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Impact of organizational culture on employee psychological safety perception: The pivotal role of trust in top management across 18 societies

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ABSTRACT

We assess the impact of organizational culture on employees' psychological safety using data from 2451 employees across 18 societies. Our multi-level structural equation models reveal that organizations that emphasize a clan culture foster significantly higher psychological safety than those that emphasize a hierarchy culture, and trust in top management mediates the effect of organizational culture on psychological safety. Additionally, macro-environmental factors, specifically a society's cultural context and governance quality, moderate the effect of trust in top management, explaining variance in psychological safety globally. Our findings make a novel contribution to the literature on psychological safety, international management, and organizational behavior. We outline vital implications for managers and provide directions for future research.

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To succeed in today's dynamic and hypercompetitive environment, organizations need employees who can adapt to uncertainty, take initiative, and manage risk (Bankins & Formosa, 2023; Barrick et al., 2015). However, success is unlikely if employees feel threatened, unsafe, and overwhelmed when experimenting with an idea, voicing their opinions, or leading while fulfilling their professional responsibilities (Chen & Hou, 2016; Dong & Li, 2024). As such, psychological safety, ''*the belief that one can show and employ one's self without fear of negative consequences to self-image, status, or career*'' (Kahn, 1990, p. 703), has become crucial in enabling employee engagement at work (Newman et al., 2017). Indeed, studies have found it to be a significant predictor of positive workplace outcomes, including increased creativity (Edmondson, 1999), high performance (Obrenovic et al., 2020), low error rates (Newman et al., 2017), and organizational learning (Carmeli & Gittell, 2009). Given its importance, studies have explored how factors such as leadership behaviors, relational networks, team characteristics, and supportive work context enable organizations to create a psychologically safe workplace (see Edmondson & Bransby, 2023; Frazier et al., 2017; Newman et al., 2017 for reviews).

However, while recent research is promising, our knowledge of the antecedents of psychological safety is far from complete (Edmondson & Bransby, 2023). Specifically, few studies have examined the role of organizational culture in facilitating employees' psychological safety (Clark, 2020; Higgins et al., 2022). This is unfortunate, as organizational culture, despite being invisible and tacit, is among an organization's most enduring and foundational attributes (Schein, 2010). Studies highlight its significance in influencing an organization's functioning and the attitude and behavior of its employees (Hogan & Coote, 2014). Understanding how it affects psychological safety can help create organizations where employees feel empowered and motivated to perform their best (Graen et al., 2020). To address this shortcoming, we test a model exploring how and under what conditions organizational culture supports versus hinders employees' psychological safety. In doing so, we use Cameron and Quinn's (2010) Competing Values Framework (CVF), a theoretically grounded and globally valid taxonomy of organizational culture. Cameron and Ettington (1988, p. 10) define organizational culture as *''the collection of attributes—values, beliefs, and assumptions—dominant within an organization and that predict the behavior of individuals within it.''* These attributes differ between organizations, allowing the classification and study of organizational culture types (Cameron, 2008). Cameron and colleagues (Cameron & Quinn, 2010; Quinn & Rohrbaugh, 1983) classified these attributes along two dimensions. The first contrasts organizational emphasis on flexibility, discretion, and dynamism with an emphasis on stability, control, and order. The second contrasts organizational emphasis on internal orientation, integration, and unity with an emphasis on external orientation, differentiation, and rivalry. Based on these dimensions, the CVF categorizes organizational cultures into four types: clan, adhocracy, hierarchy, and market (Hartnell, Ou, & Kinicki, 2011). Because variance in organizational cultures reflects the extent to which an organization offers its employees a flexible and dynamic versus a rigid and stable workplace and one that is internally oriented, focusing on collaboration and unity versus externally oriented, focusing on competition and rivalry, the CVF can help identify workplace conditions where employees feel safe and engaged versus strained and threatened.

To advance our understanding of how organizational culture affects employees' psychological safety, we examine the mechanism and contextual contingencies that shape this relationship (See Fig. 1). Because employees' trust in top management is crucial to their job commitment and sense of acceptance at work (Mahajan et al., 2012), it will mediate the effect of organizational culture on psychological safety. Indeed, a trusting relationship with leaders enables employees to express opinions, perceive fewer workplace vulnerabilities, and feel supported, thereby improving psychological safety (Oh et al., 2023; Xue et al., 2020). We extend this research by arguing that variance in organizational cultures will predict employees' trust in top management, which, in turn, will impact their psychological safety. However, such an effect may not be uniform globally, as macro-level institutional factors shape individual psychological processes (Gelfand et al., 2008), suggesting that even if similar effects are observed across societies, their magnitude is likely to vary internationally. Edmondson and Bransby (2023) stressed that employees in different societies may experience varying levels of psychological safety, as psychological safety is also influenced by their society's cultural and governance environments. Institutional theory supports this view by positing that a society's cultural values and governing rules provide resources and impose constraints that shape individual perceptions and actions (North, 1990). Management literature also underscores that organizational realities manifest the values, beliefs, rules, and regulations present in the external environment (Suddaby et al., 2010).

The values and beliefs that dominate a society reflect its culture (Schwartz, 1994), which shapes human interactions and establishes behavioral norms (Dau et al., 2022). A society's culture also impacts employees' responses to organizational stimuli (Yao et al., 2022), including how their work commitment and satisfaction are affected by their leaders' behavior (Testa, 2009). Cross-cultural literature highlights that values vary across societies (Schwartz, 1994; Taras et al., 2016), explaining international variance in employee cognition, emotions, and perceptions (Kaasa & Minkov, 2020). Building on this research, we examine how differences in cultural values across societies moderate the

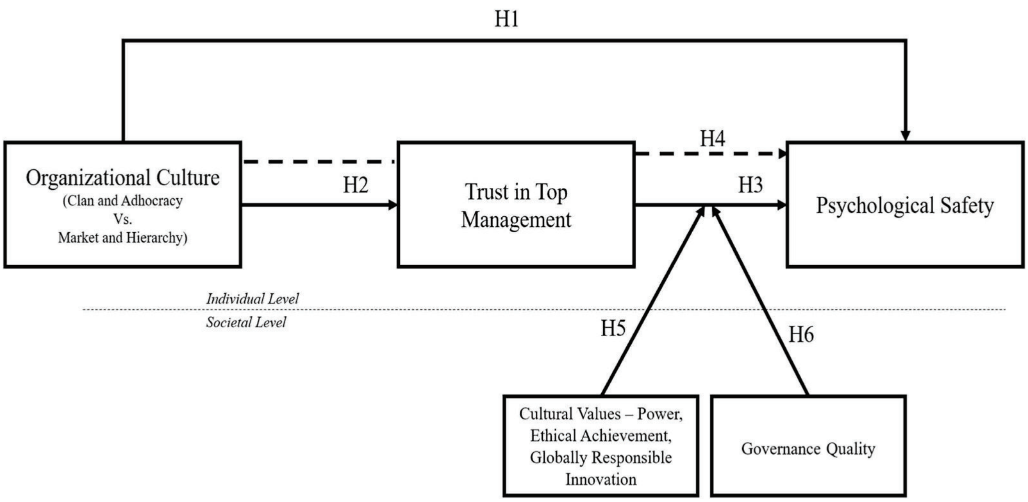


Fig. 1. Theoretical Model.

effect of trust in top management on employees' psychological safety, thereby explaining variance in psychological safety internationally. To this end, we employ Ralston et al.'s (2018) measures of cultural values for power, ethical achievement, and globally responsible innovation. Ralston et al. (2018) proposed these measures based on data from business professionals in 26 societies. Because these measures are derived from 21st-century data obtained from a global workforce (as opposed to students and K-12 teachers), they are the most suitable for our research. Indeed, studies have found them helpful in explaining international differences in workforce behaviors (e.g., Ralston et al., 2022; Terpstra-Tong et al., 2022).

The impact of trust in top management on employees' psychological safety may also vary across societies based on their governance environment, which reflects 'the traditions and institutions by which formal authority is exercised, including how rules and policies are created, and resources managed for everyone's benefit' (Kaufmann & Lafarre, 2021). Governance affects people's behaviors by shaping the rules of engagement in a society (North, 1990). It also affects the behavior of employees within organizations by shaping the broader institutional environment in which firms operate (Dau et al., 2022). For example, in well-governed societies, transparent hiring and merit-based reward systems are likely to prevail, which will foster employee motivation and commitment to excellence. Empirical studies highlight the role of governance in swaying employee decisions (Nguyen et al., 2021), risk-taking (Welter & Smallbone, 2011), and prosocial initiatives (Campbell et al., 2012). Concerning psychological safety, Frazier et al. (2017) suggested that governance systems can amplify or attenuate the efficacy of psychological safety antecedents. Following this logic, we argue that the quality of a society's governance will moderate the effect of trust in top management, explaining international variance in employees' psychological safety.

Our study makes three notable contributions. First, in response to Edmondson and Bransby's (2023, p. 71) argument that ''one of the most glaring gaps in organizational literature pertains to how to create psychological safety,'' we develop a multi-level and theoretically grounded model that examines how organizational culture enables its creation. We found that globally, clan culture has a positive and significant impact on psychological safety, whereas hierarchical culture has an adverse effect. Thus, organizations that offer more flexibility and discretion to employees tend to cultivate psychological safety more effectively than those that emphasize rigidity and control. Second, we explore the mechanism underlying the creation of psychological safety. Newman et al. (2017) noted that an area of crucial inquiry in psychological safety research is understanding the mechanisms by which it forms, erodes, and gets destroyed. In response, we investigate how trust in top management mediates the effect of organizational culture on psychological safety, and how a society's cultural and governance environments moderate this effect, thereby explaining variance in psychological safety globally. Finally, most psychological safety research is limited to single-society studies (e.g., Hirak et al., 2012; Xue et al., 2020), leading scholars to call for multi-societal research (Edmondson & Bransby, 2023; Frazier et al., 2017). We incorporate data from multiple societies, including many non-WEIRD (Western, Educated, Industrialized, Rich, and Democratic) societies (Henrich et al., 2010), and employ multi-level analysis to identify macro-environmental boundary conditions that predict individual psychological safety. This approach yields findings that are generalizable and globally valid. To our knowledge, this is one of the first studies to analyze the antecedents of psychological safety on a global scale.

1. Theoretical background

1.1. Psychological safety

Organizational researchers' interest in psychological safety proliferated following the work of Schein and Bennis (1965), Kahn (1990), and Edmondson (1999). These studies propose psychological safety as the perception of being comfortable and employing oneself without fear of negative penalties to one's image, status, or career. A psychologically safe workplace does not imply one where people are friends or feel little pressure, but one where they can grow and learn from each other, accomplish shared goals, engage in productive discussions, and voice opinions without fear of negative repercussions (Newman et al., 2017). Psychological safety is crucial for employees to achieve positive workplace outcomes. For instance, Liang et al. (2012) found that it enables employees to voice concerns about organizational dysfunctions, facilitating their timely improvements. Carmeli et al. (2009) found that it alleviates employees' fear of being judged as incompetent when seeking help from superiors, enabling their learning behaviors. Studies have also found that psychological safety encourages employees to take risks in pursuing new ideas (Li & Tang, 2022), display resilience (Rangachari, L. Woods, 2020), and communicate efficiently while engaging with organizational stakeholders (Edmondson, 2018).

Because fostering employees' psychological safety is paramount (Abror & Patrisia, 2020), scholars have shown an interest in understanding its antecedents. Among the individual-level antecedents, dispositional factors such as proactive personality, emotional stability, and learning orientation are said to enhance psychological safety (Frazier et al., 2017). The impact of cognitive factors has also been assessed, with studies indicating that emotional intelligence may shape employees' psychological safety, particularly in situations involving workplace conflict (Harper & White, 2013), while cultural intelligence may enhance it when working in culturally diverse work environments (Dibble et al., 2019). The impact of psychological factors has also been researched, with studies suggesting that stress from managing work-family conflicts (Obrenovic et al., 2020) and working under extreme pressure (Hebles et al., 2022) can adversely affect psychological safety. In another study, Lin et al. (2020) found that empowering employees improves their safety perceptions. The importance of leadership has also been emphasized, with studies indicating that it can enable employees to feel psychologically safe by inviting their input and enabling them to challenge the organization's status quo (O'Donovan & McAuliffe, 2020).

Organizational factors also play a role in stimulating employees' psychological safety. For instance, Carmeli and Gittell (2009) argued that organizations that encourage quality relationships among employees tend to enable safety perceptions. Similarly, Edmondson and Mogelof (2006) found that organizations that foster cross-functional relationships and emphasize support, openness, and error tolerance stimulate psychological safety. Conversely, those with excessive workloads, chronic time pressure, and insufficient resources tend to erode safety perceptions (Chenarboo et al., 2022). The impact of supportive work environments has also been highlighted, with studies indicating that workplaces that foster trust (Xu et al., 2022) and promote fairness, equity, and socio-emotional support (Lee, 2021) enhance psychological safety. Interestingly, Rasool et al. (2021) found that a toxic work environment characterized by harassment, bullying, and ostracism is detrimental to safety perceptions as it increases stress, burnout, and anxiety. While studies on psychological safety antecedents have produced meaningful insights, our understanding of whether and how organizational culture affects it remains limited (Edmondson & Bransby, 2023). Below, we review organizational culture research in the context of the Competing Values Framework.

1.2. Organizational culture: the competing values framework (CVF)

Organizational culture reflects the shared, enduring, and taken-for-granted values, beliefs, and assumptions that people hold within organizations (Schneider et al., 2013). Scholars note that culture varies across organizations and have proposed typologies to study its impact on organizational outcomes (see Jung et al., 2009). However, many such typologies are limited in being atheoretical, less generalizable, and less predictive (Chatman & O'Reilly, 2016). One that has received global attention is the CVF. This framework emerged from research on criteria predicting organizational effectiveness (Quinn & McGrath, 1985; Quinn & Rohrbaugh, 1983). Consistent with Schein (2010), it is based on the notion that all organizations must deal with issues surrounding flexibility versus control and external versus internal orientation. As such, it classifies organizational cultures along two dimensions (See Fig. 2) – structure and focus. The first differentiates organizations emphasizing flexibility and discretion from those emphasizing stability and control. The second differentiates organizations emphasizing internal capabilities and integration from those emphasizing external orientation and differentiation. Based on these dimensions, the CVF categorizes organizational cultures into four types: clan, adhocracy, hierarchy, and market.(Fig. 3)

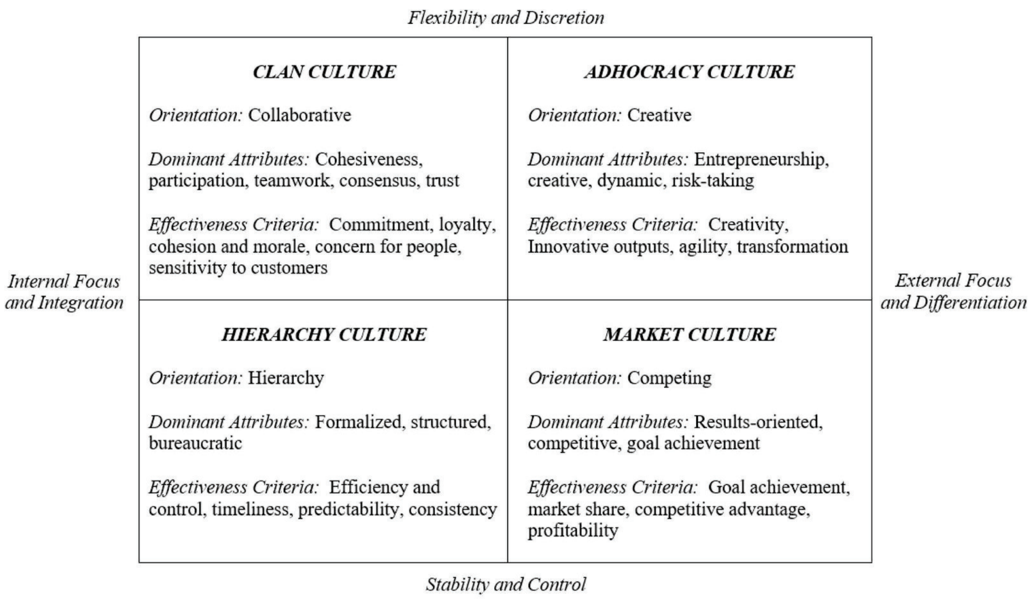
The clan and adhocracy cultures are the more organic forms of organizational cultures (Pasricha et al., 2018). The former is internally oriented and values flexibility and discretion (Cameron, 1985). It considers employee capabilities as essential to organizational success (Yarbrough et al., 2011). As such, it empowers employees and emphasizes commitment to their development (Gregory et al., 2009). The clan organizational culture also stresses the importance of employee participation (Zeb et al., 2021), promoting teamwork and open communication (Hartnell et al., 2011). Decisions are made collaboratively and influence is based on trust, shared values, and emotional connections (Pasricha et al., 2018). Similar to the clan culture, the adhocracy culture also values employee flexibility, openness, and autonomy; however, it is externally oriented, aiming to achieve a differentiated market status (Linnenluecke & Griffiths, 2010). It is characterized by its commitment to entrepreneurship and dynamism, encouraging employees to be creative, adaptable, and detail-oriented (Gregory et al., 2009). Decision-making is decentralized, with influence stemming from organizational members' vision, novelty, and expertise (Zeb et al., 2021).

The hierarchy and market cultures are the more mechanistic forms of organizational cultures. The former is internally oriented and values control, order, and stability (Yarbrough et al., 2011). It is marked by its bureaucratic structure, stressing conformity to rules and clear lines of authority (Cameron & Ettington, 1988). Formalization, routinization, and uniformity are the behavioral attributes that characterize the hierarchy culture (Hartnell et al., 2011). In such a culture, communication follows formal channels, decision-making is centralized, and influence is derived from position, authority, and adherence to procedures (Zeb et al., 2022). While similar to the hierarchy culture in its emphasis on control, planning, and goal setting, the market organizational culture differs in being externally oriented (Quinn & Rohrbaugh, 1983). It is grounded in the belief that competitiveness, aggressiveness, and fast response are essential for organizational success. As such, it is transactional and performance-driven, with communication being direct and results-focused. Behavioral attributes characterizing this culture include setting goals, gathering customer and competitor information, and overcoming external barriers (Azeem et al., 2021). Influence is exerted through the use of metrics, rewards, and external incentives (Cameron, 2008).

Studies leveraging the CVF have probed how variance in organizational cultures explains organizational performance. For instance, Linnenluecke and Griffiths (2010) argued that the CVF provides a theoretical framework for understanding how organizational cultures facilitate the implementation of corporate sustainability goals. Büschgens et al. (2013) found it helpful in explaining organizational innovation, while Cao et al. (2015) found it useful in predicting organizational supply chain integration. A parallel line of research has utilized the CVF to investigate how organizational cultures impact employees' behavior. For instance, Makumbe (2022) found that it predicted employee engagement in creative tasks, and Brettel et al. (2015) found that it explained employee proactiveness, innovativeness, and risk-taking behavior. One of the most comprehensive tests of CVF's usefulness is offered by Hartnell et al.'s (2011) meta-analysis, which explained how organizational cultures predict employee job satisfaction and commitment. Building on this research, we utilize the CVF to examine how variance in organizational cultures explains employees' perception of psychological safety.

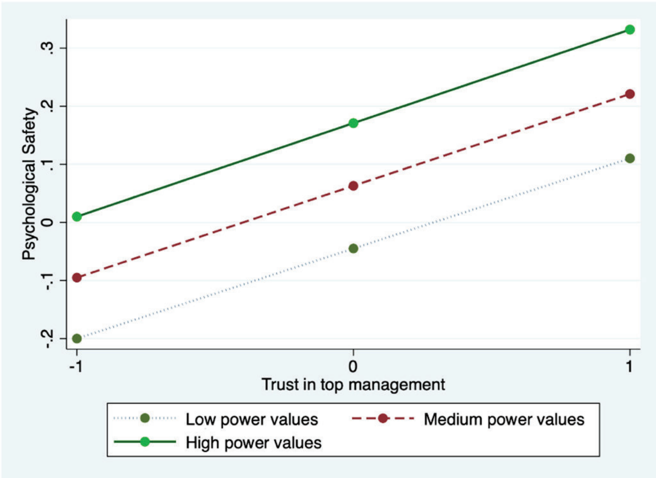
2. Hypotheses development

Central to our theorizing is the argument that organizational culture affects employees' psychological safety by fostering their trust in top management. Furthermore, a society's cultural and governance environments moderate the effect of trust in top management on psychological safety, explaining variance in psychological safety globally.

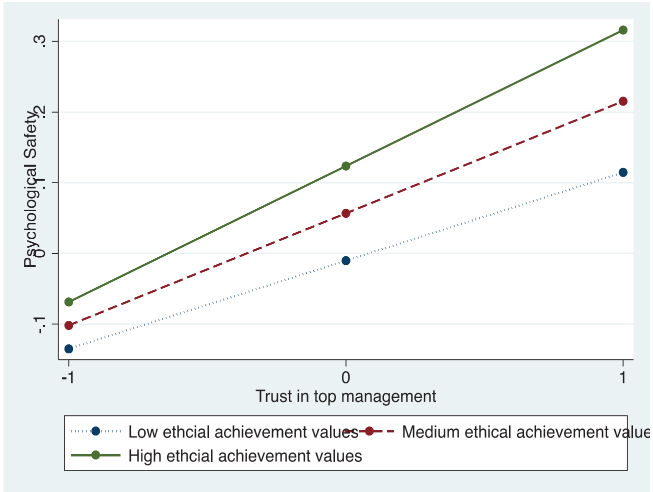


Adapted from Cameron and Quinn (2011)

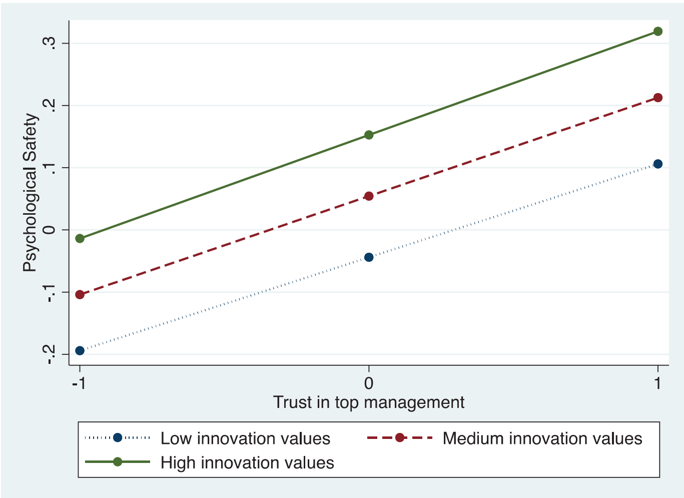
Fig. 2. The Competing Values Framework of Organizational Cultures.



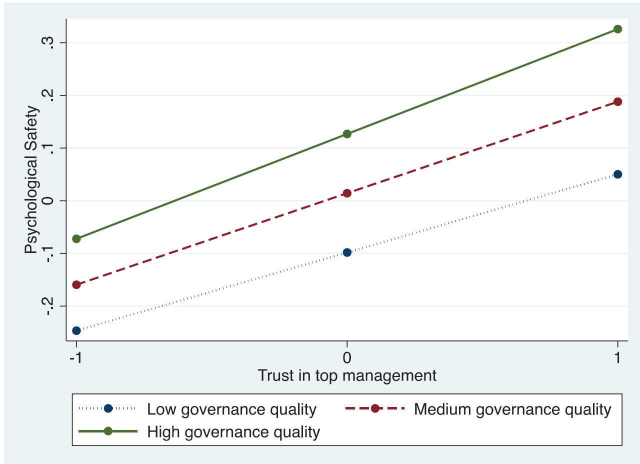
(a) Power



(b) Ethical achievement



(c) Globally responsible innovation



(d) Governance quality

Fig. 3. Moderating Effects of Societal Values and Governance Quality.

2.1. Organizational culture: impact on psychological safety

Kahn (1990) and Edmondson (1999) characterized psychological safety as a cognitive state reflecting employees' assessment of the risks of performing a task, behavior, or role. The work environment is integral to such an assessment (Schein & Bennis, 1965). Specifically, the values and beliefs that dominate an organization and characterize its culture can affect how much employees feel threatened or encouraged to take risks, voice opinions, share ideas, and learn (Edmondson & Mogelof, 2006). These attributes can hinder or promote a sense of psychological safety. While organizational culture is essential, not all cultures will enable a psychologically safe work environment. We argue that organizational cultures that value flexibility and initiative, where employees feel empowered rather than constrained, will lead to a more psychologically safe workplace than those that emphasize control, hierarchy, and adherence to rigid procedures. Organizational literature highlights workplace attributes that promote employee well-being and safety. For example, Costanza et al. (2016) found that organizations that remove constraints on employee engagement and autonomy enable their well-being and commitment. Similarly, Smith et al. (2019) noted that workplaces that offer more flexibility reduce stress and increase employee satisfaction.

We leverage the CVF to reason that among organizations, those that emphasize clan and adhocracy cultures will enable more positive psychological safety perceptions than those that emphasize market and hierarchy cultures. Specifically, psychological safety is less likely to prevail in a workplace where employees are required to adhere to strict norms and authoritative guidelines than where they are encouraged to take initiative and exhibit flexibility and adaptability. Carmeli and Gittell (2009) argued that a non-threatening and supportive environment, where employees perceive less stress and can recover from performance setbacks, is crucial for psychological safety. Accordingly, studies indicate that clan and adhocracy cultures differ significantly from market and hierarchy cultures in that the former emphasize flexibility and change, while the latter focus on control and firmness (Hartnell et al., 2011). Quinn and Rohrbaugh (1983) argued that the clan and adhocracy cultures ''share an emphasis on flexibility'' (p. 371), focusing on employee communication, attachment, and adaptability. Other studies have also found that these cultures support employees' functional and intellectual growth, providing them with an environment that fosters participation, self-expression, and empowerment (Yu & Wu, 2009).

Conversely, satisfying shareholder and consumer demands is a goal characterizing market and hierarchy cultures (Hartnell et al., 2011).

These value predictability, control, and competitiveness (Cameron & Ettington, 1988), fostering an environment where employees are encouraged to be compliant (Linnenluecke & Griffiths, 2010), and their behavior is standardized through formal rules, routines, and evaluations (Cameron, 2008). Cao et al. (2015) noted that such cultures offer employees little inspiration to participate in resolving problems and contingencies. Likewise, Felipe et al. (2016) reasoned that their top-down, bureaucratic, and rule-focused nature is less likely to facilitate agility and flexibility. Lund (2003) also contended that the ''ruthless'' (p. 223) environment of these cultures is incongruent with employees' long-term security, loyalty, and satisfaction.

Research examining the impact of organizational cultures on employee behavior also reveals significant differences between clan and adhocracy versus market and hierarchy cultures. For instance, Brettel et al. (2015) found that compared to market and hierarchy cultures, clan and adhocracy cultures are more likely to allow employees to communicate openly, collaborate, and engage in growth-oriented activities. Similarly, Čuček and Mlaker Kač (2020) and Belias and Koustelios (2015) found that clan and adhocracy cultures enable higher employee satisfaction compared to market and hierarchy cultures. Xu et al. (2022) also argued that allowing employees flexibility and freedom of opinion, an attribute essential to clan and adhocracy cultures, contributes to their psychological safety. Conversely, cultures that impose pressures on employees or fail to foster quality relationships can attenuate psychological safety (Chandrasekaran & Mishra, 2012). We hypothesize:

Hypothesis 1. Clan and adhocracy cultures will have a more positive effect on psychological safety than market and hierarchy cultures.

2.2. The mediating role of trust in top management

Trust reflects an individual's *''psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another''* (Rousseau et al., 1998, p. 395). Studies indicate that it plays a central role in organizational behavior and is vital to a firm's competitive advantage (Creed et al.,1996). While trust in a horizontal relationship (e.g., between coworkers) influences employees' engagement in teams (Tan & Lim, 2009), trust in a vertical relationship (e.g., between an employee and supervisor) is vital to their attitude, behavior, and performance at work (Poon, 2006). Some evidence suggests that trust in top management is also essential for employees' psychological safety (Madjar & Ortiz-Walters, 2009; Oh et al., 2023). However, what role organizational culture plays in driving employees' trust in top management remains underexplored (Dirks & de Jong, 2022). We argue that organizational culture is crucial to understanding why employees in some organizations are more likely to trust top management, which in turn will affect their psychological safety, making trust in top management a mediator of the organizational culture–psychological safety relationship.

Our argument builds on the theorem that trust in top management is a function of the extent to which employees believe that top management will act in their best interest, aside from an egocentric profit motive (Mayer et al., 1995). Such trust can be cognitive, based on knowledge of top management's competence, or affective, built on its benevolent behavior (Legood et al., 2023). Even when the basis of trust is cognitive, it shifts over time to become relational, derived from shared experiences and values (McAllister, 1995; Nienaber et al., 2015). As such, although the employee–top management relationship is characterized by asymmetries in power, status, information, and control (Farmer & Aguinis, 2005), employees tend to display high trust when management demonstrates a concern for their welfare (Tan & Lim, 2009). Open communication, confidence, and fair treatment will instill trust in top management among employees (Clapp-Smith et al., 2009). Consistent with this rationale, Knoll and Gill (2011) and Poon (2013) found that a friendly, caring, participative, and benevolent attitude toward employees leads to greater trust in top management. Conversely, an exploitative, demanding, and controlling attitude attenuates such trust (Chen et al., 2014).

We contend that among organizations, those with clan and adhocracy cultures are more likely to offer employees a flexible, developmental, and open workspace, enabling a sense of shared identity, cohesion, and participation, which is unlike hierarchy and market cultures that emphasize control, stability, and rigidity (Cameron, 2008). Brettel et al. (2015) reasoned that the emphasis on flexible, decentralized, and organic structures in clan and adhocracy cultures enables stronger relationships, open communication channels, and cohesion between leaders and employees. Similarly, Oh et al. (2023) suggested that organizations that promote flexible and decentralized structures enable leaders to frequently interact with employees, thereby developing trusting relationships with them. Others (e.g., Chatterjee et al., 2018; González-Romá, 2016) also noted that the support, encouragement, and constructive feedback offered to employees in clan and adhocracy cultures form the basis of high-quality leader-member exchanges.

Conversely, organizational cultures that are rigid, autocratic, and demanding limit supervisors' support of employees (Appelbaum et al., 2004) and are more likely to trigger negative emotions, such as fear and anxiety, and less likely to generate positive emotions that form the core of affective trust toward leaders (Chen et al., 2014). Lee et al. (2017) contended that rigid and hierarchical cultures require employees to comply with rules and standardized procedures, offering them little autonomy, freedom, and self-determination. These factors are likely to attenuate employees' trust in top management. Following these arguments, we posit that clan and adhocracy cultures will facilitate greater trust in top management among employees than market and hierarchy cultures. We hypothesize:

Hypothesis 2. Clan and adhocracy cultures will have a more positive effect on trust in top management than market and hierarchy cultures.

Edmondson et al. (2004) emphasized that employees' relationship with top management is vital to fostering their psychological safety. Grounded in social exchange theory, this perspective suggests that a trusting relationship with top management shapes employees' workplace attitudes and perceptions (Blau, 2017). Consequently, high trust in top management has been found to positively impact employees' work engagement (Ugwu et al., 2014), job satisfaction (Butler et al., 1999), citizenship behavior (Konovsky & Pugh, 1994), and organizational commitment (Neves & Caetano, 2009). Concerning psychological safety, Oh et al. (2023) stated that "trust is a necessary condition of psychological safety" (p. 707), suggesting that when employees trust their leaders, they are more likely to be open to taking risks, speaking up, and expressing their opinions. Conversely, a lack of trust paralyzes followers, making them less willing to step outside their job description for fear of being reprimanded (Chen et al., 2014).

Building on this research, we argue that high trust in top management will reduce employees' fear of performing their duties. It will empower them and uplift their feeling of being valued at their workplace. As such, they will consider it appropriate to communicate openly and take risks. Trust in top management will also allow them to voice concerns and express challenging viewpoints without fear of being rejected. We hypothesize:

Hypothesis 3. Trust in top management will positively affect employees' psychological safety.

Building on the detailed analysis of organizational cultures and their differential impact on trust in top management, we posit that such trust will mediate the relationship between organizational culture and psychological safety. Specifically, because clan and adhocracy cultures emphasize greater flexibility, open communication, and participative management, they will foster greater trust in top management, contributing to employees' higher psychological safety compared to market and hierarchy cultures. Therefore, the pathway from organizational culture to psychological safety underscores the foundational role of trust in top management in translating organizational culture attributes into employees' perception of psychological safety. We hypothesize:

Hypothesis 4. Trust in top management will mediate the relationship between organizational culture and psychological safety, such that this relationship would be stronger for clan and adhocracy cultures than for market and hierarchy cultures.

The Moderating Effect of Societal-level Institutional Factors on the Relationship between Trust in Top Management and Psychological Safety

While psychological safety reflects an individual's intra-psychic state, it is affected by factors at multiple levels (Edmondson & Mogelof, 2006). Specifically, employees' safety perceptions will differ based not only on their organization's culture (explaining within-societal variance) but also on their society's cultural and governance environments (explaining cross-societal variance). Such differences become evident when comparing employees working across different societal contexts. For example, Frazier et al. (2017) found that the effect of leadership on psychological safety varied across societies, depending on their attitude toward avoiding uncertainty. Similarly, Casey et al. (2015) found in their study of employees from different societies that those belonging to the South Asian culture reported markedly different perceptions of psychological safety than those belonging to the Anglo culture. In another study (Newman et al., 2017), it was observed that speaking out or experimenting with new ideas may levy more social costs in some societies than others, including losing face and risking ostracism, which in turn makes it less likely that employees in these societies will perceive high psychological safety in their workplace. It is likely that in societies where loyalty, respect, and deference to authority are typical, employees will feel psychologically safe even when they receive little empowerment and voice in decision-making (Chen et al., 2014; Mearns & Yule, 2009).

A rich volume of organizational research has leveraged institutional theory to underscore that organizations exist within a broader environment and are affected by the cultural (i.e., values-based) and regulatory (i.e., governance-based) forces prevailing therein (Scott, 2008; Suddaby et al., 2010). Such forces impact how organizations function and interact with stakeholders (Russo, 2001; Yapici & Dheer, 2023), but they also establish the rules of the game that organizational actors consider when inferring actions and behaviors within organizations (North, 1995; Wooten & Hoffman, 2017). Recent studies highlight that a society's cultural context and governance quality are crucial in shaping exchange relationships between organizational actors, such as those based on obligations, reciprocity, and trust (Li et al., 2021; Norton et al., 2015). These also shape the impact that leadership has on employees' attitudes, perceptions, and behaviors (Li et al., 2021). Building on this literature, we propose that a society's cultural values and governance quality will condition (i.e., amplify or attenuate) the extent to which trust in top management enables employees to take risks, express themselves, and experiment while performing their duties, which will account for variance in psychological safety across societies.

The moderating impact of societal cultural values. Values reflect enduring beliefs that serve as standards for evaluating the desirability of actions, modes of conduct, or end states of existence (Rokeach, 1968). Cross-cultural research has focused on understanding the variance in societal values and their impact on institutions and social practices worldwide. However, recent research highlights that values differ even among individuals within societies (Bond, 2002; Fischer & Poortinga, 2012), and a large proportion of the variance in values resides between individuals (Steel & Taras, 2010). As such, cross-cultural research acknowledges the need to identify value dimensions based on individuals and to understand how they explain differences in individual perceptions and behaviors across societies. In line with this reasoning, Ralston et al. (2018) developed cultural value dimensions using items from the Schwartz (1992), distributed to 11,709 employees across 26 societies, thereby proposing five cross-culturally valid and generalizable dimensions. Because these measures are derived from surveys of employees working in an international context in the 21st century, their use in cross-cultural research to explain contemporary workforce behaviors is warranted.

Three of the five value dimensions – power, ethical achievement, and globally responsible innovation – focus on the core reasons people pursue choices and satisfy self-actualization needs (Ralston et al., 2018; Terpstra-Tong et al., 2022). Power reflects the degree to which individuals value authority, leadership, and control, as well as the importance they place on controlling situations and asserting influence (Ralston et al., 2018). Ethical achievement symbolizes integrity and responsible behavior toward oneself and others. It reflects the importance individuals place on personal competency and achieving success and prosperity through an honorable and ethical path (Ralston et al., 2018). Finally, globally responsible innovation embodies individuals' commitment to new ideas and innovations that respect the environment and society. Responsible exploration of the unknown is the emphasis of this value dimension (Ralston et al., 2018). Ralston et al. (2018) proposed these dimensions as theoretically consistent sub-facets of individualism (Hofstede, 1980; House et al., 2004), the most common societal value dimension (Inglehart & Oyserman, 2004). However, because individualism is a societal (not individual) value dimension and is based on data that is dated (i.e., collected in the 1960s-70s), it is likely less suitable for analyzing variance in individual attitudes and perceptions across societies in current times (Tung, 2008). Ralston et al. (2018) proposed two additional dimensions, namely other orientation and universal order; however, because these do not pertain to individuals' pursuit of choice and self-actualization, they are not the focus of this study.

We argue that the positive relationship between trust in top management and psychological safety will be more pronounced in societies that emphasize power, ethical achievement, and globally responsible innovation values. In particular, in societies that emphasize power values, such as authority, control, and leadership (Ralston et al., 2022), the effect of trust in top management on psychological safety is likely to be amplified. In these societies, a trusting relationship with top management will enable employees to speak up and participate in decision-making. Additionally, it will create a supportive environment, reducing employees' vulnerabilities and fear of negative consequences. Conversely, in societies that place less emphasis on power and authority, high trust in top management may be less necessary for employees to feel psychologically safe.

The effect of trust in top management will also be amplified in societies that prioritize ethical achievement values, as employees in these societies will feel morally supported by their trust in top management. Precisely because these societies emphasize achieving success while upholding ethically and morally just standards (Ralston et al., 2018), the trusting relationship between employees and their top management will enable them to feel comfortable pointing out unethical practices or potential conflicts of interest within organizations. However, this may not be the case in societies that place less emphasis on ethical achievement values. Herein, a trusting relationship with top management may be less likely to stimulate a sense of fairness and equity amongst employees, thus attenuating their perceived safety within organizations.

Finally, the effect of trust in top management on psychological safety is likely to be amplified in societies that prioritise globally responsible innovation values. In these societies, high trust in top management will enable employees to perceive an inclusive and safe environment that values creativity, curiosity, freedom, and novelty, ultimately achieving the greater good for society (Ralston et al., 2018). Such an environment will foster open dialogue and idea sharing while reducing employees' fear of repercussions for supporting new ideas. Conversely, because societies that place less emphasis on values of global responsibility and innovation are unlikely to endorse open dialogue, diverse perspectives, and purpose-driven innovation (Terpstra-Tong et al., 2022), high trust in top management therein may not significantly increase employees' psychological safety.

Overall, societies that emphasize power, ethical achievement, and globally responsible innovation values will reduce the emotional hindrance of voicing opinions or experimenting with ideas within organizations (Basit, 2017; Eisenberg, 1999). Kim (2020) found that when employees are viewed as unique and distinguishable (i.e., as individuals) rather than interchangeable parts of a machine (i.e., as parts of a collective), they are more likely to express themselves, supporting their psychological safety. Studies also suggest that societies that value individualism endorse assertiveness as part of communication competence (Singhal & Nagao, 1993), thereby amplifying the impact that trust in top management may have on psychological safety (Fulmer & Gelfand, 2012). Allik and Realo (2004) and Huff and Kelley (2003) found that trust is higher in societies where people emphasize individualist values, allowing employees to express themselves and their opinions (Lee et al., 2021). Consistent with these rationales, we expect the effect of trust in top management on psychological safety to be more pronounced in societies where individuals endorse power, ethical achievement, and globally responsible innovation values. Conversely, this effect will be less robust in societies that endorse these values less. We hypothesize:

Hypothesis 5. Trust in top management will have a more significant positive effect on psychological safety in societies that place more emphasis on (a) power, (b) ethical achievement, and (c) globally responsible innovation values; the effect will be less in societies that place less emphasis on these values.

Moderating impact of governance quality. Societies differ not only in their cultural contexts but also in the quality of their governance. Good governance is evident when a society's formal institutions provide voice and accountability, political stability, effective government, regulatory quality, a strong rule of law, and control over corruption to its citizens (Kaufmann & Lafarre, 2021). It facilitates efficient allocation of resources (Knack, 2000) and political accountability, allowing people to choose or reject a government if it fails to abide by its mandate. It also affords legal accountability and oversight of corporate affairs, where citizens can hold leaders and organizations liable for their actions (Brautigam, 1991). Conversely, poor governance is characterized by a lack of procedural quality and limited technical competence in allocating public resources (Knack & Keefer, 1995). In this case, the bureaucracy offers people limited authority to participate in selecting the government or holding leaders and organizational gatekeepers accountable for their deeds. High corruption, unfriendly market policies, and an inefficient mechanism for delivering public goods characterize societies with poor governance (Cuervo-Cazurra & Genc, 2008).

While the quality of governance affects a society's economic landscape and the performance of its firms (e.g., Keefer, 2004; Lederman, 2010), it also has a notable effect on individual psychology and behavior. For instance, good governance provides an effective institutional and legal framework for individuals to exercise their rights and ensure they are protected. When rules are predictable and rights are protected, individuals feel more in control of their lives, which boosts their self-efficacy and motivation (Deci & Ryan, 2002). As Rockman and Hahm (2011) observed, individuals' expectations for the equitable distribution of resources and fair justice depend on the quality of their governing institutions. Likewise, Helliwell et al. (2014) suggested that good governance can enhance life satisfaction and well-being, enabling individuals to lead better lives. Conversely, poor governance can adversely affect individuals' mental and physical health, deteriorate workplace conditions, and compromise the well-being and safety of workers (Dollard & Jain, 2019). Indeed, global differences in life satisfaction (Helliwell, 2003) and happiness (Ott, 2010) are associated with variations in governance quality across societies.

We argue that a society's governance quality will moderate the positive effect of trust in top management on employees' psychological safety, such that the effect will be more pronounced in societies with good governance than in those with poor governance. Notably, good governance will foster a general trusting norm, which, when aligned with employees' trust in top management, will enable them to feel more empowered and less intimidated in expressing themselves within organizations. It will strengthen the belief that their rights, privileges, and actions are safeguarded by society's formal institutional framework, even when they voice dissatisfaction, raise concerns, or engage in risk-taking behaviors. Furthermore, it will further support their ability to offer input into work practices, propose concerns, and share knowledge with top management without fear of retaliation or adverse consequences. On the contrary, a flawed formal governance system is less likely to ensure a psychologically safe workplace even when employees place high trust in top management. It will not offer a regulatory and legal mechanism that allows them to defend their rights and privileges if organizational leaders rebuke them. We hypothesize:

Hypothesis 6. Trust in top management will have a more significant positive effect on psychological safety in societies with good governance than in societies with poor governance.

3. Methods

3.1. Data and sample

We obtained data for this study from a global dataset collected between 2014 and 2016 (see Supplementary Materials for details of data collection). From this dataset, we extracted data from 2451 participants across 18 societies. These participants included MBA students employed full-time in various companies as well as professionals and managers occupying diverse organisational roles. The societies in our study include Austria, Estonia, Finland, Germany, Greece, Hong Kong, India, Ireland, Italy, the Netherlands, Pakistan, Peru, Portugal, Spain, Sri Lanka, Switzerland, the United Kingdom, and Venezuela. Our extraction criterion required that each society's sample demonstrate adequate measurement invariance (Asparouhov & Muthén, 2014; Muthén & Asparouhov, 2014, 2018) for each of the study's six variables (four organizational culture dimensions, trust in top management, and psychological safety). For more details, refer to the section on measurement invariance.

Table 1 lists the number of participants from each society, along with their demographics (age, gender, organizational tenure, industry, and company size). We derived data for the three cultural value dimensions—power, ethical achievement, and globally responsible innovation—from Ralston et al. (2018), and data for governance quality from the World Bank. As the cultural value dimensions data did not cover Greece and Ireland, and the governance quality data did not cover Ireland, we excluded these societies in assessing the cross-level moderating effects of these variables.

3.2. Procedure

Surveys were conducted in the local languages of each society where data were collected, except in India, where English was used in accordance with business norms. To prepare the questionnaire for each society, we employed the standard translation and back-translation procedure, which involved one individual translating the questionnaire from English to the national language and another independently translating it back to English (Brislin, 1986). If discrepancies arose between the translator and the back translator, local investigators, bilingual in English and the local language, made the final decision. The local investigators distributed the survey by mail or in person at management/employee development programs. To minimize response bias, participants were assured of anonymity and informed that their participation was voluntary. Furthermore, all participants received identical instructions. Response rates across the various societies ranged from

Table 1
Sample Demographic Characteristics by Society.

Country	Size N	Age Mean	Gender (% Female)	Education	Company Tenure	Company Size	Service industry (%)
Austria	142	33.27	0.60	3.66	7.43	1.94	0.62
Estonia	72	31.85	0.38	4.10	5.10	1.54	0.76
Finland	138	41.51	0.53	3.99	8.20	1.59	0.77
Germany	130	42.15	0.59	5.05	8.09	2.15	0.45
Greece	134	40.05	0.40	4.14	10.53	1.76	0.85
Hong Kong	126	43.95	0.50	3.60	11.23	1.90	0.84
India	210	34.80	0.81	4.40	7.43	2.54	0.81
Ireland	186	38.57	0.44	3.87	8.22	2.09	0.82
Italy	129	43.60	0.61	4.78	10.09	2.09	0.83
Netherlands	179	33.64	0.68	4.87	5.72	2.28	0.80
Pakistan	113	35.42	0.86	4.61	6.91	2.50	0.78
Peru	115	32.30	0.62	3.96	4.67	2.29	0.78
Portugal	140	37.24	0.51	3.47	9.20	1.33	0.56
Spain	121	40.75	0.53	3.83	10.39	1.91	0.85
Sri Lanka	107	31.80	0.61	3.41	5.14	2.16	0.68
Switzerland	105	50.37	0.49	3.13	13.00	1.69	0.76
UK	127	41.54	0.54	3.78	10.56	2.31	0.73
Venezuela	177	35.60	0.59	4.09	6.61	1.74	0.62
Total	2451	38.10	0.58	4.07	8.22	2.01	0.74

13 % to 32 %.

3.3. Measures

Unless stated differently, respondents rated their agreement to each item using a 9-point Likert-type scale (1 = strongly disagree to 9 = strongly agree).

3.3.1. Psychological safety

We used Edmondson’s (1999) seven-item scale to assess respondents’ perceived psychological safety within their organization. A sample item includes “Members of my organization are able to bring up problems and tough issues.” We reverse-scored the three negatively worded items before performing analyses.

3.3.2. Organizational culture

We employed the Organizational Culture Assessment Instrument (OCAI; Cameron & Quinn, 2010) to evaluate respondents’ perceptions of their organization’s culture. The OCAI questionnaire comprises 24 short scenarios designed to measure the four organizational culture types: clan, adhocracy, market, and hierarchy. Cameron and Quinn’s (2010) framework of organizational culture is based on how an organization achieves its effectiveness, focusing on six critical areas of people management and administration: dominant organizational characteristics, organizational leadership style, employee management, organizational cohesion, strategic emphasis, and criteria for success. The scores of each culture type are derived from the average of the six items corresponding to clan, adhocracy, market, and hierarchy cultures. For example, an item for the clan culture states, ’’The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.’’ For an adhocracy culture, the item states, "The leadership in the organization is generally considered to exemplify entrepreneurship, innovating, or risk-taking." For market culture, the item states, ’’The management style is characterized as hard-driving competitiveness, high demands, and achievement.’’ And, for hierarchy culture, the item states, ’’The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important.’’

3.3.3. Trust in top management

We measured it using the four positively worded items in Mayer and Gavin’s (2005) scale. It measures the degree to which employees are willing to be vulnerable to actions taken by top management. We selected these items because accepting vulnerability is a central aspect of trusting relationships (Fulmer & Gelfand, 2012). A sample item reads, ’’I would be willing to let top management have total influence over immediate issues that are important to me.’’ The original scale included a fifth negatively worded item[3]; however, we excluded it from our multi-society study due to its low factor loading (standardized coefficient = 0.163) in the confirmatory factor analysis with the pooled sample.

3.3.4. Societal cultural value dimensions

We adopted three societal cultural value dimensions – power, ethical achievement, and globally responsible innovation – from Ralston et al.’s (2018) study of global values. These three value dimensions have multiple indicators: power (6 items, e.g., authority, wealth), ethical achievement (7 items, e.g., capable, responsible), and globally responsible innovation (6 items, e.g., curious, freedom).

3.3.5. Worldwide Governance Index

Consistent with Nguyen et al. (2021), we used the World Bank’s 2015 report on aggregated governance indicators to evaluate a country’s governance quality. The index measures six governance dimensions: voice and accountability, political stability and absence of violence/terrorism, governance effectiveness, regulatory quality, the rule of law, and control of corruption.

Table 2 provides the macro-level cultural and governance indicators by society.

3.3.6. Controls

Control variables included participant age (in years) and gender (0 = male; 1 = female), organizational tenure (in years), company size (1 = fewer than 100 employees, 2 = 101–1000 employees, and 3 = more than 1000 employees) and industry (service industry = 1, non-service industry = 0).

3.4. Measurement model

3.4.1. Measurement invariance

We evaluated the measurement invariance of each individual-level measure using the approximate alignment method with maximum likelihood estimation (Asparouhov & Muthén, 2014; Muthén & Asparouhov, 2014; 2018). This method is particularly suitable for studies involving many groups, such as ours with 18. It has been used in several recent multi-country/group studies (e.g., Odell et al., 2021; Lomazzi, 2018).

[3] The negatively worded item is “I do not feel the desire to have a good way to keep a close watch on top management.”

Table 2
Macro Variables by Society.

Society	BVD achievement	BVD power	BVD innovation	Governance Indicators
Austria	5.09	2.49	4.36	1.46
Estonia	4.97	3.15	4.35	1.20
Finland	4.97	3.08	4.53	1.76
Germany	5.08	3.21	4.18	1.54
Greece	N/A	N/A	N/A	0.21
Hong Kong	4.83	3.17	3.73	1.52
India	5.02	3.06	4.30	−0.20
Ireland	N/A	N/A	N/A	N/A
Italy	5.09	3.03	4.53	0.48
Netherlands	4.91	2.89	4.36	1.66
Pakistan	4.66	3.58	4.18	−1.01
Peru	5.12	3.37	4.36	−0.16
Portugal	5.43	2.91	4.29	1.06
Spain	5.14	3.03	4.12	0.79
Sri Lanka	4.83	3.17	4.33	−0.10
Switzerland	5.23	2.83	4.76	1.79
UK	4.93	3.03	4.53	1.52
Venezuela	5.15	2.92	4.20	−1.43
Total	5.03	3.06	4.32	0.71

Notes: BVD-Business values dimension; N/A not available

The rates of non-invariance for intercepts and loadings were low: psychological safety - 3.6 %, trust in top management - 4.9 %, clan culture - 2.8 %, adhocracy culture - 1.9 %, market culture - 4.6 %, hierarchy culture - 3.2 %. Because these rates were less than the 25 % cut-off suggested by Muthén and Asparouhov (See 2014, pp. 3–4), we can conclude that we have reliable alignment results for the six unifactorial scales. The Supplementary Materials provide more details on the measurement invariance procedure on pp. 1–2.

3.4.2. Confirmatory factor analysis

We conducted a confirmatory factor analysis of the sample to validate our measurement model. The six-factor model showed an acceptable fit (N = 2451, $\chi^2_{(531)} = 3933.602$, CFI = 0.913, TLI = 0.903, RMSEA = 0.051, SRMR= 0.059). To address common method bias, we combined the factors and formed three alternative models: one with three factors (psychological safety, organizational cultures, and trust in top management), one with two factors (organizational cultures, psychological safety, and trust combined), and one with one factor (all items). All alternative models exhibited a poorer fit (Table 3); therefore, common method bias is unlikely to impact our results significantly.

Table 4 provides the means, standard deviations, and Cronbach's alphas for psychological safety, the four organizational culture types, and trust in top management. The Cronbach alpha's reliability of the total sample for psychological safety was 0.66 (range of 0.56–0.74), for clan culture was 0.89 (range of 0.83–0.92), for adhocracy culture was 0.86 (range of 0.75–0.89), for market culture was 0.86 (range of 0.77–0.90), and for hierarchy culture was 0.79 (range of 0.66–0.88). The reliability of the trust scale was 0.84 (range: 0.64–0.93). All alphas met the acceptable range ($\geq$.60) for cross-cultural research (Fu & Yukl, 2000), except for the psychological safety scales of Spain (=0.57) and Venezuela (=0.56). Nonetheless, subsequent analyses conducted without Spain and Venezuela showed the same findings; therefore, we retained all 18 societies in the analyses.

3.5. Analytic strategy

All statistical analyses were performed in STATA version 18.5. Given the nested nature of our data, we used the generalized structural equation modeling (GSEM) function in STATA to test our hypotheses (Rabe-Hesketh & Skrondal, 2022). This function, akin to traditional structural equation modeling (SEM), accommodates multi-level data structures. In Model 1, we estimated the mediation effects without the moderators. Subsequently, we ran a series of Monte Carlo Simulations with 1000 repetitions to obtain robust estimates of standard errors for each indirect effect. In Model 2, we added the moderators and assessed interaction effects. In both models, we controlled for the participants' age, gender, organizational tenure, company size, and industry. We group-mean-centered all individual-level predictors and grand-mean-centered all societal-level variables (Raudenbush, 2002). To facilitate interpretation and enable a direct comparison of the coefficients of the exogenous variables, we standardized (used the z-score for) psychological safety and trust in top management when they were modeled as endogenous variables. Lastly, we illustrated the moderating effects by using graphs that display the interaction terms at three levels: −1 standard deviation, the mean, and + 1 standard deviation.

4. Results

Table 5 presents the means, standard deviations, and correlation coefficients for the variables, while Table 6 provides the results of the GSEM. The correlation coefficients indicated that psychological safety was positively correlated with all organizational cultures, with the clan (r = 0.534, $p < 0.001$) and adhocracy (r = 0.373, $p < 0.001$) cultures being significantly more correlated than the market (r = 0.107, $p < 0.001$) and hierarchy (r = 0.112, $p < 0.001$) cultures.

Hypothesis 1. stated that clan and adhocracy cultures would have a more positive impact on psychological safety than market and hierarchy cultures. In Model 1, the results show that clan culture (γ = 0.267, $p < 0.001$) exhibits a stronger relationship with psychological safety compared to hierarchy culture (γ = −0.075, $p < 0.001$). However, adhocracy (γ = 0.011, n.s.) and market cultures (γ = −0.017, n.s.) were not significantly related to psychological safety. Hence, Hypothesis 1 was partially supported.

Hypothesis 2. proposed that the effect of clan and adhocracy cultures on trust in top management would be more positive compared to market and hierarchy cultures. The results demonstrated that all organizational cultures, except the market culture, were positively related to trust in top management (Clan: γ = 0.277, $p < 0.001$; Adhocracy: γ = 0.065, $p < 0.001$; Market: γ = −0.017, n.s.; Hierarchy: γ = 0.049, $p < 0.01$). Furthermore, the coefficients of clan and adhocracy were notably more positive than those of market and hierarchy cultures. Hence, Hypothesis 2 was supported.

Table 3
Goodness of Fit of Alternative Measurement Models.

Measurement model	χ^2	df	RMSEA	CFI	TLI	SRMR
Six-factor model (Clan culture, adhocracy culture, market culture, hierarchy culture, trust-in-top-management, psychological safety)	3933.602	531	.051	.913	.903	.059
Three-factor model (Clan+adhocracy+market+hierarchy, trust-in-top-management, psychological safety)	10048.081	543	.085	.754	.730	.091
Two-factor model (Clan+adhocracy+market+hierarchy, trust-in-top-management, +psychological safety)	10669.447	545	.088	.738	.714	.093
One-factor model	12174.176	546	.094	.699	.672	.099

Notes: df=Degree of freedom, RMSEA=Root mean square error of approximation; CFI=Comparative fit index; TLI=Tucker-Lewis fit index; SRMR=Standardized root mean square residual.

Table 4
Mean, Standard Deviation and Cronbach's Alpha of the Study Variables by Society.

	Psychological Safety			Trust-in-top-mgt.			Clan			Adhocracy			Market			Hierarchy		
Country	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**α**	**Mean**	**S.D.**	**α**
Austria	6.31	1.26	0.69	5.22	1.91	0.82	5.83	1.62	0.86	5.52	1.50	0.80	6.10	1.46	0.81	6.40	1.25	0.73
Estonia	6.95	1.19	0.68	5.34	1.71	0.79	6.11	1.63	0.86	5.31	1.54	0.82	5.85	1.63	0.85	6.04	1.37	0.72
Finland	6.37	1.15	0.65	5.30	1.74	0.80	5.73	1.52	0.85	5.43	1.79	0.77	5.74	1.65	0.77	5.46	1.39	0.66
Germany	5.39	1.29	0.67	3.91	1.96	0.85	4.49	1.81	0.87	4.21	1.75	0.83	4.83	2.04	0.89	4.85	1.65	0.77
Greece	5.20	1.23	0.64	4.51	2.24	0.92	5.08	1.83	0.86	4.57	1.78	0.86	5.15	1.94	0.90	5.90	1.51	0.75
Hong Kong	5.57	1.09	0.68	5.46	1.51	0.84	5.61	1.50	0.87	5.01	1.50	0.86	5.61	1.58	0.87	5.91	1.35	0.83
India	5.82	1.25	0.66	5.64	1.96	0.86	6.32	1.65	0.89	5.76	1.68	0.89	6.51	1.23	0.80	6.54	1.19	0.73
Ireland	5.45	1.12	0.73	4.95	1.60	0.90	5.66	1.73	0.90	5.15	1.57	0.89	5.68	1.43	0.87	5.72	1.37	0.76
Italy	5.89	1.19	0.70	5.16	1.90	0.86	5.67	1.92	0.92	5.43	1.79	0.89	5.74	1.65	0.88	5.46	1.39	0.76
Netherlands	5.87	1.13	0.61	4.92	1.80	0.83	5.68	1.44	0.83	5.16	1.59	0.84	6.05	1.62	0.88	5.75	1.42	0.77
Pakistan	5.50	1.18	0.60	5.14	1.73	0.82	5.79	1.71	0.90	5.28	1.62	0.85	5.96	1.53	0.85	6.05	1.37	0.77
Peru	5.86	1.31	0.65	4.77	1.64	0.78	5.58	1.74	0.91	5.51	1.60	0.86	6.13	1.40	0.82	5.80	1.46	0.81
Portugal	5.76	1.40	0.74	5.57	1.72	0.82	5.67	1.87	0.92	5.62	1.46	0.80	6.15	1.38	0.79	5.79	1.49	0.79
Spain	5.62	1.09	0.57	5.07	1.79	0.81	5.15	1.88	0.91	4.77	1.79	0.86	5.25	1.70	0.85	5.52	1.42	0.77
Sri Lanka	5.45	1.12	0.61	4.95	1.60	0.80	5.66	1.73	0.90	5.15	1.57	0.88	5.68	1.43	0.84	5.72	1.37	0.77
Switzerland-Germ	6.19	1.27	0.70	5.37	1.96	0.88	5.60	1.86	0.90	5.26	1.41	0.75	5.74	1.52	0.82	5.89	1.31	0.70
UK-Scotland	6.14	1.18	0.67	5.44	1.91	0.89	6.09	1.46	0.85	5.27	1.57	0.83	6.39	1.56	0.88	6.39	1.20	0.74
Venezuela	6.20	1.26	0.56	5.22	1.91	0.65	5.83	1.62	0.88	5.52	1.50	0.85	6.10	1.46	0.87	6.40	1.25	0.89
Total	5.89	1.28		5.13	1.90		5.69	1.79		5.26	1.71		5.89	1.67		5.92	1.49	

Table 5
Mean, Standard Deviation and Correlation Coefficient of Study Variables (Pooled Sample).

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
Individual level variables												
1. Psy. Safety	5.888	1.277										
2. Trust in top mgt.	5.131	1.900	0.424									
3. Clan culture	5.694	1.789	0.534	0.612								
4. Adhocracy culture	5.265	1.711	0.373	0.479	0.687							
5. Market culture	5.894	1.669	0.107	0.233	0.318	0.575						
6. Hierarchy culture	5.925	1.485	0.112	0.296	0.406	0.350	0.564					
7. Age	38.102	10.356	0.022	0.061	−0.018	−0.027	−0.056	0.002				
8. Gender	0.581	0.493	0.033	0.071	0.058	0.066	0.085	0.052	0.060			
9. Org. tenure	8.215	7.780	−0.009	0.047	0.018	−0.018	−0.012	0.060	0.599	0.057		
10. Service industry	0.741	0.438	−0.059	−0.049	−0.028	−0.106	−0.093	−0.022	−0.045	−0.105	−0.047	
11. Company size	2.013	0.854	−0.067	−0.121	−0.091	−0.072	0.145	0.154	−0.054	0.116	0.033	0.039
Societal-level variables	Mean	S.D.	1	2	3							
1. BVD Achievement	5.027	0.181										
2. BVD Power	3.056	0.241	−0.529									
3. BVD Innovation	4.319	0.227	−0.549	0.252								
4. Governance quality	0.711	1.006	0.164	−0.425	0.065							

Notes: Individual level N = 2451; Age and Organizational tenure measured in years; Gender (0 =female; 1 =male); Societal level (for BVD values, N = 16; for Governance Index, N = 17); correlations at the individual level: when r = |.046|, $p < .05$; correlations at the societal level: when r = |.549|, $p < .05$

Hypothesis 3. stated that trust in top management would have a positive effect on psychological safety. Model 1 reveals that trust in top management is positively related to psychological safety ($\gamma = 0.191$, $p < 0.001$), thereby supporting Hypothesis 3.

Hypothesis 4. posited that the indirect effect of clan and adhocracy cultures on psychological safety, mediated by trust in top management, would be more substantial than that of market and hierarchy cultures. The results indicated that the indirect effects of clan, adhocracy, and hierarchy cultures were significant, with the effect of clan ($\gamma = 0.053$, $p < 0.001$; 95 % CI: 0.042, 0.065) and adhocracy ($\gamma = 0.012$, $p < 0.001$; 95 % CI: 0.007, 0.019) cultures being more substantial than that of the hierarchy culture ($\gamma = 0.009$, $p < 0.01$; 95 % CI: 0.004, 0.015). However, the indirect effect of the market culture was not significant. Hence, Hypothesis 4 was partially supported.

Hypotheses 5 and 6 stated that societal value dimensions and governance quality, respectively, would interact with trust in top management to enhance its effect on psychological safety. Results in Model 2 show that all three societal value dimensions interacted with trust in top management positively, amplifying the impact of trust on psychological safety (power: $\gamma = 0.041$, $p < 0.001$; ethical achievement: $\gamma = 0.058$, $p < 0.001$; innovation: $\gamma = 0.025$, $p < 0.001$). Similarly, governance quality interacted with trust in top management, magnifying its impact on psychological safety, albeit to a lesser extent than societal values ($\gamma = 0.001$, $p < 0.001$). Therefore, Hypotheses 5 and 6 were supported.

5. Discussion

This study's findings illustrate that, globally, the clan organizational culture contributes more to employees' psychological safety than the hierarchy organizational culture. Furthermore, trust in top management drives the mechanism underlying the effect of organizational culture, such that cultures that foster such trust are more likely to enable a psychologically safe workplace than those that hinder it. More importantly, we found that psychological safety is not solely a function of an employee's organizational culture, but also of their society's cultural and governance environment, which explains the international variance in psychological safety. These findings advance literature by integrating organizational culture theory (Chatman & O'Reilly, 2016) with psychological safety research (Edmondson & Bransby, 2023). Additionally, these contextualize psychological safety and contribute to its theory development. We discuss our contributions, present implications for managers, and offer suggestions for future research.

Table 6
Results of Multi-level Mediation and Moderation Analyses.

	Estimate	SE	95 % CI
Model 1			
Direct effects on psy. safety			
Clan	0.267***	0.015	0.237, 0.297
Adhocracy	0.009	0.017	−0.023, 0.042
Market	−0.017	0.015	−0.047, 0.012
Hierarchy	−0.076***	0.015	−0.106, −0.047
Trust in top management	0.191***	0.021	0.151, 0.232
Direct effects on trust in top management			
Clan	0.277***	0.014	0.250, 0.303
Adhocracy	0.065***	0.016	0.033, 0.096
Market	−0.017	0.015	−0.046, 0.011
Hierarchy	0.049**	0.015	0.020, 0.077
Indirect effects			
Clan→Trust →Psy. Safety	0.053***	0.006	0.042, 0.065
Adhocracy→Trust →Psy. Safety	0.012***	0.003	0.007, 0.019
Market→Trust →Psy. Safety	−0.003	0.003	–0.009, 0.002
Hierarchy→Trust →Psy. Safety	0.009**	0.003	0.004, 0.015
Model 2			
Cross-level direct effects			
Power values	−0.206***	0.005	−0.216, −0.197
Ethical achievement values	−0.300***	0.006	−0.312, −0.288
Innovation values	−0.139***	0.006	−0.151, −0.126
Governance quality	−0.074***	0.001	−0.010, −0.007
Cross-level interaction effects on Trust→Psy. Safety			
TrustXPower values	0.041***	0.001	0.039, 0.042
TrustXEthical achievement values	0.058***	0.001	0.056, 0.060
TrustXInnovation values	0.025***	0.001	0.023, 0.028
TrustXGovernance quality	0.001***	0.000	0.001, 0.002

Note. Model 1: N = 2451 at the individual level and 18 at the societal level. Model 2: N = 2131 from 16 nations (excluding Greece and Ireland). $^{**}p < 0.01$, $^{***}p < 0.001$. SE = Standard Error. CI = Confidence interval.

5.1. Theoretical and empirical contributions

This study makes several contributions to the psychological safety literature. First, by including respondents from both WEIRD and non-WEIRD societies, it extends the generalizability of prior research (see Edmondson & Bransby, 2023; Frazier et al., 2017) and broadens the nomological network of psychological safety antecedents. Second, it establishes organizational culture as a significant global predictor of psychological safety, highlighting that employees' safety perceptions vary according to the degree to which their organization's culture offers them flexibility and autonomy versus rigidity and control. Specifically, we found that employees in organizations with a clan culture experienced a substantially more positive effect on psychological safety than those in organizations with a hierarchical culture. Therefore, to ensure that employees contribute maximally to organizational growth (Obrenovic et al., 2020), organizations should provide them with an environment that affords flexibility, autonomy, adaptability, and stimulation, irrespective of their worldwide location. Empowering employees and providing them with a platform to voice their opinions, which are central to clan culture (Hartnell et al., 2011), is more conducive to fostering psychological safety than an autocratic, restrictive, and controlling environment. Furthermore, although our results indicate that adhocracy culture had a positive effect on psychological safety and market culture had a negative effect, neither effect was statistically significant. Because we examined these effects within a structural model that included all four organizational cultures, the findings suggest that adhocracy and market cultures do not exert a direct effect on psychological safety beyond the influence of other cultural types. Notably, both correlated significantly with psychological safety at the zero-order level. Overall, these findings extend the research of Brettel et al. (2015), Choi and Lee (2022), and Xu et al. (2022), which suggest that organizations that enable flexible and open environments stimulate employees' decision-making and innovative thinking.

Our third contribution pertains to illustrating the mechanism underlying how organizational culture affects psychological safety. We found that trust in top management mediates this effect. Consistent with Oh et al.'s (2023) study on Korean workers, we found that such trust stimulates psychological safety. Therefore, the extent to which an organization's culture fosters psychological safety partially depends on how much it helps employees build trust in top management. Our multi-society data revealed that the impact of clan culture on trust in top management is more substantial than that of hierarchy culture. As such, empowering employees and offering them a flexible and developmental platform is more likely to enable their trust in top management, creating a psychologically safe workplace rather than a controlling and restrictive environment. This finding builds on Erkutlu and Chafra's (2016) and Edmondson and Lei's (2014) theory, which posits that employees' relationships with top management are crucial to their psychological safety. What is notable is the absence of direct and indirect impact of market culture on psychological safety. Market culture's emphasis on competitiveness and goal orientation, as well as control and stability (Zeb et al., 2021), appears to prioritize short-term gains and immediate results over establishing an environment that fosters psychological safety (Kim & Jung, 2022). This orientation likely detracts from developing a deeper, trust-based relationship within the organization (Pham & Tran, 2023), which is crucial for nurturing a sense of security and openness that supports psychological safety. The focus on external achievements and efficiency can overshadow the internal need for employee empowerment and risk-taking, which are essential for employee growth and development. Consequently, the limited positive influence of market culture on psychological safety can result in a workplace where employees feel less inclined to take interpersonal risks or engage fully in their work. We recognize that this finding appears to differ from the related proposition from Kowtha et al. (2001), who theorized that organizations with a market culture tend to establish mechanisms that promote employee voice. The absence of a significant empirical relationship could mean that market culture is associated with a varied level of psychological safety among our global respondents. Given that we could not identify any empirical studies that specifically examine the relationship between market culture and voice or psychological safety, this presents an opportunity for more nuanced future research efforts.

Finally, we contribute to theory building by evaluating how a society's cultural context and governance quality explain cross-national variance in employees' psychological safety. This finding has critical implications, including the fact that although employees' trust in top management enables their psychological safety, its effect is also contingent upon their society's institutional environment. As such, we advance psychological safety research (e.g., Basit, 2017; Erkutlu & Chafra, 2016; Oh et al., 2023) in an international context, responding to Edmondson and Bransby's (2023) call to study it across multiple societies. Specifically, our results indicate that trust in top management has a more significant positive impact on psychological safety in societies where people place importance on power, ethical achievement, and innovation values. When combined with trust in top leadership, these values will reinforce perceptions of a safe work environment. On the contrary, employees in societies where these values are less cherished (or are condoned) did not experience the societal validation in feeling safe within their organizations, despite their trust in top management. In such societies, trust in top management may not carry the same significance for interpersonal safety and voice behaviors.

We also offer compelling evidence of the role that a society's governance structure plays in swaying employees' attitudes, beliefs, and perceptions within their organizations. Specifically, we found that the effect of trust in top management on psychological safety is more substantial for organizations operating in societies with high rather than low governance quality. This finding suggests that when a society's formal institutional context provides reliable mechanisms for voicing concerns, accessing resources, upholding the rule of law, combating corruption, and ensuring accountability, it will enhance the psychological safety of its organizational workforce. This finding appears to reflect a societal norm of trust that cascades down to the individual level (cf. Newton & Zmerli, 2011). When individuals perceive higher quality governance, they are more willing to take interpersonal risks — not only in society at large but also in the workplace. This alignment between trust and risk-taking, manifested as psychological safety in our study, illustrates how broader societal contexts can amplify psychological processes at the individual level.

5.2. Managerial implications

As psychological safety is vital to organizational innovation (Andersson et al., 2020) and effectiveness (Moore & Wang, 2017), our multi-society findings of its determinants have vital managerial implications. First, our results suggest that clan organizational culture is more likely to contribute to employees' psychological safety than hierarchical organizational culture. Even in large organizations where a hierarchical culture prevails at the corporate level, clan culture can be cultivated at the departmental or team level, evident through initiatives that build trust, encourage collaboration, and facilitate open communication (Edmondson, 1999). Human resource functions can support this by administering anonymised employee engagement surveys, providing confidential feedback channels, and conducting training focused on inclusive and supportive leadership practices (Edmondson, 2018). An awareness of the positive impact of clan culture can help managers and leaders assess their organization's culture to determine if it fosters an environment that contradicts flexibility, discretion, open communication, participation, and empowerment—elements that can impede psychological safety and hinder organizational innovation and performance. Indeed, for workplaces to thrive and workers to be satisfied, employees must be able to express their opinions about how work is performed or engage in novel and experimental tasks while feeling psychologically safe and supported when they speak out against the established ways of performing work and innovating new products. Unfortunately, many organizational cultures do the opposite by harboring hidden fear and resentment. Our findings suggest that these latter culture types may not yield desirable organizational outcomes.

Furthermore, regarding global variance in psychological safety, our findings suggest that managers and practitioners should be vigilant of the cultural values and governance quality prevailing in their society, as these can strengthen or weaken the impact of trust in top management on employees' safety perceptions. Organizations in less well-governed societies may need to work harder to promote employee psychological safety, as they may not receive the societal amplification effect that is visible in better-governed societies.

5.3. Limitations and Future Research Directions

Our research has a few limitations that suggest avenues for future research. First, for a mediation study, it would be desirable to collect the predictor, mediator, and outcome variables at different times (i.e., a multi-wave longitudinal study). However, like other large-scale workplace studies (e.g., Andresen et al., 2020), we secured cross-sectional data and utilized it to its best advantage, given the limited funding available. We encourage joint international efforts, similar to the World Values Survey in the social sciences, to periodically collect data from the business world, thereby enabling more longitudinal and cross-cultural research. Second, our research suggests that organizations with a hierarchical culture may find their capacity to offer a psychologically safe environment impaired, which may hinder their efforts in innovation and creativity (Andersson et al., 2020). Although examining whether subsidiaries of multinational corporations have different organizational cultures in different societies was beyond the scope of this study, our findings suggest that multinational corporations should audit their subsidiaries' culture to determine the extent to which cross-cultural differences in the capacity for innovation and creativity are impeding competitive advantage, organizational effectiveness, and survival. Lastly, we did not control for participants' position or perceived status within their organizations. Future research should control for a status variable to account for the potential confounding effect (*cf.* Bienefeld & Grote, 2014). Additionally, future research could examine whether perceived status moderates the relationship between organizational culture and psychological safety across societies that differ in power distance, thereby contributing to the limited cross-cultural literature on psychological safety.

6. Conclusion

To our knowledge, this is the first multi-society, multi-level study to examine how organizational culture and societal-level institutional factors jointly shape employees' psychological safety. Drawing on data from 18 societies, we demonstrate that organizational culture is a crucial driver of employees' psychological safety worldwide, and that trust in top management mediates this relationship. Notably, the impact of organizational culture is not uniform – clan cultures foster substantially greater psychological safety than hierarchy cultures. Furthermore, societal cultural values and governance quality impose boundary conditions on the trust in top management–psychological safety relationship, underscoring the importance of considering institutional contexts in psychological safety research. Because psychological safety is central to organizational innovation, these insights hold substantial practical value for managers and leaders seeking to cultivate environments that empower employees worldwide. More broadly, our study responds to the paucity of international psychological safety research and the urgent need to develop global theories that reflect 21st-century organizational realities (Buckley et al., 2017). By establishing that both organizational and institutional factors influence psychological safety, we provide a meaningful step toward building a cross-cultural understanding of this vital construct and chart a salient direction for future international research on psychological safety.

Declaration of Competing Interest

None of the authors have a conflict of interest to disclose.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.ibusrev.2025.102523.

Data availability

Data will be made available on request.

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