), qualitative research may be used to help understand the dynamics of fluid teams better, as well as to understand how psychological safety takes shape in nontraditional work arrangements. A similar case can be made for remote and hybrid work arrangements, which are clearly on the rise. Many research questions present themselves regarding the impact of remote work on psychological safety, voice, inclusion, collaboration, and learning, to name just a few variables of interest. Conducting this research will require some methodological innovation, however. Although we can still survey employees—reaching them electronically through their employers—it is no longer easy to show up in various workplaces to observe behavioral dynamics over time. In that the original field research that generated this robust stream of literature owes its insights to observing and talking to people in natural work settings (Edmondson 1999, Kahn 1990), it may be that lack of access to such contexts is a loss to the field.

A final implication of the dominant themes identified by our analysis may also point to a vital, if unusual, area for future research—one that offers a clear transition to our brief discussion of implications for practice. The way in which psychological safety affects performance, learning, work experiences, and the role of leadership in these studies—whether explicitly or implicitly—is through conversation. The microdynamics of conversations present an important understudied area in psychological safety research. We know that leadership matters, but we know less about what leaders and teammates can say and do in concrete terms. Candidates for further exploration include calling attention to uncertainty to normalize not knowing all the answers, asking questions and listening intently to others' responses, offering and seeking help for work-related tasks to destigmatize such requests, and responding with empathy and support to bad news and setbacks (Edmondson 2019). What are the highest-value, most learnable leadership actions for creating psychological safety? How can we help employees at all levels of organizations contribute to a psychologically safe climate for learning, innovation, and inclusion? These and other practical and theoretical questions are worthy of future research.

IMPLICATIONS FOR PRACTICE

Employees in many types of organizations face a level of interpersonal risk that harms their ability to learn, innovate, and perform at work. This is the motivating idea at the heart of research on psychological safety. The coherence and amount of the cumulative research suggests that creating a climate of psychological safety should be near the top of the leadership agenda for organizations around the world. Whether you lead a small team or a global enterprise, ensuring that people can speak up, ask for help, offer ideas, provide dissenting views, or collaborate effectively across boundaries may be essential.

In study after study, psychological safety predicts outcomes ranging from creativity to error reporting to performance. In addition to these substantive results, it is worth noting that the consistency of psychological safety as a predictor implicitly shows its tendency to vary widely across

units. Practitioners today stand to gain from awareness of this consistent evidence of variance in psychological safety. It is safe to assume that differences in psychological safety exist in your organization. Some of this variance has been attributed to leadership behavior, as we have shown, placing a practical spotlight on the need for leadership training and tools to build high and consistent levels of psychological safety. Although how to do this also remains an area for future research, the existing literature offers ideas to get started. For instance, leaders can practice genuine inquiry and display vulnerability.

Finally, a growing number of studies identify psychological safety as a moderator that allows, for example, task complexity or diverse expertise to translate into performance outcomes. An implication is that practitioners should think of psychological safety as a mechanism that helps them achieve desired results in challenging contexts by leveraging the diverse skills in their teams. Psychological safety is thus not the goal but rather a factor for enabling other goals. When psychological safety is seen as an end in its own right it risks fetishizing work climate, and perhaps distracting people from the organization's actual mission. The body of work we reviewed implies that practitioners across industries stand to gain from encouraging open communication about the work—as part of a disciplined learning process that integrates the knowledge and ideas of different people—to achieve both better performance and better work environments.

CONCLUSION

Reviewing the past decade of research on psychological safety led us to conclude that this established literature has much to offer scholars and practitioners about thriving in an increasingly complex and interdependent world. Psychological safety, we believe, plays a more vital role than ever in today's organizations. As we conclude our writing, immense uncertainty remains about how the world of work will be remade following the global coronavirus pandemic. How this uncertainty will shape psychological safety research over the next decade seems to us an open question. We hope many readers will be compelled to help find answers.

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