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Research Paper

Psychological Safety as A Dimension of Organisational Culture: Its Effect on Employee Voice, Knowledge Sharing and Innovative Work Behaviour: A Quantitative Explanatory Research Framework for Knowledge-Intensive Organisations

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Abstract

Psychological safety has emerged as an important dimension of organisational culture because employees rarely contribute their knowledge, concerns or unconventional ideas when interpersonal risk is high. Although organisations frequently encourage innovation, many employees remain silent because they anticipate criticism, humiliation, loss of status, unfavourable performance evaluation or damage to their careers. Such silence restricts early identification of errors, prevents circulation of tacit knowledge and weakens organisational learning. The present paper examines psychological-safety culture as an antecedent of employee voice and innovative work behaviour, with knowledge-sharing behaviour functioning as a mediating mechanism. The study integrates psychological-safety theory, social-exchange theory, organisational-learning theory and the componential theory of creativity. A quantitative, explanatory and cross-sectional research design is proposed for employees working in knowledge-intensive organisations, including technology companies, universities, hospitals, startups and research institutions. The conceptual model proposes that psychological-safety culture directly encourages employee voice, knowledge sharing and innovative work behaviour. It further proposes that knowledge sharing mediates the effect of psychological safety on employee voice and innovation, while employee voice provides an additional behavioural pathway through which shared knowledge is converted into workplace innovation. A stratified sample of approximately 400 employees is recommended, with data collected through a structured five-point Likert-scale questionnaire. Confirmatory factor analysis and structural equation modelling are proposed for assessing the measurement and structural models.

The paper concludes that organisations can improve innovation by developing inclusive leadership, fair responses to failure, accessible voice mechanisms, knowledge-sharing routines and credible follow-up procedures. Since no primary dataset has been used, the paper presents anticipated relationships and an empirical testing framework rather than fabricated statistical findings.

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KEYWORDS: psychological safety, organisational culture, employee voice, knowledge sharing, innovative work behaviour, organisational learning, employee silence

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1. INTRODUCTION

Modern organisations operate in environments characterised by technological disruption, changing customer expectations, intense competition and increasingly complex professional work. Under such circumstances, an organisation's ability to recognise emerging problems and develop new solutions depends heavily on whether employees are willing to contribute what they know. Senior managers cannot observe every operational failure, customer complaint, clinical risk, technical weakness or emerging opportunity. Employees working close to tasks often possess information that is unavailable to formal decision-makers. However, possessing useful information does not guarantee that employees will share it.

Employees frequently assess the interpersonal and career-related consequences of speaking before expressing a concern or proposing an unconventional idea. They may ask whether a manager will listen, whether colleagues will ridicule the suggestion, whether admitting a mistake will damage their reputation or whether challenging a procedure will be interpreted as disloyalty. When the anticipated cost of expression appears greater than its likely benefit, silence becomes a rational form of self-protection.

This problem has increased the importance of psychological safety. Edmondson (1999) defined team psychological safety as a shared belief that a team is safe for interpersonal risk-taking. It exists when employees believe that they can ask questions, acknowledge uncertainty, request assistance, offer suggestions and report mistakes without humiliation or unfair punishment. Psychological safety does not mean that every idea must be accepted. It means that employees can participate honestly in work-related dialogue and receive a respectful response.

Psychological safety is often studied as a team climate, but it can also be considered a dimension of organisational culture. Organisational culture represents shared assumptions, values and behavioural norms that guide how members interpret situations and respond to them. When an organisation consistently rewards openness, treats error reporting as an opportunity for learning and protects constructive dissent, psychological safety becomes embedded in its culture. Conversely, when leaders publicly request ideas but privately punish disagreement, employees learn that silence is safer than participation.

The consequences extend beyond communication. Innovation depends on the combination, interpretation and application of knowledge. Employees must first be willing to reveal what they know, including incomplete ideas and uncertain observations. Colleagues must then exchange expertise, question assumptions and jointly refine possibilities. Innovative work behaviour emerges when employees move beyond routine performance to identify opportunities, generate ideas, mobilise support and implement improvements.

Psychological safety, employee voice, knowledge sharing and innovative work behaviour are therefore closely connected. Nevertheless, these constructs are often examined separately. Voice research focuses on upward communication, while knowledge-management research concentrates on transfer and exchange. Innovation research frequently examines creativity, leadership or resources without fully explaining why employees withhold useful knowledge or avoid proposing improvements.

The present paper integrates these streams by proposing knowledge-sharing behaviour as a mediator between psychological-safety culture and two important outcomes: employee voice and innovative work behaviour. It also suggests that employee voice can help transform shared knowledge into implemented innovation.

Recent empirical studies support this direction. Septiawan (2024) found that psychological safety positively influenced knowledge sharing and innovative work behaviour and that knowledge sharing mediated their relationship. Septiawan, 2024 Research conducted among Indian manufacturing employees similarly found that psychological safety and knowledge sharing formed a pathway connecting humble leadership with innovative work behaviour. Dahiya et al., 2024

The subject is especially relevant to technology companies, universities, hospitals, startups and research organisations. These institutions depend on expertise, collaboration and learning, yet they are also vulnerable to hierarchy, professional status differences and fear of error. A software engineer may recognise a security weakness but remain silent when deadlines are politically sensitive. A junior doctor may notice a clinical risk but hesitate to question a senior consultant. A university lecturer may identify an ineffective policy but avoid criticism due to contractual insecurity. A startup employee may withhold concern because challenging the founder is interpreted as lack of commitment. These examples demonstrate that innovation is not only a matter of resources or intelligence; it also depends on whether the culture makes honest participation possible.

2. Statement of the Problem:

Organisations increasingly promote employee participation, knowledge management and innovation. Nevertheless, formal mechanisms such as suggestion portals, meetings and digital knowledge repositories frequently produce limited results. Their weakness may not arise from a shortage of employee knowledge but from employees' perceptions of interpersonal risk.

A technically sophisticated knowledge-management system cannot compel employees to reveal experience-based knowledge. An open-door policy does not create voice when past criticism has been ignored or punished. Innovation programmes may also fail when employees expect managers to appropriate credit, reject unconventional ideas or blame individuals for unsuccessful experimentation.

Three related problems arise.

First, employees may engage in defensive or acquiescent silence. Defensive silence occurs when people deliberately withhold relevant information to protect themselves. Acquiescent silence occurs when employees believe that speaking will make no meaningful difference. Both forms prevent managers from receiving accurate information.

Second, employees may engage in knowledge hiding rather than knowledge sharing. Knowledge hiding includes evasive responses, deliberate concealment or claims that information is

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unavailable. Knowledge can become a source of personal security or status, particularly in competitive workplaces.
Third, employees may restrict themselves to formally prescribed duties instead of engaging in innovative work behaviour. Innovation involves uncertainty and possible failure. Employees are unlikely to invest effort in untested ideas when unsuccessful attempts attract criticism or career penalties.

The research problem is therefore expressed as follows:
To what extent does a psychological-safety culture influence employee voice and innovative work behaviour, and how does knowledge-sharing behaviour mediate these relationships in knowledge-intensive organisations?

3. Significance of the Study:
The study is significant for five reasons.
First, it treats psychological safety as a cultural condition rather than an isolated individual perception. This approach recognises that employee behaviour is shaped by repeated organisational signals concerning authority, failure and disagreement.
Second, it integrates employee voice and knowledge sharing. The two behaviours overlap but are not identical. Employees may exchange technical information with colleagues without raising concerns to management. Alternatively, an employee may speak about a problem without participating in wider knowledge exchange.
Third, the study explains innovation as a process. Psychological safety does not automatically produce innovation. It creates conditions under which employees can share knowledge and express ideas, which subsequently support innovation.
Fourth, the proposed multi-sector framework improves practical relevance. Knowledge-intensive organisations face similar challenges but differ in hierarchy, risk and professional norms.
Fifth, the quantitative model can be tested using structural equation modelling, allowing direct, indirect and sector-specific relationships to be examined simultaneously.

4. OBJECTIVES OF THE STUDY
1. To examine psychological safety as a dimension of organisational culture.
2. To analyse the effect of psychological-safety culture on employee voice.
3. To assess the effect of psychological-safety culture on knowledge-sharing behaviour.
4. To examine the influence of psychological-safety culture on innovative work behaviour.
5. To investigate the effect of knowledge-sharing behaviour on employee voice.
6. To analyse the effect of knowledge-sharing behaviour on innovative work behaviour.
7. To test the mediating role of knowledge-sharing behaviour between psychological-safety culture and employee voice.
8. To test the mediating role of knowledge-sharing behaviour between psychological-safety culture and innovative work behaviour.
9. To examine whether employee voice contributes to innovative work behaviour.
10. To recommend managerial measures for developing a psychologically safe and innovation-oriented organisational culture.

5. Research Questions:
1. Does psychological safety culture significantly influence employee voice?
2. Does psychological-safety culture promote knowledge-sharing behaviour?
3. Does psychological safety culture improve innovative work behaviour?
4. Does knowledge sharing encourage employees to express constructive suggestions and concerns?
5. Does knowledge sharing increase innovative work behaviour?
6. Does knowledge sharing mediate the relationship between psychological safety and employee voice?
7. Does knowledge sharing mediate the relationship between psychological safety and innovative work behaviour?
8. Does employee voice provide a behavioural pathway from knowledge sharing to innovation?
9. Do these relationships vary across technology companies, universities, hospitals, startups and research organisations?

6. HYPOTHESES
H1: Psychological-safety culture has a significant positive effect on employee voice.
H2: Psychological-safety culture has a significant positive effect on knowledge-sharing behaviour.
H3: Psychological-safety culture has a significant positive effect on innovative work behaviour.
H4: Knowledge-sharing behaviour has a significant positive effect on employee voice.
H5: Knowledge-sharing behaviour has a significant positive effect on innovative work behaviour.
H6: Employee voice has a significant positive effect on innovative work behaviour.
H7: Knowledge-sharing behaviour mediates the relationship between psychological-safety culture and employee voice.
H8: Knowledge-sharing behaviour mediates the relationship between psychological-safety culture and innovative work behaviour.
H9: Psychological-safety culture influences innovative work behaviour sequentially through knowledge sharing and employee voice.
Null hypotheses
The corresponding null hypotheses state that the proposed direct and indirect relationships are not statistically significant.

7. REVIEW OF RELATED LITERATURE
7.1 Psychological safety
Edmondson (1999) provided the foundational empirical formulation of team psychological safety. Her study showed that psychologically safe teams were more willing to discuss errors

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and engage in learning behaviour. Importantly, a higher number of reported errors did not necessarily indicate poorer performance. It could indicate that employees felt safer acknowledging problems.

Kahn (1990) argued that psychological safety enables individuals to express themselves physically, cognitively and emotionally in their work roles without fearing damage to their status or career. His framework suggests that employees engage more fully when interpersonal conditions do not require constant self-protection.

Frazier et al. (2017) conducted a meta-analysis demonstrating that psychological safety has meaningful relationships with employee attitudes, information sharing, learning behaviour and performance. Their findings established psychological safety as an important construct at both individual and team levels.

Newman et al. (2017) reviewed psychological-safety research and concluded that supportive leadership, organisational practices and interpersonal relationships are important antecedents. They also identified employee voice, learning and performance as recurring outcomes.

These contributions show that psychological safety is not merely an emotional condition. It affects whether employees reveal information required for organisational learning.

7.2 Psychological safety as organisational culture

Schein and Schein (2017) describe culture through artefacts, espoused values and underlying assumptions. These levels can be applied to psychological safety.

- Artefacts include open forums, reporting systems, learning reviews and meeting practices.
- Espoused values include commitments to respect, openness and learning.
- Underlying assumptions concern whether mistakes are treated as evidence of incompetence or as information for improvement.

A genuine safety culture requires alignment among these levels. An organisation may announce that employees should "speak freely," but if managers react defensively to criticism, the operative culture remains unsafe.

Psychological safety should also be distinguished from a relaxed or conflict-free workplace. A psychologically safe organisation can maintain demanding standards and vigorous debate. The distinguishing feature is that disagreement remains focused on work rather than personal humiliation.

7.3 Employee voice

Employee voice refers to discretionary communication of ideas, suggestions, concerns or opinions intended to improve organisational functioning. Van Dyne and LePine (1998) conceptualised voice as constructive, change-oriented extra-role behaviour.

Liang et al. (2012) distinguished between:

- **Promotive voice:** suggestions for improving existing practices or introducing new opportunities.
- **Prohibitive voice:** expressions of concern about harmful practices, risks or behaviour.

Both forms involve interpersonal risk. Promotive suggestions may threaten established routines, while prohibitive voice may expose failure or challenge authority.

Detert and Burris (2007) found that leadership openness influenced employee voice. Employees were more likely to speak when leaders appeared willing to receive input.

Morrison (2014) explained that employees remain silent when they perceive speaking up as risky or futile. Voice is therefore influenced not only by the value of the information but also by expected managerial response.

Recent communication research reinforces this position. Moon and Kang's survey of 570 employees found that dialogic leadership communication reduced defensive and acquiescent silence, with psychological safety operating as an important mediator. Moon & Kang, 2025

Liu, Yuan and Luo (2025) examined how technical anonymity affects willingness to speak. Their work suggests that anonymous channels may support voice, but their effectiveness depends on contextual conditions such as whether leaders actively request input. Liu et al., 2025

7.4 Knowledge-sharing behaviour:

Knowledge sharing refers to the exchange of information, expertise, experience and skills among organisational members. It includes:

- donating knowledge to others;
- collecting knowledge from colleagues;
- explaining work processes;
- sharing lessons from mistakes;
- offering professional advice; and
- contributing information to collective repositories.

Explicit knowledge can be documented, while tacit knowledge is embedded in experience and is more difficult to communicate. Tacit knowledge is particularly dependent on trust and interpersonal interaction.

Cabrera and Cabrera (2005) observed that knowledge sharing presents a social dilemma. Although sharing may benefit the organisation, individuals may lose exclusive advantage or receive insufficient recognition. Organisational practices must therefore reduce the personal cost and increase the social value of sharing.

Bock et al. (2005) demonstrated that social norms, anticipated relationships and organisational climate influence knowledge-sharing intention. Technology alone does not determine whether knowledge is exchanged.

A 2024 study of e-commerce professionals found that psychological safety significantly supported knowledge sharing by creating an environment in which employees could exchange information without fear of judgement. Frontiers in Psychology, 2024

Research on organisational justice and psychological safety has also indicated that unsafe or unfair conditions encourage knowledge hiding and restrict creativity. Nam et al., 2024

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7.5 Innovative work behaviour

Innovative work behaviour is the intentional creation, promotion and implementation of new ideas within a work role, team or organisation. Janssen (2000) identified three principal stages:

1. idea generation;
2. idea promotion; and
3. idea realisation.

Innovation is therefore broader than creativity. Creativity concerns the production of original and useful ideas, while innovation includes securing support and implementing them.

Scott and Bruce (1994) showed that leadership, group relationships and a supportive climate influence innovative behaviour.

De Jong and Den Hartog (2010) developed a multidimensional measure covering idea exploration, generation, championing and implementation.

Innovation creates interpersonal and career risk. Employees may challenge existing interests, compete for resources or expose themselves to failure. Psychological safety can reduce these risks and encourage experimentation.

Septiawan's 2024 study of service-sector employees reported that psychological safety increased knowledge sharing and innovative work behaviour, with knowledge sharing acting as a mediator. These findings support the central mechanism proposed in the present paper.

Dahiya and colleagues' 2024 research among 225 subordinate–supervisor dyads in Indian SMEs showed that psychological safety and knowledge sharing sequentially connected humble leadership with innovative work behaviour. Occupational self-efficacy strengthened parts of this relationship.

7.8 RESEARCH GAP

The literature establishes separate associations among psychological safety, voice, knowledge sharing and innovation. Nevertheless, important gaps remain:

1. Psychological safety is frequently treated as an individual or team perception rather than a dimension of organisational culture.
2. Voice and knowledge sharing are often studied separately despite their complementary roles.
3. Limited research examines knowledge sharing as a mediator between psychological safety and both employee voice and innovative work behaviour in one integrated model.
4. Many studies focus on a single industry, limiting comparison across knowledge-intensive sectors.
5. Cross-sectional research often relies entirely on employee self-reports, increasing common-method bias.
6. Limited attention is given to the sequence through which safety encourages knowledge exchange, which supports voice and subsequently facilitates innovation.

The present framework addresses these gaps through an integrated, multi-sector and quantitatively testable model.

8. Theoretical Foundation:

8.1 Social Exchange Theory

Social Exchange Theory explains workplace relationships through reciprocal exchanges. When an organisation treats employees with respect and protects them from unfair interpersonal consequences, employees may reciprocate through constructive behaviours such as knowledge sharing, voice and innovation.

Psychological safety signals that the organisation values employee contribution. Employees are consequently more willing to invest their knowledge and accept the risks associated with proposing change.

8.2 Organisational Learning Theory:

Organisational learning occurs when individual experience is communicated, interpreted and incorporated into collective routines. Psychological safety supports this process by enabling error reporting, questioning and reflection.

Knowledge sharing converts individual understanding into accessible collective knowledge. Employee voice directs that knowledge towards organisational attention, while innovation translates it into changed practices.

8.3 Componential Theory of Creativity:

Amabile's componential theory proposes that creativity depends on domain-relevant expertise, creativity-related processes, motivation and a supportive social environment. Psychological safety strengthens the social environment by reducing fear of negative evaluation. Knowledge sharing expands the expertise available for creative combination.

8.4 Theory of Planned Behaviour:

Employee voice and knowledge sharing are intentional behaviours. Attitude, social norms and perceived behavioural control influence whether employees perform them. A psychologically safe culture creates a supportive norm and increases perceived control over interpersonal consequences.

9. Conceptual Framework:

Interpretation of the model:

The framework proposes three direct pathways from psychological-safety culture. The first leads to knowledge sharing, the second to employee voice and the third to innovative work behaviour. Knowledge sharing acts as a mediator, while employee voice may operate as an additional sequential mediator between knowledge sharing and innovation.

The framework allows partial rather than complete mediation. Psychological safety may stimulate innovation directly by encouraging experimentation even when knowledge sharing is limited. It may also influence innovation indirectly by enabling employees to exchange knowledge and express proposals.

10. RESEARCH METHODOLOGY

10.1 Research approach

The proposed investigation follows a positivist orientation and a deductive approach. Hypotheses are derived from established theories and can be tested through quantitative data.

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10.2 Research design

A quantitative, explanatory and cross-sectional survey design is proposed. The design is suitable because it permits measurement of latent psychological and behavioural constructs and examination of direct and indirect relationships.

A time-lagged design would provide stronger evidence if resources permit:

- Time 1: psychological-safety culture;
- Time 2: knowledge sharing and employee voice;
- Time 3: supervisor-rated innovative work behaviour.

This separation would reduce common-method bias and strengthen temporal interpretation.

10.3 Population

The target population consists of employees working in knowledge-intensive organisations:

- information-technology companies;
- universities and research institutions;
- hospitals and healthcare organisations;
- technology-oriented startups; and
- research and development organisations.

Employees should have completed at least six months in the organisation so that they possess sufficient experience to evaluate its cultural environment.

10.4 Sample size

A sample of approximately **400 employees** is recommended. A possible distribution is:

Sector	Proposed sample
Information technology	100
Universities and research institutions	100
Hospitals and healthcare organisations	100
Startups and R&D organisations	100
Total	**400**

The final requirement should also be checked using statistical power analysis and the complexity of the structural model.

10.5 Sampling technique

A multistage sampling procedure is recommended:

1. Purposive selection of knowledge-intensive sectors.
2. Selection of participating organisations.
3. Stratification by sector and occupational category.
4. Random or systematic selection of eligible employees within accessible organisations.

Where a complete employee list is unavailable, proportionate quota sampling may be used, but its limitations should be acknowledged.

10.6 Sources of data

- **Primary data:** structured employee questionnaire and, preferably, supervisor ratings.
- **Secondary data:** peer-reviewed journals, books, organisational reports and policy documents.

10.7 Research instrument

A structured questionnaire may contain six parts:

1. informed consent and screening;
2. demographic information;
3. psychological-safety culture;
4. knowledge-sharing behaviour;
5. employee voice; and
6. innovative work behaviour.

Responses may be recorded using a five-point Likert scale:

1 = Strongly disagree
2 = Disagree
3 = Neither agree nor disagree
4 = Agree
5 = Strongly agree

10.8 Operationalisation of variables

Variable	Role	Operational meaning	Indicative source
Psychological-safety culture	Independent	Shared perception that speaking, questioning and admitting mistakes are interpersonally safe	Edmondson (1999)
Knowledge-sharing behaviour	Mediator	Exchange of work-related information, expertise and experience	Van den Hooff and De Ridder (2004)
Employee voice	Dependent/intermediate	Constructive expression of suggestions and concerns intended to improve work	Liang et al. (2012)
Innovative work behaviour	Dependent	Generation, promotion and implementation of new ideas	De Jong and Den Hartog (2010)

10.9 Indicative questionnaire statements:

Psychological-safety culture

1. Employees in this organisation can discuss mistakes openly.
2. It is safe to ask for help when work is difficult.
3. Employees can question existing practices without being labelled troublesome.
4. Different opinions are treated with respect.
5. Managers respond constructively when employees raise concerns.
6. Employees are not unfairly punished for well-intentioned unsuccessful efforts.

Knowledge-sharing behaviour

1. I share useful work experience with colleagues.
2. Colleagues exchange information that helps solve difficult problems.
3. Team members discuss lessons learned from mistakes.

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4. I provide professional advice when colleagues request it.
5. Employees contribute their knowledge to collective tasks.
6. Valuable knowledge is not deliberately withheld.

Employee voice

1. I suggest ways to improve work procedures.
2. I communicate concerns about practices that may cause harm.
3. I speak up when an important work issue is being overlooked.
4. I offer recommendations even when they challenge current routines.
5. I raise problems through appropriate organisational channels.
6. I encourage colleagues to address issues affecting performance.

Innovative work behaviour

1. I search for new methods of performing my work.
2. I generate original solutions to work-related problems.
3. I seek support for promising new ideas.
4. I help transform useful ideas into practical action.
5. I evaluate whether new work methods produce improvement.
6. I contribute to the implementation of innovative practices.

10.10 Pilot study

A pilot study involving 30–50 employees should be undertaken. The pilot should assess:

- clarity of language;
- completion time;
- relevance of items;
- preliminary reliability;
- ambiguous or repetitive statements; and
- technical operation of the survey.

Experts in organisational behaviour, HRM and research methodology should review the instrument for content validity.

10.11 Reliability

Internal consistency may be assessed through:

- Cronbach's alpha;
- composite reliability; and
- rho_A.

Values of 0.70 or above are generally considered acceptable, although coefficients should be interpreted alongside item quality and construct breadth.

10.12 Validity

Content validity: Expert evaluation of item relevance.
Convergent validity: Standardised factor loadings and average variance extracted. AVE values of at least 0.50 are desirable.
Discriminant validity: Fornell–Larcker criterion and heterotrait–monotrait ratio.
Construct validity: Confirmatory factor analysis.

10.13 Data-analysis techniques

Data may be analysed using SPSS and AMOS, SmartPLS or equivalent software.

Recommended stages include:

1. data coding and screening;
2. treatment of missing data;
3. identification of outliers;
4. demographic analysis;
5. descriptive statistics;
6. normality assessment;
7. reliability testing;
8. exploratory factor analysis, if required;
9. confirmatory factor analysis;
10. correlation analysis;
11. structural equation modelling;
12. mediation analysis using bootstrapped confidence intervals;
13. multi-group analysis across sectors; and
14. robustness and common-method-bias assessment.

10.14 Structural equations

The principal relationships may be represented as:

$KSB=\beta10+\beta11PSC+\sum\beta1kCVk+\varepsilon1$ $EV=\beta20+\beta21PSC+\beta22KSB+\sum\beta2kCVk+\varepsilon2$ $IWB=\beta30+\beta31PSC+\beta32KSB+\beta33EV+\sum\beta3kCVk+\varepsilon3$

Where:

- PSC = psychological-safety culture;
- KSB = knowledge-sharing behaviour;
- EV = employee voice;
- IWB = innovative work behaviour;
- CV = control variables;
- ε = error term.

10.15 Control variables

The model may control for:

- age;
- gender;
- educational qualification;
- organisational tenure;
- job level;
- sector;
- team size; and
- employment status.

10.16 Ethical considerations

Participation must be voluntary. Respondents should receive information about the purpose of the study and their right to withdraw. No names, employee numbers or directly identifying information should be collected unless necessary and separately protected.

Confidentiality is particularly important because employees are being asked about voice and psychological safety. Managers should not receive individual responses. Results should be reported only in aggregate form.

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11. Literature-Based Analysis and Expected Relationships:

11.1 Psychological safety and employee voice

The literature strongly suggests a positive relationship. Speaking up expose's employees to the possibility of rejection, conflict or reputational damage. Psychological safety reduces this anticipated cost.

The effect may be stronger for prohibitive voice because reporting a risk or harmful practice can threaten established interests. Promotive suggestions may be perceived as comparatively constructive, although they can still challenge existing authority.

Therefore, H1 is theoretically well supported.

11.2 Psychological safety and knowledge sharing

Knowledge sharing involves vulnerability. Employees may fear that an incomplete contribution will expose ignorance or that colleagues will misuse their expertise. A safe culture reduces fear of judgement and supports reciprocal exchange.

Psychological safety is expected to increase both knowledge donation and knowledge collection. Employees feel safer giving advice and asking questions.

Accordingly, H2 is expected to receive support.

11.3 Psychological safety and innovation

Innovation involves uncertainty and possible failure. A punitive culture encourages employees to follow established routines, while a learning culture enables experimentation.

Psychological safety should increase idea generation and promotion. Its relationship with implementation may depend more strongly on resources, managerial authority and organisational support. Therefore, H3 is plausible but may vary across the stages of innovation.

11.4 Knowledge sharing and employee voice

Knowledge sharing improves the substance and confidence underlying employee voice. Employees who understand a problem and receive peer input are better able to communicate credible recommendations.

Knowledge exchange may also build supportive networks, reducing the isolation associated with speaking up. Thus, H4 is theoretically justified.

11.5 Knowledge sharing and innovative work behaviour

Knowledge sharing exposes employees to diverse information and helps combine specialist perspectives. It is expected to influence idea generation, refinement and implementation.

The relationship may be especially strong in interdisciplinary settings such as hospitals, universities and research teams. H5 is therefore expected to be supported.

11.6 Employee voice and innovation

Innovative ideas have little organisational value if they remain private. Voice communicates ideas and attracts attention, feedback and resources. Promotive voice may directly advance innovation, while prohibitive voice may prevent failure and create pressure for corrective innovation.

H6 is consequently expected to show a positive relationship.

11.7 Mediating effect of knowledge sharing

Psychological safety creates a favourable climate, but employees must engage in knowledge exchange before many innovative outcomes can emerge. Knowledge sharing therefore explains part of the process through which culture influences behaviour.

Partial mediation is more likely than complete mediation because psychological safety can also stimulate voice and innovation directly. H7 and H8 are theoretically supported.

11.8 Sequential mediation

The proposed sequence is:

Psychological safety→Knowledge sharing→Employee voice→I nnovative work behaviour

Employees first feel safe enough to exchange knowledge. Shared knowledge provides stronger foundations for suggestions and concerns. Voice then brings those ideas into organisational decision-making, supporting implementation.

This sequence provides the rationale for H9.

12. DISCUSSION

The proposed framework demonstrates that psychological safety is not an optional interpersonal benefit. It is a productive cultural capability that affects whether an organisation can access, circulate and apply employee knowledge.

An unsafe organisation may still appear orderly. Meetings may contain little disagreement and employees may follow instructions without visible resistance. However, such harmony can be misleading. Silence may conceal technical problems, ethical concerns, customer dissatisfaction or emerging opportunities. The absence of reported problems does not prove that problems do not exist.

Psychological safety makes hidden information visible. It enables employees to acknowledge uncertainty and contribute knowledge before problems become crises. This function is particularly important in hospitals, where silence may affect patient safety; in technology companies, where unreported weaknesses may create security failures; and in research organisations, where suppressed criticism can weaken scientific quality.

The framework also clarifies the difference between safety and low accountability. Psychological safety allows honest discussion; accountability establishes standards. High-performing organisations require both. Safety without accountability may produce comfort without achievement, while accountability without safety may produce fear, concealment and defensive compliance.

Knowledge sharing provides the principal social mechanism. When employees safely exchange experience, the organisation develops a larger pool of collective intelligence. However, managers must ensure that shared knowledge is heard and used. Repeatedly asking employees for input without meaningful response may weaken future voice.

Innovation further requires resources. Psychological safety can enable idea generation and expression, but implementation

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depends on time, authority, funding and coordination. Managers should therefore connect voice systems with formal innovation processes.

13. Sector-Specific Implications:

13.1 Technology companies:

Technology teams require open discussion of bugs, cybersecurity risks and design weaknesses. Agile retrospectives and code reviews can strengthen safety when they focus on learning rather than personal blame.

13.2 Universities:

Universities should protect reasoned academic disagreement and participation in institutional decision-making. Junior and contractual faculty may require additional safeguards because employment insecurity can restrict voice.

13.3 Hospitals

Healthcare organisations should use non-punitive incident reporting, interdisciplinary safety rounds and structured escalation procedures. Hierarchical differences must not prevent junior professionals from raising clinical concerns.

13.4 Startups

Founders should avoid equating disagreement with disloyalty. Rapid growth increases the need for challenge because informal practices may become unsuitable as the organisation expands.

13.5 Research organisations

Research leaders should encourage methodological criticism, replication and discussion of negative results. Concealing unsuccessful experiments wastes resources and weakens scientific learning.

14. Managerial Recommendations:

1. Leaders should acknowledge their own fallibility and invite corrective information.
2. Managers should respond appreciatively when employees raise difficult concerns.
3. Organisations should separate responsible error reporting from negligence.
4. Regular learning reviews should examine systems and processes rather than search immediately for an individual to blame.
5. Voice mechanisms should include direct, digital and confidential channels.
6. Employees should receive feedback explaining what happened to their suggestions.
7. Knowledge-sharing contributions should be recognised in performance appraisal.
8. Team leaders should ensure that junior and less vocal members are invited to participate.
9. Innovation programmes should provide time and small-scale resources for testing ideas.
10. Organisations should monitor psychological safety through anonymous surveys and qualitative discussions.
11. Managers should be trained to receive disagreement without defensiveness.
12. Employees who raise ethical, safety or legal concerns should receive protection against retaliation.

15. Expected Contribution to Knowledge:

The paper contributes an integrated explanation of how psychological-safety culture can influence innovation. It positions knowledge sharing as a mediating mechanism and employee voice as both an outcome and a pathway to innovative work behaviour.

The framework also separates psychological safety from general employee satisfaction. Employees may be satisfied with pay or facilities but still fear challenging authority. Psychological safety should therefore be measured independently.

The proposed multi-sector design can determine whether the same structural relationships operate across different professional environments. This can improve the contextual validity of psychological-safety research.

16. LIMITATIONS

The proposed cross-sectional design cannot conclusively establish temporal causality. A longitudinal or time-lagged study would offer stronger evidence.

Self-reported innovation may be affected by social-desirability bias. Supervisor ratings or documented innovation outcomes should be included where possible.

Psychological safety can vary between teams within the same organisation. Multilevel modelling may be required when respondents are nested within teams.

17. Scope for Further Research

1. Longitudinal examination of changes in psychological safety.
2. Multilevel comparison of individual, team and organisational safety.
3. Comparative analysis of permanent and contractual employees.
4. Examination of inclusive, ethical and humble leadership as antecedents.
5. Investigation of digital anonymity in employee-voice systems.
6. Study of remote and hybrid teams.
7. Examination of knowledge hiding as a competing mediator.
8. Analysis of burnout as a possible cost of excessive voice expectations.
9. Comparison of promotive and prohibitive voice.
10. Investigation of psychological safety in AI-supported workplaces.
11. Cross-cultural comparison of high- and low-power-distance organisations.
12. Experimental evaluation of managerial responses to employee mistakes.

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18. CONCLUSION

Psychological safety is a fundamental dimension of organisational culture because it determines whether employees can use their knowledge openly in the service of improvement. Organisations do not innovate merely because they employ talented people. They innovate when talented people feel able to question, share, challenge and experiment.

The paper also emphasises that psychological safety is compatible with accountability. Employees should remain responsible for the quality of their work, while organisations create fair conditions for honest reporting and learning. Leaders have a decisive role because their responses to questions, criticism and mistakes communicate the organisation's actual values more powerfully than formal policy.

Technology companies, universities, hospitals, startups and research institutions can benefit from developing psychologically safe cultures, but sector-specific differences must be considered. In every setting, employees must believe that constructive participation is both safe and worthwhile. When that belief becomes part of organisational culture, voice becomes more credible, knowledge moves more freely and innovation becomes a shared organisational practice rather than an occasional individual achievement.

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