





Mediating Role of Psychological Safety on Support at the Workplace and its Association with Organization Performance: Context of Indian IT Sector



Priya Jindal¹ , Amit Mittal^{1,*} , Piyush Gupta²  and Rishi Chaudhry³ 

¹Chitkara Business School, Chitkara University, Punjab, India

²Birla Global University, Bhubaneswar, Odisha, India

³Institute of Management Studies and Research, Maharshi Dayanand University, Rohtak, Haryana, India

Abstract:

Introduction: In India, the IT sector has grown to be a substantial industry. Emerging technologies demonstrate their capability to offer clients globally, not only on-shore but also off-shore services. The workplace evolution of the IT sector, which includes a highly structured dynamic system and cutting-edge technology, makes the employees experience anxiety, trepidation, or a general unease while interacting socially or personally with their coworkers. Employees may have anxiety over their capacity to sustain themselves, hold onto their position within the company, and be viewed as valuable contributors by superiors and peers. As the work pressure increases, this helps the organization to understand the impression of psychological safety.

Methods: The current study is an attempt to delve into the association between social support, *i.e.*, Perceived Organizational Support (POS), Perceived Supervisory Support (PSS), and Perceived Co-worker Support (PCS), and personal employee support, *i.e.*, Personal Self-Concept (PSC) at the workplace and Organizational Performance (OP). The study also analyzes the mediating role of Psychological Safety (PS) in this relationship. A cross-sectional survey was conducted to collect data from 232 Indian IT professionals. The data were analyzed using the SPSS statistical software package with Covariance-Based Structural Equation Modeling (CB-SEM). Evaluation of the hypotheses was conducted through the SEM, and mediation analysis was carried out using bootstrap estimation in SPSS AMOS.

Results: The results suggest that POS and PSS have a significant effect on PS and OP. Also, PS has a direct impact on OP. Mediation analysis suggests that PS has full mediation between the relationship of PSC and OP while partial mediation between PSS and OP.

Conclusion: To stay competitive and gain an edge in a continuously changing environment, IT organizations are looking to execute strategies that will help them retain their personnel. Therefore, businesses are keen to provide their employees with psychological safety and a sense of support so that they can perform more effectively in the workplace. Regarding psychological safety, this affects not only the individual but also teams and, thus, the entire company.

Keywords: Psychological safety, Organizational performance, IT sector, Social and personal employee support, Emergent technologies, Workplace.

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*Address correspondence to this author at the Chitkara Business School, Chitkara University, Punjab, India; E-mail: amit.mittal@chitkara.edu.in

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1. INTRODUCTION

Employees are now beginning to appreciate the importance of individuals' association with their organization. This is of great importance for every organization that aims to be flexible, progressive, and effective in a constantly changing environment [1]. The strength and expansion of an organization depend on the efforts and capabilities of all its employees and available resources. Continuous development, equalization, and optimization of employee capabilities are essential for the growth of a company [2]. To realize this intention, the organization must have a sophisticated and polished culture, as it encourages employees to be innovative, take calculated risks, initiate projects, and deliver growth in the organization. The impact of personality characteristics on organizational performance has been a prominent subject of research throughout the years. Certain factors are included in employee behavior, and these qualities are manifested in both the organization and its employees [3]. The business enterprise can only survive through constant improvement by gaining knowledge, adapting, and understanding philosophy in a dynamic environment. Employees are therefore expected to exhibit extra activities in their roles by taking interpersonal risks and investing their efforts into their work [4]. These approaches take place at many stages in the organization when individuals and groups come together by articulating themselves [5], collaborating [6], and facing experiential processes [7] through practicing activities. Psychological protection fosters a sense of safety and self-belief among employees, empowering them to cultivate their skills, gather information, make meaningful contributions, and effectively carry out their obligations in a dynamic and growing workplace. It simply means individual security during the change in organizational structure [8]. It is intently linked to the degree of effort exerted by members of the organization in their work. It has the possibility to enhance personal drive and improve work effectiveness, thus bolstering the organization's fundamental competitive advantage.

In order to establish a collective understanding of psychological safety within an organization, it is necessary to ascertain the amount of psychological safety experienced by each individual employee in their own workplace. A culturally informed approach towards organizational psychological safety nurtures a feeling of being valued or recognized among employees [9]. Therefore, Psychological safety in an organization is also influenced by culture components and has a distinct way of presenting itself. Psychological safety in cultures is determined by dignity, respect, and empathy. Social support and community lead to psychological safety [10]. Western values are characterized by individualism, freedom, and open communication. In this culture, constructive feedback and fair team dynamics reduce fear of negative effects, thereby promoting psychological safety [11]. Relational trust and meticulous social norms found in non-western cultures that emphasize collectivism, hierarchy, and indirect communication encourage psychological safety [12].

To comprehend the influence on organization performance, this study looks at the relationship between social

support and personal employee support at workplace. Hence, this study aims to investigate how psychological safety mediates the link between the performance of the organization and support. The findings of the study will not only broaden but also deepen the field of psychological safety research, which will encourage supportive behavior in both employees and leaders alike and raise the graph for organizational success.

1.1. IT Industry in India

India is a worldwide hub and an IT-dominated knowledge powerhouse in the 21st century. This sector is the heart of economic development to multiply exponentially and produce a significant range of project possibilities [13]. The IT sector has supported and boosted India's growth rate. This Industry absorbs a large pool of Indian skilled human resources, making the country an international IT hub [14]. However, it is the IT industry that has been key in changing India's entire economic and governmental landscape. The fourth wave of the industrial revolution is here, and India's IT industry will play a vital role by developing disruptive technologies. Breathtaking technological advances have made it necessary for IT professionals to continually learn new skills throughout their lifetime to adapt to the changing business environment [15]. Increasing technical reliability requires personnel with up-to-date capabilities, adequate training, and sufficient experience to maintain a resilient system. These individuals act as the ultimate protection against inevitable shortcomings arising [16]. As a result, the IT industry has come to understand that human resources are of paramount importance in sustaining a competitive advantage due to the ever-present fierce competition. In today's fast-paced work environment, dominated by fierce competition, overall employee performance is of great importance, encouraging individuals to increase their capabilities and make improvements. Effective communication of performance goals and consistent motivation are key elements of supervision that encourage individuals to grow and develop toward their potential [17]. The significance of these necessary nutrients for well-being is substantial.

Firms are racing to transform themselves into digital businesses, and the Indian IT sector is one of the brightest spots. Despite the great gains and developments, there lies a concerning reality - the health and well-being of tech professionals [18]. The IT sector is also known as the "brain drain" sector due to the significant immigration of Indian software professionals to other countries. Organizations face a considerable problem in retaining and hiring top performers [19]. Indian IT organizations are characterized by targets, deadlines, and work pressure [20]. Recently, employees in the IT sector have faced various work-related stresses, including an increasing prevalence of burnout [18], depression [19], and excessive workload [18-20]. A significant number of IT workers do not feel psychologically secure in their work. 40% of employees in India suffer from elevated levels of burnout, anguish, anxiety, and depression due to toxic work environments [21].

A recent report [22] highlighted an imperative issue of

mental health in the tech industry. In VUCA (Volatility, Uncertainty, Complexity, Ambiguity) environments, IT workers are more stressed out and anxious. Employees still avoid mental health discussions at work. A previous study [23] revealed that employees feel uncomfortable discussing mental health with their supervisors or managers for fear that discussion might affect their promotion. The demanding nature of jobs in IT affects employee health. Psychological safety must be maintained in the tech sector as a preventive measure by applying a supportive work culture.

Indeterminacy has continually been and will usually be an important part of professional lives. Additionally, employees may have concerns about being able to maintain their position in the organization, be visible as meaningful contributors to peers and superiors, and take care of themselves and their families [24]. Employers usually do not offer any assurances given the prevailing economic circumstances. However, safeguards can be provided for employees to prevent hasty or haphazard decisions [25]. Companies should, therefore, prioritize enhancing psychological safety in the workplace for their employees, thereby contributing significantly to the success of the organization. Psychological safety is closely linked to employee retention. Organizations that prioritize inclusive workplaces and promote a positive work culture will have an advantage in a highly competitive labor market [26]. They will be better able to attract highly competent individuals if they can establish a positive employer branding associated with psychological safety. So, instead of prioritizing organizational development, it is important to emphasize psychological safety, which can impact employee performance.

1.2. Psychological Safety and its Relationship with Organizational Performance

Amy Edmondson, a professor of Leadership and Management at Harvard Business School, is credited with pioneering the notion of psychological safety inside the workplace [27]. The idea gained popularity with the release of her influential paper "Psychological Safety and Learning Behavior in Work Teams" in 1999, and it remains relevant to date. The current business environment presents substantial obstacles to the viability of businesses. An organization's approach to tracking operations and attaining performance objectives is inspired by its strategic behaviors [28]. To ensure long-lasting competitive aspects and enhance operational effectiveness, businesses must prioritize strategic behaviors. The viability and advancement of an organization are heavily reliant on the Individual Performance (IP) of its employees [29]. Studies [21, 29, 30] have discovered that preserving silence regarding demanding situations, challenges, and troubles in the workplace is an extremely widespread occurrence. The idea of organizational silence suggests that employees frequently exhibit reluctance in expressing their concerns. Individuals inside organizations often choose the cautious approach of remaining silent, refraining from sharing input that might be beneficial to others

or opinions that they desire to share [31]. Establishing psychological safety in the workplace is a crucial determinant of organizational performance. Psychological safety is not a simple buzzword term; it refers to a culture that fosters a secure workplace where any employee, regardless of their position, can openly deal with any issue without fear of negative consequences to their reputation or professional trajectory [32].

In addition, creating a sense of belonging and psychological safety leads to an environment where people feel supported and acknowledged, as well as secure collaboration, which ultimately provides work satisfaction. Employees are comfortable with sharing their thoughts, admitting mistakes, and being truthful when a workplace environment creates such openness for accepting various viewpoints and praises constructive criticism. Moreover, it helps in idea generation. The factors under which employees build trust are organizational support, competent leadership, a contemporary learning environment as well as relationships with trusted co-workers [33]. This trust is grounded in the belief that their concepts, which are oriented toward benefiting, advancing, or improving an organization, will not be humiliated or punished. When employees are not threatened with penalties or retaliation, they learn from their mistakes and become psychologically safe [34]. It creates a channel through which employees will know that it is not wrong to make mistakes, as one should learn from his or her failures and improve decision-making. This can be vital when it comes to empowering employees and boosting their productivity. Psychological safety enables individual development and knowledge accumulation. The learning process, the development of abilities, and their addition, can also impact employee behavior [35]. An agile organizational structure is characterized by such a resilient level of psychological safety that teams can quickly address issues while functioning independently from a bureaucratic or isolated framework. Psychological safety refers to the ideal blend of positivity, behavior, and environment.

2. THEORETICAL FRAMEWORK AND ANTECEDENTS OF PSYCHOLOGICAL SAFETY AND ORGANIZATIONAL PERFORMANCE

2.1. Background Theories

The social support theory argues that it is possible to improve employee's well-being through the provision of social support against the stress they are challenged with. There are many sources of social support. It can come from the organization itself or even from the supervisor and, at times, coworkers [36]. All of these contribute positively to the quality of life enjoyed by people and add value to the overall organization. Apart from that, it can be offered in various ways like instrumental support (doing something for an employee), emotional support (showing sympathy), informational support (sharing pertinent information), and appraisal support (providing constructive feedback). Workplace social support reduces the negative impact that results from stressors such as high emotional demands and job overload in addition to

burnout and occupational stress [37]. Social support at work is the extent to which employees perceive that their supervisor or employers care about them in terms of health and make available stress-reducing resources such as a chance for positive social interaction [38].

The current study also used the Social Exchange Theory (SET) as a theoretical framework to explore interpersonal interactions from the viewpoint of mutual benefit and deliberation [39]. In the work environment, employees engage in social interaction with their fellow team members and supervisors as well as with the organization itself. These interactions influence the attitudes, behaviors, and performances of an individual [40]. This notion emphasized the focal point of justice and reciprocity, which highlighted that people aim for fairness in their relationships by trying to find equilibrium between what they offer a relationship and what comes back. In turn, the theory also helps to foster the physical and emotional loyalty of an employee towards a particular organization, which influences his job performance and reflects on overall company success.

The social cognitive theory argues that learning is a cognitive process occurring within the social environment and results from observation or instruction without direct reinforcement. In addition, the perception of efficacy held by an individual may greatly influence one's approach and how one should handle goals, tasks, and challenges [41]. Employees encounter stress when they see a loss of resources or barriers that impede their ability to fulfill employment goals. The theory gives a detailed account of the facts that psychological safety has its outcome variables and how behavioral changes are related to cognitive beliefs [42].

The main theoretical framework underpinning the current research is the Conservation of Resources (COR) theory, which highlights the importance of resources (such as support) for well-being [43]. The theory states when employees perceive strong support from an organization, supervisors, or co-workers, they believe they have more resources to cope with work demands, which boosts their self-efficacy and self-esteem, contributing to a positive self-concept [44]. This holistic approach not only enhances individual well-being and performance but also drives overall organizational success.

2.2. Research Hypotheses and Model Development

Organizational support refers to goal setting, developing strategies that are more suited for the identified goals, and instituting resource allocation as a means of achieving these set of objectives. They formulate strategies to adjust themselves to the dynamic and complex environmental conditions [45]. These approaches are aimed at achieving tangible results that would be set by them. When group members see the aim is unclear or when the debate strays from its focus, organizational support is essential in encouraging them to voice their concerns. Perceived organizational support allows the organizations to prepare for and be ready before such forthcoming events or activities take place. Moreover, it

helps employees to obtain new resources and improve their talents [46]. Employees believe that the organization provides both emotional and physical support. They are also expected to be recognized for the efforts they put forward in promotional opportunities to excel and prosper within this organization [47]. In addition, organizational support is involved in fostering overall performance over the long run through strategically promoting innovation.

2.2.1. H1: Perceived Organizational Support (POS) will have a Positive Impact on Organizational Performance (OP)

Supervisors play an important part in assisting staff [48]. The supportive behavior on the part of a leader is characterized by giving guidance, helping in obtaining required resources, offering emotional support, and guaranteeing safety. Role specifications by a leader ensure clarity and learning opportunities with respect to how one regards his /her ideals. Such an idea, if used by the organization, may help promote both personal and organizational development, which would result in fostering growth. The performance of an individual and at a team level is greatly influenced by leaders or supervisors who consistently create trustworthy connections, elicit responsive behavior from employees, and enhance commitment and loyalty [49]. The framework of supervisory trust eliminates several distractions preventing the pursuit of organizational efficiency [50].

2.2.2. H2: Perceived Supervisory Support (PSS) will have a Positive Impact on Organizational Performance (OP)

Coworker support is defined by employees' perceptions regarding the amount of practical and emotional help they receive from their coworkers [51]. Employees interact more often with their coworkers than they do with their supervisors, and thus, this factor can have a substantial level of effect on organizational attachment [52], employee behaviors [53], well-being, and turnover intentions [54]. During the various stages of their careers, employees tend to socialize at different points, which helps them to familiarize themselves with cultural differences and adapt accordingly. Nurturing a corporate culture that accepts a diverse workforce makes organizations benefit from this holistic aspect. Colleagues of varying backgrounds and experiences from different fields and careers help to create a warm environment that nurtures human potential, creativity, and innovativeness [55]. Organizational effectiveness is possible through knowledge sharing, teamwork, and collaborative decision-making. By including people with different views and opinions, organizations can benefit from diverse thinking [56]. This method encourages creative solutions to problems, improves decision-making processes, and creates a more dynamic workplace. These need a level of interpersonal comfort. It is directly related to the level of confidence in team skills through which an organization's overall performance and success depend on it.

2.2.3. H3: Perceived Co-worker Support (PCS) will have a Positive Impact on Organizational Performance (OP)

Self-concept also plays an important role in influencing employees' motivation, attitude, and behavior [57]. It covers individual characteristics, including intrinsic personality traits or personal qualities. Innovative and optimistic employee behavior is important because employees are a major stimulant of innovation within an organization [58]. When employees feel safe in expressing their ideas and opinions, they are more willing to take on new assignments and offer innovative solutions. They get comfort and confidence when leading to improved cognitive processes such as positive thinking, informed decision-making, efficient problem-solving, and the fulfillment of their maximum capabilities. Their optimistic attitude and creative aptitude significantly enhance the overall achievement of the organization [59].

2.2.4. H4: Personal Self-concept (PSC) will have a Positive Impact on Organizational Performance (OP)

Psychological safety not only enhances individual job performance but also enhances the organization's overall performance by fostering efficient interactions and creativity among employees [60]. Psychological safety also enhances the productivity and efficacy of an organization. Companies that prioritize this aspect achieve superior financial outcomes as a consequence of improved retention rates, innovation, and engagement [61]. In highly dynamic and fast-paced workplaces, psychological stability is crucial for equitable processes, which in turn fosters open communication and feedback [62]. The quality of work and physical safety is enhanced when employees feel comfortable discussing prejudices or injustices, which leads to more equitable practices.

2.2.5. H5: Psychological Safety (PS) will have a Positive Impact on Organizational Performance (OP)

Psychological safety has significant importance in contemporary work environments. It is one of the factors that lead to success. Organizations are moving towards a new operational paradigm for work and the workforce, focusing on skills rather than prescribing specific job titles. Intrinsic support may help employees feel safe and secure, guaranteeing that their organization is flexible enough to implement changes or handle unexpected emergencies in the future [63]. Employees should be able to take calculated risks without the fear of being judged or made guilty by their peers. It is the role of leaders to create and nurture psychological safety within an organization. They must create the atmosphere and show what they want others around them to be doing. The need to ensure psychological safety should be a priority for leaders who seek to build an extremely efficient, innovative, and hard-working workforce [64]. The key component is to have an environment where employees feel comfortable taking risks, inquiring more often, freely articulating their thoughts, and learning from their mistakes [65]. Psychological safety has also been associated with perceived support from co-workers because

it reduces anxiety and defensiveness among members by availing resources as well as knowledge. Sharing rewards and collective responsibility, are some of the behaviors that have been associated with creating psychological safety in teams [66]. Psychological safety will determine the tendency of an individual to participate or react in physical, cognitive, and emotional aspects throughout executing their roles [67]. In a psychologically safe environment, workers are more likely to engage in activities that promote learning and innovation because they would be willing to share information and embrace openness. Organizational performance is a complex phenomenon associated with an organization's mission and vision. It refers to the organization's capacity to effectively utilize its resources and produce outcomes that align with its objectives and are meaningful to its stakeholders [68]. Psychological safety is the cornerstone of a healthy workplace culture since it leads to higher employee retention and engagement.

2.2.6. H5a-d: Psychological Safety Positively Mediates the Relationship between (i) Perceived Organizational Support (H5a), (ii) Perceived Supervisory Support (H5b), (iii) Perceived Co-worker Support (H5c), and (iv) Personal Self-concept (H5d), and Organizational Performance

A research model is proposed encompassing all hypotheses, which is shown in Fig. (1).

3. METHOD

3.1. Data Collection

The current research specifically targeted employees in the service industry, particularly those who were working in the IT sector in India. The research adopted a purposive sampling technique to collect data. Participants' inclusion criteria were as follows:

- i) This survey encompassed full-time employees, Part-time employees, and Interns aged between 20–45 years old;
- ii) Working in an organization with more than ten staff;
- iii) Joined a team with more than three members;
- iv) Not a president, manager, or team leader.

A cross-sectional questionnaire survey was conducted between July to October 2023 among IT employees. The research collected data with informed consent from all participants. The questionnaire mentioned that the data provided by the respondents would be used only for research purposes. Participants understood the study's goals, procedures, and potential risks. They were guaranteed anonymity and confidentiality of their responses. The survey instrument had closed-ended questions. Responses were collected using a 7-point Likert-type scale, with 7 indicating *strongly disagree*, 6 indicating *disagree*, 5 indicating *partially disagree*, 4 indicating *uncertain*, 3 indicating *partially agree*, 2 indicating *agree*, and 1 indicating *strongly agree*. The data had been collected from 232 respondents, which were in between the recommended sample size *i.e.*, five to ten times the number of items in the study [69].

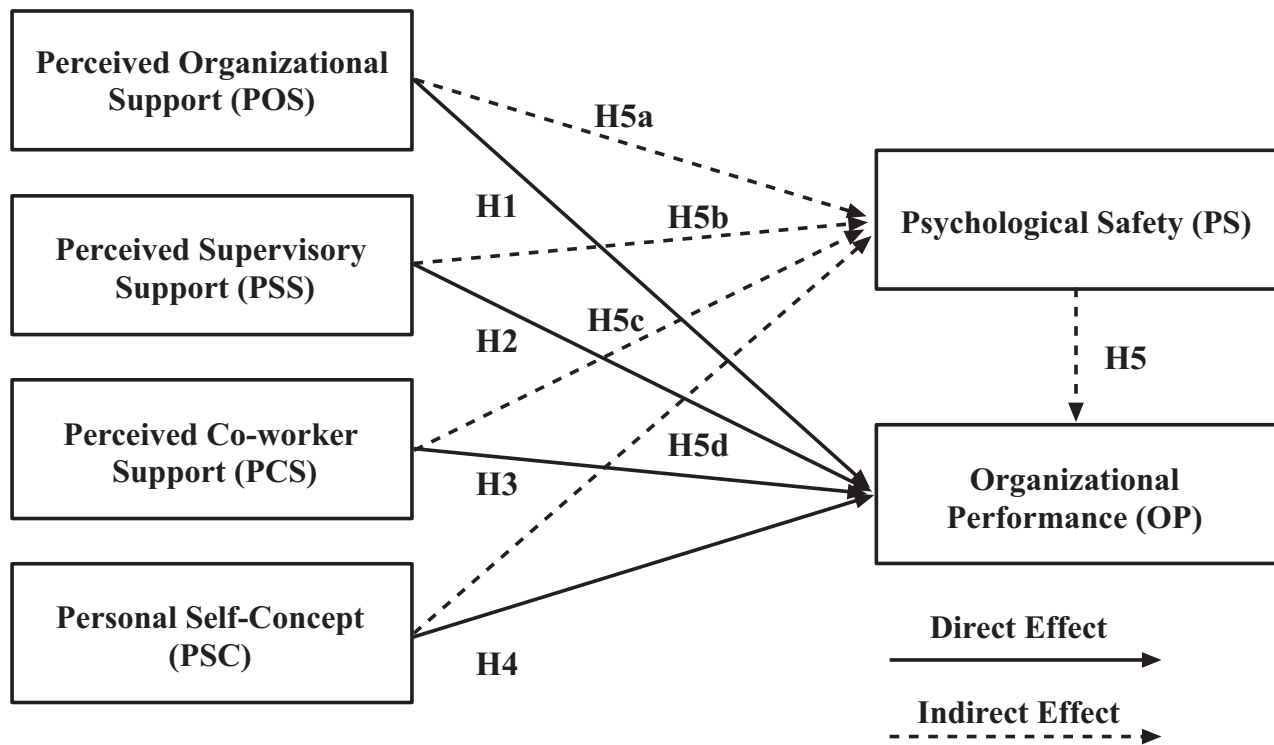


Fig. (1). Proposed research model.

3.2. Research Design

The current study used an exploratory research design. Psychological safety is a mediating variable in the proposed model. A mediation test was conducted to ascertain that the psychological safety measurement construct is appreciable in holding the capacity of an exogenous variable (social and personal employee support) to an endogenous variable (organizational performance). Statistical tests such as Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and SEM were used which only accept responses from a 5-point scale or above. The methodology for the data analysis was carried out in three stages. In the initial step, the researcher used exploratory factor analysis (EFA) to find out the underlying structure among the variables (scale items). After conducting the EFA, the measurement model was tested through the CFA, it established the construction of the measurement scale items in terms of validity (convergent and discriminant), reliability, and model fit. Further, SEM was performed to find the causal relationship among the variables and test the proposed hypothesis.

3.3. Measurement Instruments

The survey was divided into two parts; the first part was specifically related to demographic survey questions, and the subsequent part had the questions related to different variables used in the study. Appendix-1 showed

respondent demographics. The provided questionnaires in the survey can be found in Appendix 2. The measurement instruments of each variable will be discussed individually in the following section. The measurement of independent variable perceived organizational support (POS) was adopted by a shortened version of the survey originally designed by [70]. This is a short version of their original survey but equally reliable. Prior studies have effectively utilized abbreviated versions of the survey [71]. Perceived Supervisory Support (PSS) utilizes the scale developed by [72] to evaluate employees' views of the level of support they receive from their supervisors in their employment. Perceived coworker support (PCS) was precise, using a scale developed by [73]. Personal Self-Concept (PSC) as one of the independent variables was overviewed by the scale developed by [74]. Psychological safety (PS), a mediating variable in the current study, was checked using the scale developed by [75]. To measure the level of organizational performance (OP) as a construct of the dependent variable, the scale developed by [76] was used.

3.4. Common Method Bias

The study sought to determine if common method bias may be present by using Harman's one-factor test as recommended by [77]. All items were subjected to exploratory factor analysis (EFA) in order to test for common method bias, a single factor explained less than 50% variance. The results of the study specify that no common method bias was present.

3.5. Exploratory Factor Analysis

The EFA was conducted using SPSS 20.0. The Kaiser-Mayer-Olkin test was conducted to assess the adequacy of the sample, yielding a value of 0.818, which was above the acceptable threshold of 0.80 [69]. The EFA proposed six variables with varimax rotation, as seen in Table 1. Table 1 also displayed the summarized results for the loadings of the items. Two items, namely PSS1 and PSS7, were removed from the perceived supervisory support scale due to their low factor loadings. These items have a factor

loading below 0.45. Low factor loading items lead to poor AVE scores, which causes issues with convergent validity [78]. All other factors that were included in the analysis were found to be statistically significant and within acceptable limits.

The study conducted an examination of internal consistency reliability using the Cronbach alpha (α) coefficient. The Cronbach alpha (α) values for each construct in the present study are above the minimum acceptable threshold of 0.70. A Cronbach alpha (α) value over 0.70 indicates good internal reliability [78].

Table 1. EFA and cronbach alpha findings.

| - | Component | | | | | |
|--|----------------|---------|---------|---------|---------|---------|
| | POS | OP | PCS | PSS | PS | PSC |
| Cronbach α | 0.913 | 0.914 | 0.839 | 0.871 | 0.880 | 0.802 |
| Eigen Value | 13.71 | 3.04 | 1.75 | 1.44 | 1.20 | 1.08 |
| Total variance explained (explained variance) | 67.4% (41.57%) | (9.22%) | (5.32%) | (4.38%) | (3.65%) | (3.27%) |
| POS1 | 0.818 | - | - | - | - | - |
| POS2 | 0.774 | - | - | - | - | - |
| POS3 | 0.800 | - | - | - | - | - |
| POS4 | 0.746 | - | - | - | - | - |
| POS5 | 0.767 | - | - | - | - | - |
| POS6 | 0.637 | - | - | - | - | - |
| OP1 | - | 0.746 | - | - | - | - |
| OP2 | - | 0.728 | - | - | - | - |
| OP3 | - | 0.799 | - | - | - | - |
| OP4 | - | 0.776 | - | - | - | - |
| OP5 | - | 0.659 | - | - | - | - |
| PCS1 | - | - | 0.707 | - | - | - |
| PCS2 | - | - | 0.655 | - | - | - |
| PCS3 | - | - | 0.757 | - | - | - |
| PCS4 | - | - | 0.647 | - | - | - |
| PCS5 | - | - | 0.605 | - | - | - |
| PSS1 | - | - | - | - | - | - |
| PSS2 | - | - | - | 0.715 | - | - |
| PSS3 | - | - | - | 0.669 | - | - |
| PSS4 | - | - | - | 0.681 | - | - |
| PSS5 | - | - | - | 0.542 | - | - |
| PSS6 | - | - | - | 0.603 | - | - |
| PSS7 | - | - | - | - | - | - |
| PS1 | - | - | - | - | 0.719 | - |
| PS2 | - | - | - | - | 0.716 | - |
| PS3 | - | - | - | - | 0.596 | - |
| PS4 | - | - | - | - | 0.644 | - |
| PS5 | - | - | - | - | 0.591 | - |
| PSC1 | - | - | - | - | - | 0.711 |
| PSC2 | - | - | - | - | - | 0.639 |
| PSC3 | - | - | - | - | - | 0.666 |
| PSC4 | - | - | - | - | - | 0.477 |
| PSC5 | - | - | - | - | - | 0.680 |

Note: Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Table 2. Model fit indices.

| Model Goodness of Fit Indices | Cut-off Values | Final Measurement Model |
|-------------------------------|----------------|-------------------------|
| χ^2/ df | < 3 | 1.776 |
| RMSEA | < 0.08 | 0.058 |
| GFI | > 0.90 | 0.901 |
| AGFI | > 0.80 | 0.830 |
| NFI | > 0.90 | 0.904 |
| CFI | > 0.90 | 0.951 |

Table 3. Factor correlation matrix, composite reliability (CR), and average variance explained (AVE).

| - | CR | AVE | PCS | POS | PS | PSS | PSC | OP |
|-----|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|
| PCS | 0.798 | 0.569 | 0.754 | - | - | - | - | - |
| POS | 0.912 | 0.634 | 0.451 | 0.796 | - | - | - | - |
| PS | 0.880 | 0.595 | 0.523 | 0.689 | 0.772 | - | - | - |
| PSS | 0.881 | 0.555 | 0.700 | 0.612 | 0.711 | 0.745 | - | - |
| PSC | 0.764 | 0.618 | 0.692 | 0.386 | 0.499 | 0.598 | 0.786 | - |
| OP | 0.915 | 0.684 | 0.488 | 0.653 | 0.771 | 0.700 | 0.404 | 0.827 |

Note: Diagonal values (bold) show the square root of the AVE.

Table 4. Hypotheses testing.

| Independent Variable → Dependent Variable | Beta | Sig | Results |
|---|-------|------------|-------------------|
| POS → OP | 0.163 | 0.021** | H1 Supported |
| PSS → OP | 0.443 | 0.003** | H2 Supported |
| PCS → OP | 0.017 | 0.902 (ns) | H3 Not supported |
| PSC → OP | 0.085 | 0.312 (ns) | H4 Not supported |
| PS → OP | 0.519 | 0.000*** | H5 Supported |
| POS → PS | 0.359 | 0.000*** | H5a Supported |
| PSS → PS | 0.565 | 0.000*** | H5b Supported |
| PCS → PS | 0.039 | 0.782 (ns) | H5c Not supported |
| PSC → PS | 0.102 | 0.221 (ns) | H5d Not supported |

Note: ns = "not significant", p-value = *** < 0.000; ** < 0.05.

3.6. Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a multivariate statistical approach commonly applied to estimate the validity of the construct [79]. CFA was applied to the items of the constructs to check the reliability of the constructs and to test how well the model is statistically fit. The composite reliability of the measurement constructs ranged from 0.764 to 0.915. The model fit indices of the final measurement model are also within the acceptable range [78], as shown in Table 2.

3.7. Discriminant and Convergent Validity

Validity analysis can be performed by examining convergent and discriminant validities. To establish validity, the minimum acceptable threshold for average variance extracted (AVE) is 0.5, and the square root of the AVE of each construct should be greater than the correlation between the construct and all the variables [80]. The results of the current study show that AVE is greater than 0.5, ensuring a convergent validity, and CR is

greater than 0.7, ensuring good reliability. Moreover, Table 3 shows the discriminant validity as the diagonal element values are greater than the correlation between the construct and all the variables, ensuring a good discriminant validity.

3.8. Structure Model

3.8.1. Hypotheses Testing (Direct Effect)

The structural equation model was performed to test the hypotheses H1-H5 and H5a-d using the maximum likelihood estimation method. The results in Table 4 show that hypotheses H1 ($\beta=0.163$, $p< 0.05$), H2 ($\beta=0.443$, $p< 0.05$), H5 ($\beta=0.519$, $p< 0.000$), H5a ($\beta=0.359$, $p< 0.000$) and H5b ($\beta=0.359$, $p< 0.000$) are supported while H3, H4, H5c and H5d are not supported.

3.8.2. Hypotheses Testing to Test the Mediating Effects (Indirect Effect)

The bootstrap estimation method in AMOS was used to test the hypotheses (H5a-d), starting with the mediating

Table 5. Mediation analysis.

| Path (X→M→Y) | Direct Effect (X→Y) | Indirect Effect (X→Y) | Results |
|--------------|---------------------|-----------------------|-----------------------------------|
| POS→PS→OP | 0.163 (ns) | 0.053 (ns) | No mediation (H5a not supported) |
| PSS→PS→OP | 0.443** | 0.294** | Partial mediation (H5b supported) |
| PCS→PS→OP | 0.017 (ns) | 0.020 (ns) | No mediation (H5c not supported) |
| PSC→PS→OP | 0.085 (ns) | 0.186** | Full mediation (H5d supported) |

Note: P value = ** < 0.05; ns = 'not significant'.

'X', 'M', and 'Y' represent independent, mediator, and dependent variables, respectively.

effect of psychological safety on social support *i.e.*, perceived organizational support (POS), perceived supervisory support (PSS) and perceived co-worker support (PCS) and personal employee support *i.e.*, personal self-concept (PSC) at workplace and organizational performance. As suggested in a previous study [81], this method was widely used to compute the confidence interval for indirect effects. The results in Table 5 show that the indirect effects of PSC on organizational performance are significant, while the indirect effects of PSS on organizational performance are partially significant. Table 5 also suggests that there is no mediation of psychological safety between the relationship of POS and PCS on organizational performance (OP).

4. RESULT AND DISCUSSION

The present research covers the four main drivers of psychological safety related to support *i.e.*, perceived organizational support (POS), perceived supervisory support (PSS) and perceived co-worker support (PCS), and personal employee support *i.e.*, personal self-concept (PSC) at the workplace.

The result shows that POS has a positive impact on OP support hypotheses 1, which aligns with the previous literature [28, 29]. Offering training and career development opportunities highlighted that the organization is invested in employees' futures, thereby increasing OP [82]. POS enhances employee motivation, satisfaction, and well-being and contributes to better organizational outcomes. POS leads to a more engaged and productive workforce [83]. Perceived organizational support, such as recognizing employee contributions, providing adequate resources, and supportive work environment, significantly improves organizational performance. Transparent and open communication from management about organizational goals, changes, and appreciation strengthens POS [84].

The result of PSS has a positive impact on OP, supporting hypothesis 2. PSS creates a more supportive work environment that drives success and growth. The hypothesis outcomes are uniform and supported by the earlier research conducted [53,55], which depicts that employees who perceive supervisor support are generally more satisfied with their jobs, contributing to better individual performance and, in turn, organizational performance. Supervisory support strengthens employees' emotional and professional commitment to the organization, reducing turnover intentions and absenteeism [85]. Support and resources encourage emp-

loyees to take initiative and innovate, which drives organizational growth.

The result of hypothesis 3 shows that PCS has a non significant impact on OP [86] focused on the stronger impact of vertical relationships compared to horizontal relationships on organizational outcomes. External market conditions (opportunities and threats) [87] and internal competitive climate [88] limit the role of PCS. Internal competitive climate significantly affects performance and commitment [89]. Other scholars have shown that competition leads to increased pressure among employees, more unethical behaviors [90], and higher stress [91]. PCS is valuable; it should be balanced with other critical support systems like managerial support and technological infrastructure to maximize organizational performance.

Hypothesis 4 examines the impact of PSC on OP and shows that it has no significant impact on OP. The self-concept of an individual is mainly affected by the environment as well as the people with whom the individual works. A person may develop a positive or negative self-concept depending on how he is treated and how he perceives such treatment. Upward social comparisons tend to induce more negative feelings [92]. A negative self-concept can limit what one is willing to try. It leads to anxiety, hopelessness and frustration. Evaluation styles and performance also affect personal self-concept [93]. Locus of control strongly influences optimistic versus pessimistic evaluation styles. Therefore, when organizations and managers have favorable attitudes toward employees, they are in a much better position to reinforce positive and realistic self-concepts among them. On the other hand, previous studies [94] have proven that there was a significant positive correlation between professional self-concept and job satisfaction.

Hypothesis 5 shows that PS improves OP at the workplace. It stimulates worker involvement and teamwork [61]. The relationship between psychological safety and organization performance is greater where the results or work aren't prescribed and when the job demands employees to do something creative, novel, or truly collaborative [34]. Psychologically secure workplaces encourage workers because they believe their efforts count. Better decision-making results from speaking up without fear. Employees are comfortable discussing and learning from errors [28-30].

The current study mainly focuses on the mediating role of PS in the relationship between Support at the

workplace and OP in the context of the Indian IT sector. Some hypotheses are partially mediated, fully mediated, and have no mediation. Most papers have looked at PS as a mediator across three distinct streams: the individual, team, and organizational levels [95, 96]. The PS has partial mediation between PSS and OP, which supports hypothesis H5b. Leaders create a positive work culture by developing an atmosphere of high psychological safety in the workplace so it improves connection with peers and colleagues who help to contribute towards better organizational performance [97]. It is through relationships with leaders that employees learn important insights regarding adaptability, consistency; trust, and competence. In this case, leaders have an influence on the workers that motivates them. The responsible leader is supposed to resolve the stability problems in the workplace and has the knowledge of work stress with job insecurity.

PS shows full mediation in the relationship between PSC and OP, supports hypothesis H5d. Employees are the main actors in the operation of their firms; scholars have paid much attention to the mediating role of psychological safety at work place because the issue of job retention substantially influences the working lives of employees, as well as organizational outcomes [98]. When employees feel psychologically safe in an organization, they may perceive that they are cared for and respected by the organization. These perceptions lead employees to attach themselves to organizations by enhancing their social identity [61,62,98]. A psychologically safe environment creates a positive sense of self in employees, which helps them develop positive attitudes toward their firms in the form of stronger organizational commitment.

CONCLUSION AND IMPLICATIONS

Psychological insecurity is rooted in mental health concerns, unaddressed grievances, prejudices, and anxiety, creating the possibility of losing anonymity while providing feedback. Psychological safety in a work setting enhanced open communication and the appreciative attitude of fellow workers [99]. However, the organizational support helps employees to become open and willing to propose ideas that vary from the normal standard of operations. Organizations should not focus on punishing employees for their mistakes but strive to transform these errors into great learning experiences. The organization provides employees with an opportunity to correct their mistakes so that mistakes do not stifle them from taking risks and exploring new endeavors [8, 26]. Through the ability to empathize, leaders demonstrate how much they care about their team and are willing to help. Leaders demonstrate such behaviors that create an environment where everyone appreciates and practices psychological safety [53].

Active listening is the most important aspect of creating a psychologically safe workplace environment [100]. This transformation has also changed the way leaders actively interact with their teams and here takes a central place. The team members are inspired and empowered to follow their leaders, making it a unified, efficient group that thrives in open communication with mutual support. By encouraging the appropriate atmosphere, optimistic

mindset, and diligent behavior among their workers, leaders create an environment that psychologically enables them to be safe [101]. Employees often admire the leader and think of their position as a goal or next level. Therefore, a leader has multi-dimensional characteristics that take up several roles, such as directing in the workplace and expecting clear performance deliverables from an employee and mentoring. In addition, the creation of a safe environment by leaders encourages employees to share their opinions more openly, collaborate, and find unique solutions [97]. This development is significant in any leader-subordinator relationship, whether on an individual level or within a group. To bring about a culture that is synonymous with psychological safety, leaders feel courageous enough to speak for themselves and their employees. Psychological safety is a very important aspect that lays the foundation for longstanding economic success. On the other side, a lack of psychological safety in the workplace reduces the inclination to take risks and accept errors. As a result, this later leads to disengagement and a lack of commitment towards the quest for organizational growth [102]. Psychological safety extends beyond the contributors and affects teams; hence, this even applies to all businesses.

THEORETICAL IMPLICATIONS

The current research assists IT firms in developing psychological safety interventions and policies to create a safe workplace. This notion represents a significant contribution to the existing literature on psychological safety, support, and IT firms' performance. Unlike prior research, which focused on observing the mediating role of psychological safety on organizational performance either separately or in combination through organizational support, supervisor support, and co-worker support, this research offers a fresh perspective. This research adds value by applying an individual perspective and incorporating personal self-concept to build psychological safety in the workplace. It describes how someone views oneself. Hence, the study emphasizes the role of personal self-concept in fostering psychological safety in the workplace. The study suggests that before building a psychologically safe environment in the organization, it is essential to foster a strong sense of personal self-concept among employees. The research shows that it fulfills the needs for autonomy, connection, and competence. It also emphasizes leaders' and organizations' obligation to create conditions that allow employees to meet these needs.

PRACTICAL IMPLICATIONS

The research paper has several ramifications for organizations, managers, and HR practitioners. To promote psychological safety, HR practitioners should collect information about organizational practices, equalize employee psychological safety, and assess improvement opportunities within the workplace environment. Mapping the organization's existing programs with the planned psychological safety program reduces duplication and increases staff well-being investment. If required, the HR practitioners should reevaluate the current psychological safety portfolio with the present situation to see whether

the capabilities of the company's employees are properly supported or not. Organizational support intensifies the sense of a collective identity amongst members belonging to an organization. Organizations should implement regular performance evaluations to check the strengths and areas for improvement in a constructive manner. Offer access to counseling services, stress management workshops, and flexible work arrangements to accommodate employee's needs and promote work-life balance. This highlights the significance of a corporate culture and leadership approach that enables proactive work behavior. Supervisors' support at the workplace assists in meeting the fundamental psychological demand for autonomy and competence. The study focuses on leadership training programs to equip managers with the essential skills such as active listening, empathy, and providing constructive feedback. Managers or supervisors should pay more attention to developing strong interpersonal relationships with their team members by building trust and empathy. Organizational phenomena that facilitate these requirements create psychological safety through which organizational accomplishment is influenced.

LIMITATIONS AND FUTURE RESEARCH

The first limitation of this study is its cross-sectional design, which prevents tracking respondents over time. Future research should use longitudinal designs to evaluate how employees' sense of empowerment and psychological safety evolve and how proposed relationships might change or reverse with the passage of time. Thus, these findings may not hold in longitudinal studies. Secondly, in our study, the respondents were limited to Indian IT professionals, and the sample size was small relative to the IT sector in India, raising questions about its generalizability. The current study can be replicated, and future studies need to validate the findings of the study on the sample from other companies in India. Thirdly, this study was conducted in India, where cultural differences significantly influence workplace perceptions, attitudes, and job performance. Future research should examine the relationship between psychological safety and organizational performance across different countries to account for these cultural variations. Fourthly, the current study explored the mediating role of psychology safety with organizational performance. It is recommended that future studies be conducted to explore more the mediating role of PS in predicting employee workplace behaviors and their consequences, such as creativity and innovation. Finally, the current study does not consider the individual traits that influence their psychological safety sense. Therefore, it is also recommended that future studies should focus on the possible role of individual differences and determine how dispositional variables are involved in psychological safety.

Appendix 1. Demographic profile of respondents.

| Variables | Categories | Frequency | Percentage |
|--------------------|------------|-----------|------------|
| Status of your job | Full time | 120 | 51.7 |
| | Part-time | 59 | 25.4 |
| | Interns | 53 | 25.9 |

AUTHORS' CONTRIBUTION

It is hereby acknowledged that all authors have accepted responsibility for the manuscript's content and consented to its submission. They have meticulously reviewed all results and unanimously approved the final version of the manuscript.

LIST OF ABBREVIATIONS

- POS = Perceived Organizational Support
- PSS = Perceived Supervisory Support
- PCS = Perceived Co-worker Support
- PSC = Personal Self -Concept
- OP = Organizational Performance
- PS = Psychological Safety

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Informed Consent was received from the participants/respondents. The paper meets all ethical requirements vide UINC 242002068CBS.

HUMAN AND ANIMAL RIGHTS

All human research procedures followed were following the ethical standards of the committee responsible for human experimentation (Institute and National) and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from the participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data and supportive information are available within the article.

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CONFLICT OF INTEREST

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APPENDIX

contd....

| Variables | Categories | Frequency | Percentage |
|----------------------------|--------------------------|-----------|------------|
| Gender | Male | 139 | 59.9 |
| | Female | 93 | 40.1 |
| Age (years) | 20 to 30 Years | 119 | 51.3 |
| | 31 to 40 Years | 64 | 27.6 |
| | 41 to 45 Years | 49 | 21.1 |
| Highest level of education | Master's Degree | 61 | 26.3 |
| | Bachelor's Degree | 140 | 60.3 |
| | Others | 31 | 13.4 |
| Job level | Entry Level | 104 | 44.8 |
| | Experienced Senior Staff | 77 | 33.2 |
| | Technicians | 51 | 22.0 |
| Work Experience | 0-5 Years | 121 | 52.1 |
| | 5-10 Years | 14 | 6.1 |
| | 11-15 Years | 47 | 20.3 |
| | 16-20 Years | 50 | 21.5 |

Appendix 2. Scale measurement.

| Scale | Code | Item | Source |
|----------------------------------|------|---|------------------------------|
| Perceived Organizational Support | POS1 | My organization strongly considers my goals and values. | Rhoades & Eisenberger (2002) |
| | POS2 | My organization really cares about my well-being. | |
| | POS3 | My organization would forgive an honest mistake on my part. | |
| | POS4 | My organization cares about my opinions. | |
| | POS5 | Help is available from my organization when I have a problem. | |
| | POS6 | My organization is willing to help me when I need a special favor. | |
| Perceived Supervisory Support | PSS1 | My supervisor takes the time to learn about my career goals and aspirations. | Eisenberger et al. (2002) |
| | PSS2 | My supervisor keeps me informed about different career opportunities for me in the organization. | |
| | PSS3 | My supervisor makes sure I get the credit when I accomplish something substantial on the job. | |
| | PSS4 | My supervisor gives me helpful feedback about my performance. | |
| | PSS5 | My supervisor gives me helpful advice about improving my performance when I need it. | |
| | PSS6 | My supervisor supports my attempts to acquire additional training or education to further my career. | |
| | PSS7 | My supervisor provides assignments that give me the opportunity to develop and strengthen new skills. | |
| Perceived Co-worker Support | PCS1 | My colleagues give me helpful information or advice. | Ladd & Henry (2000) |
| | PCS2 | My colleagues are sympathetic and give me advice. | |
| | PCS3 | My colleagues give me clear and helpful feedback. | |
| | PCS4 | My colleagues give me practical assistance. | |
| | PCS5 | My colleagues provide a source of satisfaction for me. | |
| Personal Self-Concept | PSC1 | I feel of equal value to other people, regardless of my performance, looks, IQ, achievements, or possessions (or lack of them). | Shavelson et al. (1976) |
| | PSC2 | I take responsibility for my feelings, emotions, thoughts, and actions. I do not give others credit or blame for how I feel, think, or what I do. | |
| | PSC3 | I learn and grow from my mistakes rather than deny them or use them to confirm my unworthiness. | |
| | PSC4 | I nurture myself with kind, supportive self-talk. | |
| | PSC5 | I actively participate in challenging tasks when they are available. | |
| Psychological Safety | PS1 | If I speak up/voice my opinion, I know that my input is valued by my organization. | Liang et al. (2012) |
| | PS2 | I feel my ideas are valued by my organization, and I feel safe in suggesting them. | |
| | PS3 | I can communicate my opinions about work issues with my team leader. | |
| | PS4 | If I had a question or was unsure of something in relation to my role at work, I could ask my peers. | |
| | PS5 | If I made a mistake, I would feel safe speaking up to my leaders and peers. | |
| Organizational Performance | OP1 | Our company is more efficient and productive than our competitors. | Lau & May (1998) |
| | OP2 | Our management performance is superior to our competitors. | |
| | OP3 | Our financial performance is excellent in comparison to our competitors. | |
| | OP4 | The procedure used by our organization is free of bias. | |
| | OP5 | Our organization considers safety at least as important as production and quality in the way work is conducted. | |

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