



PSYCHOLOGICAL SAFETY AS A MODERATOR IN THE RELATIONSHIP BETWEEN SHARED LEADERSHIP AND TEAM INNOVATION IN HIGHER EDUCATION

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Abstract

Purpose: This study examines the impact of shared leadership on team-level psychological ownership and its subsequent effect on team innovative behavior among employees in the higher education sector. Additionally, it investigates the moderating role of psychological safety in these relationships.

Design/methodology/approach: Grounded in social exchange theory, data were collected from academic and administrative staff across multiple higher education institutions using standardized measurement scales. Structural equation modeling (SEM) was employed to test the hypothesized relationships.

Findings: Results indicate that shared leadership significantly predicts team-level psychological ownership, which in turn positively influences team innovative behavior. Psychological safety was found to play a significant moderating role, enhancing the effects of shared leadership on team outcomes.

Originality/value: This study addresses a gap in empirical research on shared leadership and team dynamics within the higher education sector. It emphasizes the importance of psychological safety in maximizing the benefits of shared leadership for fostering innovation, offering both theoretical insights and practical guidance for academic institutions operating in complex and competitive environments.

INTRODUCTION

In the contemporary landscape of higher education, the cultivation of innovative behavior within teams is paramount for sustained institutional advancement and competitive advantage (Shen, Deng, Xiao, Zhang, & Dai, 2025). To navigate the complexities of modern academia, institutions are increasingly reliant on the collective ingenuity and collaborative spirit of

their constituent teams (Pu, Dong, & Jiang, 2024). However, the dynamics that underpin team-level innovation are multifaceted and influenced by a constellation of leadership approaches, individual psychological states, and the overarching organizational climate (Shao, Miao, Ren, Cai, & Fan, 2024).



In response to these limits, this research endeavors to investigate the intricate interplay between shared leadership, team-level psychological ownership, team innovative behavior, and the moderating role of psychological safety among employees within the higher education sector. This exploration is crucial, as innovation in higher education serves as the cornerstone for shaping the future of learning and knowledge dissemination (Aithal & Maiya, 2023; Sauphayana, 2021). Teams in academic institutions are increasingly required to engage in collaborative knowledge creation, problem-solving, and service improvement, making team dynamics and leadership approaches critically important (Shao et al., 2024). Traditional hierarchical leadership models, often rigid and top-down in nature, have shown limitations in addressing the complex and dynamic challenges faced by modern organizations (Alabdali, Yaqub, Agarwal, Alofaysan, & Mohapatra, 2024). In response, there has been a growing scholarly and practical interest in shared leadership, a collective leadership model characterized by the distribution of leadership influence among team members (Karakose & Tülübaş, 2023).

Shared leadership enables teams to leverage the diverse skills, expertise, and perspectives of all members, which is particularly valuable in higher education settings that rely heavily on intellectual contributions and collaborative innovation (Aggarwal, Baker, & Joshi, 2024). Shared leadership, characterized by the distribution of leadership responsibilities among team members, has emerged as a potent catalyst for fostering innovation (Harvey, Bresman, Edmondson, & Pisano, 2022). Departing from traditional hierarchical structures, shared leadership empowers individuals to contribute their unique expertise and perspectives, thereby enriching the collective problem-solving capacity of the team (Harvey, Johnson, Roloff, & Edmondson, 2019).

The concept of academic capitalism posits that higher education institutions are proactive agents of change (Cai, Lysova, Khapova, & Bossink, 2019), the implementation of effective leadership

models remains a critical determinant of successful innovation.

Innovation allows organizations to improve their viability and it is broadly recognized as a serious influence for administrative success (Shanker, Bhanugopan, Van der Heijden, & Farrell, 2017). One of the best ways to become an innovative organization is to capitalize on employees' innovative abilities; fostering this culture will help ensure continuous and long-term effectiveness (Pieterse, Van Knippenberg, Schippers, & Stam, 2010). Innovative behavior raises to recognizing workplace difficulties, generating new results or concepts for the difficulties and generating support so the new ideas are ultimately embedded within the organization (Javed, Khan, & Quratulain, 2018; Scott & Bruce, 1994). O. Janssen (2000), defined progressive conduct as a voluntary construction, initiation and use of novel thinking in a work role, for the purpose of benefiting organizational performance. Pieterse et al. (2010), suggests that new ideas can act as per the structure wedges from which to deliver superiority in facility and/or resolve workplace difficulties in an innovative way.

Several studies, for instance, (Al-Husseini, El Beltagi, and Moizer (2019); Alahmari, Issa, Issa, and Nau (2019)) suggest that the innovative behavior of individuals in education sector could significantly contribute to a dynamic environment and meet new challenges. Innovative behavior could increase students' learning outcomes and, assist in achieving a higher quality education (Abdullatif, 2017). The demonstration of innovative behaviors by academics could foster an innovative climate amongst academics themselves, where academic programs are continually updated to meet market demands and skills, and teaching methods are updated to match students' learning preferences (Al-Husseini et al., 2019; Lašáková, Bajžíková, & Dedze, 2017; Thurlings, Evers, & Vermeulen, 2015). Teachers need to remain imaginative and advanced in every aspect of their effort. Some of the aspects include curriculum design, course outlines, learning based objectives, pedagogical techniques, researching contemporary ideas, and



sharing knowledge which can inculcate creative and analytical skills among university students. Another study explained the creativity of the teams influenced by participative leadership and shared leadership with mediating role between participative leadership and team creativity. Further the study reported significant moderation role of team voice behavior between participative leadership and shared leadership, the moderation role was found by team creative efficacy between shared leadership and team creativity (Ali, Wang, & Johnson, 2020). The prior study also reported that explicit knowledge sharing and tacit knowledge sharing predict the innovative behavior of employees, the study further explained the relationship between team reflexivity that influence the knowledge sharing with moderation role of authoritative leadership and benevolent leadership among employees (Wang, Ren, Chadee, Liu, & Cai, 2021).

The prior studies have stated that organizational structure predict the workplace innovation. A large number of articles have printed so far on assessing the relationship between organizational team and innovation (Le Blanc, González-Romá, & Wang, 2021). The meta-analysis has been conducted that shows direct influence and relationship of team processes, characteristics and innovation (Hülsheger, Anderson, & Salgado, 2009). The one of the most dominating factor of innovative work in teams behaviors are recognized visualization, support for innovation, external & internal communication and task orientation (Le Blanc et al., 2021). When shared leadership work in teams or groups it encourages innovative ideas and provide inventive information to other team members (Hoch, 2013; Wu, Cormican, & Chen, 2020).

There are many definitions of psychological safety, mostly research articles defined shared trust as the level of trust between individuals while indulge in interpersonal risk that have been taken at their place of work. The psychological harmless working atmosphere is desire for workers and organizations strive to develop such psychologically safe working environment that create the sense of security and safety that further leads to develop the positive intentions to respect

each other. This sense of internal association and relation creates the feel of safety and enable firms to solve the conflicts and reduce the negative emotions and hostility (Edmondson & Lei, 2014). The previous research scholars have empirically examined the moderating role of psychological safety between the relationship of team and organization, the results revealed that psychological safety moderates the relationship and positively influence the innovation carried out through research and development teams (Gu et al., 2013; Post, 2012), the innovation in industrial procedure that impact the performance and innovation level (Lee, Swink, & Pandejpong, 2011) and knowledge creation (Choo, Linderman, & Schroeder, 2007).

The study was conducted on Pakistani software house employees to determine the project success and reported that ethical leadership influence the project success with mediation role of trust and knowledge sharing, the study reported that ethical leadership helps to gain the trust and knowledge sharing that further foster the project success significantly (Bhatti, Kiyani, Dust, & Zakariya, 2021). Another study explained the entrepreneurial leadership that influence the self-efficacy and psychological ownership that further predict the in-role performance and reduces the deviant behavior (Kim & Beehr, 2017).

As already mentioned, universities must produce highly skilled graduates to meet the changing and increasingly complex needs of the labor market. The quality of graduates is contingent on instructors' skills, and innovative behavior. Therefore, Saudi universities need to look for ways to foster innovative behavior among academics for the sake of achieving the country's educational goals. In the same vein, Isaksen and Ekvall (2010), asserted that a key challenge faced by organizations – academic institutions inclusive – is how to manage and provide a supportive climate and conducive work environment which stimulates individual innovation. The failure to innovate can place organizations at risk and thus impede competitiveness and sustainability. Similarly, Shanker et al. (2017), argued that an organization's ability to innovate is directly and indirectly linked to the extent that its leaders,



people, climate and the organizational culture that advocate innovation.

The prior studies investigated the relationship between servant leadership and organizational citizenship behavior with mediating effect of psychological ownership. The study conducted on the managers and assistant managers in USA to assess the workplace behaviors with relation to psychological perspective of an individual for determining the organizational commitment, satisfaction with job, and performance of the firm influenced by workplace behavior. The literature depicted that psychological ownership do not impact extra role behavior. The promotive psychological ownership comprises on self-identity, self-efficacy, belongingness, and accountability.

The literature shows that Team level psychological ownership influenced by transformational leadership style, that leadership play important role in shaping the behavior of employees develop belongingness with workplace and psychologically attach to the firm that enhance the performance. The study also suggested to inspect the role of psychological ownership with other variables including leadership styles and performance related outcomes (Chanakan Chavaha, 2021). The literature has supported that organizational citizenship behavior influence the performance of the firm through effective utilization of scarce resources, increase the productivity of employees, reduce the performance, strengthening the organizational capability and for attracting the potential workers that enable the environmental changes and improvement in the working conditions (Chanakan Chavaha, 2021).

This study contributes to the existing literature in three key ways. First, it extends the application of shared leadership theory to the higher education sector, offering insights into its implications for team innovation. Second, it identifies psychological ownership as a mediating mechanism through which shared leadership fosters innovative behaviors. Third, it introduces psychological safety as a moderating variable, providing a nuanced understanding of the conditions under which shared leadership can

effectively enhance innovation in academic teams.

Literature Review and Underpinning Theory **Social Exchange Theory**

Social Exchange Theory was developed by (Blau, 1964; Homans, 1961; Thibaut, 1959) to explain the social exchange between individuals. Homans (1961) explained that exchange can be rewarding or costly for those engaged in the transaction. The work of Homans focused on the dyadic exchange built on organizational justices, organizational balance between stakeholders, status, power and authority, leadership and solidarity. Blau (1964), focused on exchange in terms of rewards and costs proposing that people can look forward to an exchange so they can act according to the anticipated rewards or look backward to past rewards from an exchange. Generally, the theory claims that the main purpose of social exchange is to maximize benefits while minimizing costs. As such, individuals will consider the possible assistances and hazard of societal interactions as well as if risk outweighs the prizes, formerly individuals incline to dismiss the association. The individuals engage in interactions they perceive as rewarding, while avoiding those perceived as costly.

In organizational and team contexts, this theory helps explain how leadership behaviors, organizational support, and team climates influence employee attitudes and behaviors through reciprocal processes (van Knippenberg, Pearce, & van Ginkel, 2025). In the context of this study: Shared leadership distributes leadership roles and decision-making responsibilities across team members. According to SET, when team members experience this empowerment and trust from their peers, they are likely to reciprocate by developing a stronger sense of psychological ownership toward the team's goals, tasks, and outcomes (Liu, Kassa, & Tekleab, 2025). This sense of ownership reflects a reciprocation of the value and autonomy given to them through shared leadership (Shang, Kuo, Hsu, Lai, & Ye, 2024).

Psychological ownership, in turn, leads individuals to feel personally responsible for the



team's success, motivating them to engage in innovative behaviors such as generating new ideas, solving problems creatively, and improving team processes (Yamao, 2024). SET suggests that such behaviors serve as reciprocation for the leadership influence and autonomy received within the team (Cropanzano, Anthony, Daniels, & Hall, 2017).

Psychological safety strengthens this reciprocal relationship by reducing interpersonal risks associated with participation, dissent, and innovation (Cross & Dundon, 2019). In a psychologically safe environment, individuals feel confident that their contributions will be valued rather than punished (Stafford & Kuiper, 2021). SET implies that when the social exchange environment is characterized by high psychological safety, the positive effects of shared leadership on psychological ownership and innovative behavior are amplified, as members perceive their involvement and contributions as safe and worthwhile (Orekoya, 2024).

In summary Social Exchange Theory provides a foundational explanation for how and why shared leadership fosters psychological ownership and innovative behavior within teams. It suggests that when leadership and trust are shared among members, employees feel valued and obligated to reciprocate through greater commitment, ownership, and creativity – especially when a psychologically safe environment reinforces these exchanges.

Shared Leadership and Team Innovative Behavior

A team's simultaneous, continuous, mutual influence process, known as the "serial emergence" of official and unofficial leaders, is shared leadership (Pearce, 2004). Conceptually, shared leadership and rotating leadership are different. According to rotating leadership (LePine, Erez, & Johnson, 2002), different leaders may emerge based on the work at hand and whom the team members deem to be the best qualified to lead at that moment. Shared leadership and rotational leadership share the characteristic of the project not having a single permanent leader. In other words, multiple

people can lead. Rotating leadership is different because only one designed leader is present at any moment. In a culture of shared leadership, leadership is frequently exchanged. Rather than focusing on a single individual, team members share the task of leading, according to (DeRue & Myers, 2014) definition of shared leadership (Carson, Tesluk, & Marrone, 2007).

However, the process of developing and putting new ideas into practice is innovation. Individual innovation is "the deliberate development, introduction, and use of new ideas inside a work role, group, or organization, to enhance the performance of the position, the group, or the organization" (O. Janssen, 2004). Three distinct behaviors make up inventive behavior, according to (O. Janssen, 2004): idea production, concept promotion, and idea implementation. Concept generation, characterized as a "free-flowing activity where applications, implications, and repercussions are recognized and then molded via refining into a new idea or group of ideas," is the first form of innovative behavior (Mumford, 2000). Idea generation is developing new concepts in any industry (Amabile, Conti, Coon, Lazenby, & Herron, 1996).

So, the idea advancement is the second type of innovative activity, which takes place when a worker has an idea and then looks for supporters, allies, and the financing required to test the proposal (O. Janssen, 2004). Idea realization, which denotes the acquisition of sufficient knowledge and time to carry out new ideas, is the final category of innovative activity (Gray, Young, & Waytz, 2012). Empirically it showed that when top leadership deliver a piece of knowledge or information in clear and creative ways, it transforms their followers. Then they use these ideas in creative ways to achieve the organizational goal. The innovative behavior at institute makes followers efficient and creative in finding innovative ideas to do a task creatively. When group members share their ideas, they become able to explore new innovative ideas to do the task.

H₁: There is a positive influence of shared leadership on innovative team behavior.



Shared leadership and Team level of psychological ownership

The study intends to determine the role of shared leadership in explaining the phenomenon of psychological ownership that other influences innovative work behavior. The previous literature expressed the role of leadership in enabling team effectiveness and argued that leadership is critically essential for organizational success. Leadership gains much curial importance due to its influence on team members and affects the whole workplace (Zhang et al., 2021). Leadership is best conceived as a group quality and set of functions that must be carried out in the group. The literature has highlighted distributed leadership as an essential factor and suggested that team members influence others to attain shared goals. Shared leadership strengthens organization to gain competitive advantage by increasing the commitment to personal and organizational resources brought to bear on complex tasks (Zhang et al., 2021). The shared leadership also influences employees' commitment level, assists in gaining a competitive advantage, accomplishing touch and complex tasks and information sharing. The literature widely argued that shared leadership influence effectiveness in the workplace and enhances organizational success (Carson et al., 2007).

Therefore, in earlier literature, there was an indication that authentic leadership and psychological ownership were occasionally treated as analogous constructs, with research scholars exploring the association between authentic leadership and psychological ownership, often examining the dyadic and temporal effects of their relationship. The research papers have depicted a significant favourable influence of authentic leadership on organizational-based, promotive psychological ownership. The research findings also illustrated that authentic leadership has an impact on both belongingness and self-efficacy. Moreover, self-awareness exhibited a negative correlation with self-efficacy. Authentic leadership ultimately influences moral perspective and balanced processing concerning psychological ownership, although no

moderating effect of dyadic duration has been observed in this relationship. (Alok, 2014). Another study investigated the influence of empowering leadership on self-efficacy and psychological ownership, which further affect employees' in-role performance and deviant behavior.

So, the study identified a statistically significant association between the study's constructs, revealing that empowering leadership has a significant influence on psychological ownership and is particularly noteworthy in its correlation with outcomes such as performance.(M. Kim & Beehr, 2017). The study incorporated the concept of project teams that ensure the project's success and leadership influences the project team's success. The social learning theory supports that leadership influences the organization's success and is related to project success. The knowledge and trust of leadership also influence the behavior of employees. The study depicted that leadership is related to trust and knowledge sharing and mediates the relationship between leadership and project success. Based on the above research stream, the following hypothesis is devised:

H₂: There is a positive influence of Shared Leadership on the Team Level of Psychological Ownership

Team-Level Psychological Ownership and Innovative Behavior

The studies referred to psychological ownership as an attitude that positively affects the organizations, including employee attitude, financial performance, extra-role behavior, organizational commitment and job satisfaction. Innovative initiatives require extra efforts from employees to gain success and align their values with organizational goals (Singh & Sarkar, 2012). The research scholars have established the link between psychological ownership and innovative work behavior to be more constructive work behavior of employees. The research studies have defined extra-role behavior and predicted innovative work behavior. Therefore, employee identification is required to determine employees' power that influences organizations' workplaces.



The research scholars have defined ownership as the right of possession and being an owner that leads to a relationship with large-scale responsibilities and commitment (Zhang et al., 2021). The owners and shareholders of the businesses take more risk for success, and the core of psychological ownership is the feeling of possessiveness and emotionally attached to the objects. Literature suggests that psychological ownership entails a sense of possessiveness, wherein individuals become emotionally connected to an object. This concept posits that when we inhabit or invest ourselves in something, it transcends mere object status and becomes an integral part of our identity. Furthermore, psychological ownership is characterized as a cognitive state wherein individuals perceive the object of ownership, whether it be tangible or intangible, as an extension of themselves or as possessing a part of it. It is also considered a cognitive-affective process, and it is needed to be completed for psychological ownership to emerge (Karabay, 2021).

Therefore, previous studies have examined the influence of conceptual skills and psychological ownership and revealed significant results. Moreover, the study found that emotional healing significantly influences psychological ownership. Further, the study investigated the influence of empowerment on psychological ownership and reported significant results. Psychological ownership also positively influenced the significant influence of helping subordinates (Chavaha, Lekhawichit, & Jermisittiparsert, 2021). The research scholar has investigated the influence of psychological ownership on innovative work behavior and reported significant statistical results; further, the study reported a significant mediating role of person organizational fit (Karabay, 2021).

Based on the above literature, the following hypothesis is derived:

H₃: There is a positive influence of Team Level of Psychological Ownership on Team Innovative Behavior

Mediating Role of Psychological Ownership

The previous research studies inspected the moderation consequence of psychological ownership between the relationship of organizational citizenship behavior and servant leadership. The study found that psychological ownership predicts the organizational citizenship behavior, however the previous research scholars have overlooked to inspect the mediating role of psychological ownership between the constructs that determine the innovative behavior of employees. The psychological ownership is suggested as potential mediator between the constructs to determine the exogenous phenomenon (Matilainen et al., 2019).

The prior studies have established that job performance is negatively impacted due to work-family conflict and psychological safety and well-being mediated the relationship. The research article argued that there is strong justification of assessing the mediating role of psychological ownership and safety between variables of the model based on conservation of resource theory. The common resource exchange enables the research scholars to examine the influence of work-family conflict as predicted (Obrenovic, Jianguo, Khudaykulov, & Khan, 2020). The study found that well-being is reduced due to increased work-family conflicts and increase the psychological strain and negatively impact the mental health and cognitive resources. There is strong control is required over family activities that positively influence the psychological well-being, the inability to handle the conflicts reduce the performance and causes lack in fulfilling the responsibilities (Fitzpatrick, Janzen, Abonyi, & Kelly, 2012).

The psychological safety has been observed at workplace that is considered as interpersonal risk and related to ease at workplace and security. The individuals perceive workplace environment as safe, secure and protective they are less likely to get indulge in negative emotions or get involve in negative behaviors or conflicts. These employees observed to be more likely to be more productive, successive and passionate about changes. On the other hand, if employees develop negative emotions or perceive lack of security that most



likely to get indulge in passive, negative and evasive behavior. The employees found to be reluctant to come up with innovative ideas due to fear of failure and may face consequences in terms of security that further increase the knowledge hiding phenomenon. The employees always expect and seek help from leaders to avoid the mistakes, negative impact, and conflicts at workplace and to improve the abilities and capabilities based on learning (Spreitzer & Porath, 2014). The research studies show that psychological safety assist in eliminating the negative behavior and help in overcoming the anxiety of learning or at workplace. The previous study examined the mediating role of psychological safety between inclusive leadership and behavioral outcomes.

The literature depicted that psychological ownership mediates the relationship between conceptual skills and organization citizenship behavior, it also found to be significantly mediating relationship between emotional healing and organizational citizenship behavior, the psychological ownership mediated the relationship between helping subordinated grow and success and organizational citizenship behavior. But the psychological ownership has no facilitating result on the association between empowerment and organizational citizenship behavior (Chanakan Chavaha, 2021). By following the same line of research, the current study intends to determine the mediating role of psychological ownership between shared leadership and team innovative behavior. The succeeding theory is consequent:

H₄: Psychological ownership mediates the relationship between shared leadership and team Innovative behavior

Moderating Role of Psychological Safety

The current study incorporated the psychological safety as moderating variable between the relationship of psychological ownership and innovative work behavior. The current study argues that psychological safety moderates the relationship by strengthening it and predict the innovative work behavior. The research studies have expressed the concept of psychological safety as perception of an individual of taking interpersonal risks at the workplace environment. The research scholars have suggested that psychological safety is distinct from trust and focuses on self. The psychological safety pertains to a narrow and short time frame, whereas trust encompasses a wide temporal range (Carmeli, Reiter-Palmon, & Ziv, 2010). Psychological safety considered as perception of interpersonal risk at workplace and referred as subjective perception of ease and security. The study revealed that inclusive leadership influence the psychological safety that further impact the taking charge behavior (Zeng, Zhao, & Zhao, 2020). Another learning investigated the role of work family conflict that influence the psychological safety and psychological well-being and further impact the job performance significantly. The results also revealed that psychological safety mediates the relationship between work family conflict and job performance (Obrenovic et al., 2020).

The current study intends to examine the moderation role of psychological safety between psychological ownership and innovative work conduct among employees of education sector. Thus, subsequent theory is derived:

H₄: Psychological Safety moderates the relationship between Psychological Ownership and team Innovative behavior

Model:

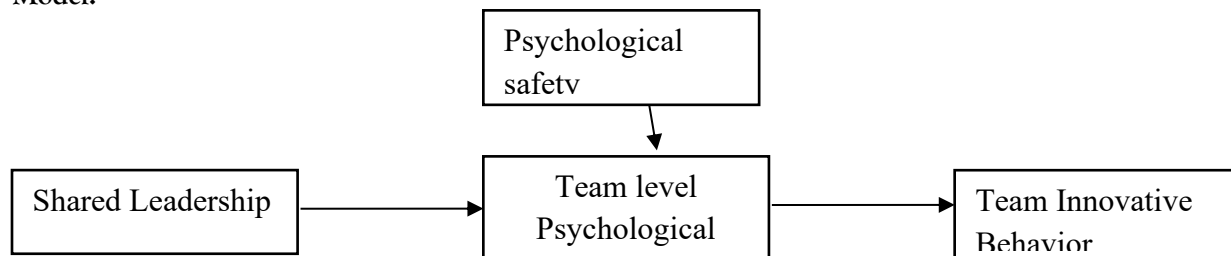


Figure 1: Outline of the study



Research Methodology

The study's unit of analysis comprises individual employees within the higher education sector of public sector universities in Punjab, Pakistan. The population under consideration in this research consists of full-time academic employees, encompassing lecturers, assistant professors, associate professors, and professors. The province of Punjab is excellent for data gathering because the researcher can only visit some of Pakistan's universities. In Pakistan, Punjab has the highest number of universities and accounts for 54% of the country's population (CIA, Fact Book, 2018). It is practically hard to get data from the entire study population. As a result, a sample or subset of the entire population is chosen to represent the research population (Zikmund, Carr, & Griffi 2013).

The academic employees of public sector universities was the sample of the present study. Sample size was consist of 300 faculty members, 25 teams of different departments of universities (Sarker & AL-Muaalemi, 2022; Sekaran & Bougie, 2016). Teams will typically consist of 10 to 12 peoples. Each university was consider strata, and a specific proportion for data collection, which further shows that stratified random sampling was used for data collection. The table was used for sample calculation in the current cross-sectional study to determine the phenomenon of innovative team behavior influenced by shared leadership, Team-level psychological ownership, and team conflict. The survey questionnaire was completed in English, Pakistan's official language of government communication(Adamson, 1983; Syed, Arain, Schalk, & Freese, 2015).

Measures

The questionnaire has two sections; section one consists of measurement scales of the construct of the current study, and the second consists of demographic information. The measurement scales were adapted from previous studies.

Shared Leadership

Using a 10-item scale to assess shared leadership (Carson et al., 2007). Sample items from the scale

include (1) "Spent time discussing our team's purpose, goals, and expectations for the project" and (2) "My team encourages everyone actively participate in decision-making." Every item is scored on a Likert scale of 1 to 5, where 1 is the weakest and 5 is the strongest.

Team-Level Psychological Ownership

The 10-item Scale of Psychological Ownership was used to gauge the psychological ownership of the team (Avey, Avolio, Crossley, & Luthans, 2009). One of the sample answers is, "I believe I need to defend our ideas from being used by others in our group," while another is, "I feel being a part of our organization helps define who I am."

Team Innovative Behavior

We used (Le Blanc et al., 2021) 3-item scale to measure the team's innovative behavior. The sample items of the scale are (1) "in my team, people make use of their knowledge and skills in order to put new working methods, new services, or new products into practice" and "In my team, we often try out new ideas and methods".

Psychological Safety

A 5-item scale was used to measure the psychological safety from (Carmeli et al., 2010). The items are: (1) "I am able to bring up problems and tough issues" and (2) "No one in this organization would deliberately act in a way that undermines my efforts". Respondents replied to the questions on 5 point Likert scale (ranging from 1 = 'not at all' to 5 = 'to a large extent').

Control Variable

In this research, we measured and controlled for demographic variables such as gender, age, education, Employee Status and employee Experience (Kozlowski & Bell, 2013).

Team size

According to (Mueller, 2012; Useem, Davidson, & Wittenberg, 2002), the team size depends on the task. It is unclear; some believe 5 to 12 is ideal, and 5 to 9 is optimum.



Procedure

Data analysis was performed to assess the respondents' opinions according to variables such as demography. (R. Janssen & Eriksson, 2022). Reliability is the extent to which multiple scale items have internal consistency (Garaika, Margahana, & Negara, 2019). Reliability is the internal consistency of the scale. Validity describes that the scale measure what is supposed to be measured. Most of the scale items are adapted from studies to ensure content validity.

Through CFA, we confirmed the impartiality of the main model variables using structural equation modelling software AMOS version 23. In line with the pact, we used a combination of comparative fit index (CFI), fit indices and root means a square error of approximation (RMSEA) – to assess the adequacy of our hypothesized model by comparing it with several reasonable alternative measurement models (Bentler & Bonett, 1980). RMSEA scores below 0.07 and

CFI and TLI scores above 0.90 are arbitrated to confirm a good model fit(Hair, 2013).

Measurement model assessment

Through CFA established the impartiality of the key model variables using structural equation modeling software AMOS version 23. In line with pact, we used a combination of comparative fit index (CFI), Tucker-Lewis index (TLI) , fit indices – standardized root mean square residual (SRMR),and root mean square error of approximation (RMSEA) – to assess the adequacy of our hypothesized model by comparing it with a number of reasonable alternative measurement models (Bentler & Bonett, 1980). SRMR and RMSEA scores below 0.07 and CFI and TLI scores above 0.90 are arbitrated to confirm a good model fit(Hair, 2013).

AMOS provides us many fitness indicators and there are some of them which are following as in a form of table:

Table-1: Model Fitness, CFA model fit indices:

Test	Standard Range	Results
RMSEA	<0.05	.056
CFI	≥0.9	.931
TLI	>.9	.924

This table shows us the analyzing data in which we get the standard range and results of different tests. The first test of this table is RMSEA (Root Mean Square Error of Approximation). According to the research, we get that in fifteen years, the RMSEA's cut-off points have been significantly reduced. At that time of research RMSEA values should be below <0.08 which is known as the perfect and preferable value of

measures. So here the value of RMSEA is .056 which less than 0.08 and considers an indication of fair fit. After the first you have other indices such as CFI, TLI. Regarding recommended values to qualify your model, CFI (Comparative Fix Index) and TLI (Tucker-Lewis index) should be at least 0.90 and in our table both values are same as recommended.



The figure 2 presents the measurement model assessment.

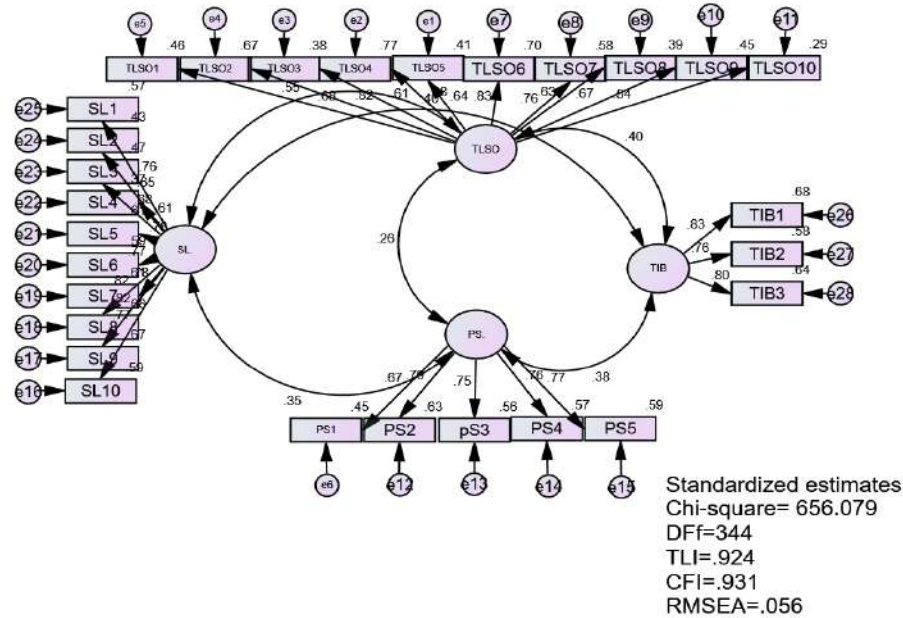


Figure 2: Measurement Model

Note: Team innovative behavior (TIB), Shared leadership (SL), Team Level psychological ownership (TLPO), psychological safety (PS)

Table 2: Reliability and Validity Measures:

	CR	AVE	MSV
TIB	0.840	0.536	0.162
SL	0.926	0.559	0.304
TLPO	0.910	0.509	0.304
PS	0.864	0.560	0.144

Note: Team innovative behavior (TIB), Shared leadership (SL), Team level psychological ownership (TLPO), psychological safety (PS).

This table shows us the analyzing data in which we get different indicators results columns which are CR = Composite Reliability, AVE = Average Variance Extracted, MSV = Maximum Shared Variance Based on Fornell and Larker's (1981) validity determination criteria, For convergent validity, CR for the construct should exceed 0.70 and AVE > 0.50 For discriminant validity, AVE > MSV the AVE of a latent variable should be higher than the squared correlations

between the latent variable and all other variables. According FORNELL and LARKER criteria, the first point of it is as it is as the criteria required, our CR values are greater than 0.70 and all the values of AVE are less than 0.50 moreover in discriminant validity, the above values of AVE actual greater than MSV. So, accordance the FORNELL and LARKER criteria our indicators perfectly be like of it.

**Table 3: MEDIATION TABLE:**

DEPENDENT	TIB	SE	P	R-sq
SL	.3897	.0490	.0000	.3615
TLPO	.4952	.0605	.0000	

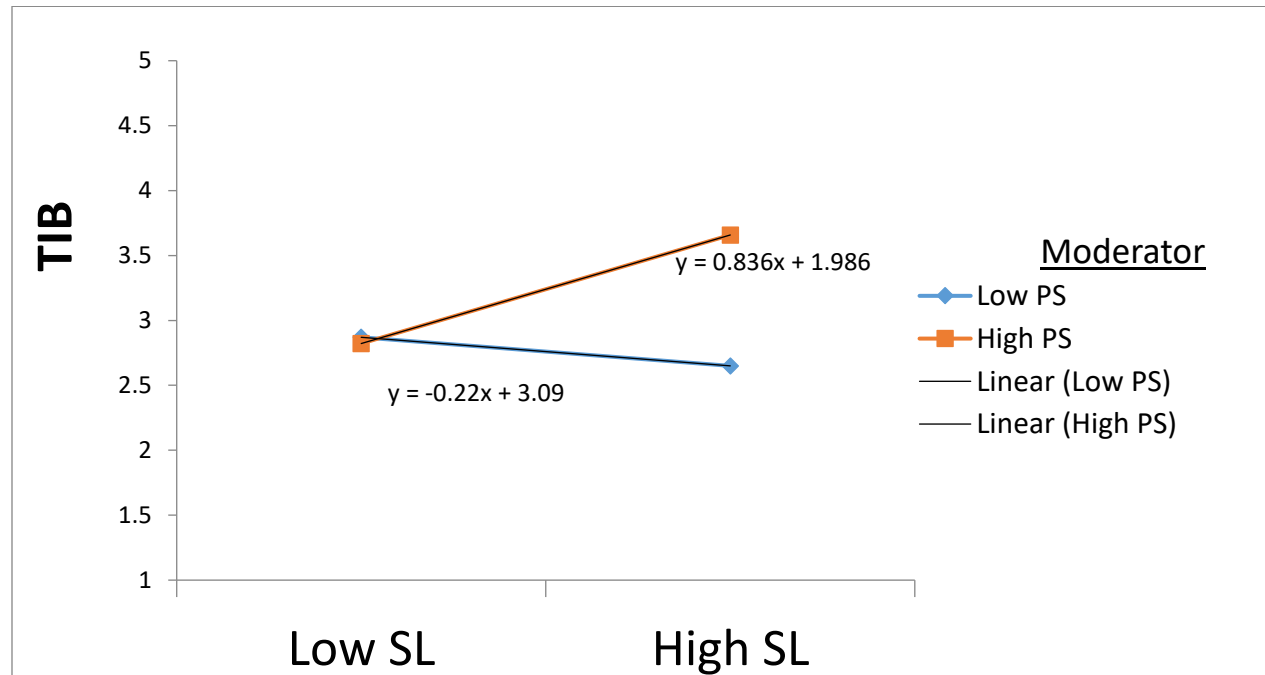
According to researches and estimation the R-squared for intentions has increased from 0.252 to 0.369 while that for behavior has increased from 0.393 to 0.445. The squared multiple correlations for SL and TLPO are 0.3897 and 0.4952 respectively.

Table 4: Correlations Table

		TSL	TPO	TTIB	TPS
TSL	Pearson Correlation	1	.308**	.482**	.027
	Sig. (2-tailed)		.000	.000	.625
	N	335	335	335	335
TPO	Pearson Correlation	.308**	1	.490**	.036
	Sig. (2-tailed)	.000		.000	.508
	N	335	335	335	335
TTIB	Pearson Correlation	.482**	.490**	1	.054
	Sig. (2-tailed)	.000	.000		.327
	N	335	335	335	335
TPS	Pearson Correlation	.027	.036	.054	1
	Sig. (2-tailed)	.625	.508	.327	
	N	335	335	335	335

The independent variable (SL) has strong positive relationship (.482) with dependent variable (TIB), Mediator (TLPO) (.308) and Moderate (PS) (.027). As the same, Mediator variable (TLPO) has strong positive relationship with independent variable (SL) (.308), Dependent variable (TIB)

(.490) and Moderate (PS) (.036). Just be like the independent and Mediator variables, independent and moderate variables also have a positive strong relationship with all variable. It means every variable has a strong positive correlation among them.

**Moderation Role:**

The report provides us coefficient, standard errors and significant test for these three individual pressures Arbitration was run for analysis.

Regression coefficients are the minimum square (or strong) estimates of the parameters. Value indicates how a large change occurs for the conversion of one unit when the remaining unit is made permanent.

Standard error of regression coefficient is the standard deviation of the estimate. It is used assumption tests or confidence limits. Strong fitting is used these values depend on the option. This is the T-test value to test the speculation that $\beta\beta_{ii} = 0$ vs. substitute after removing us $\beta\beta_{ii} \neq 0$ the influence of all other X's. This T-value has an N-p-1 degree of freedom.

This is the P-value to test the significance of the regression coefficient. P-value is the possibility that it will take the real value to at least as much as the actually observed value, assuming it is an empty assumption. True (ie the estimate of regression is equal to zero). If the p-value is less than alpha, say 0.05, empty speculation the equation is rejected. This P-value is for two-tail test.

These coefficients are often called partial regression coefficients after the effect of the second X has been removed.. The significant

indirect effect ($y = 0.106$, [0236 .0503]) indicates that self-efficacy is a significant mediator in the relationship between supervisees' perception of TTIB, TSL and their TPO. Moderate has a strong and positive impact on all the variables factors. TPS is constant while if it makes it occurs changes in other variables too. In Significant error, TPO (.3072), TSL(.0422) and TTIB (.0797) have changed by TPS and the most significant changes and strong relation of SE is between moderate(TPS) and Mediator(TPO).Moreover if we see the coefficient changes, in TPO (.3339), TSL(.2491) and TTIB (.0424), TPO has more significant relationship with TPS rather than others.

Theoretical Implementation of the study:

The findings of this study offer several important theoretical implications for the fields of organizational behavior, leadership studies, and higher education management. By examining the influence of shared leadership on team-level psychological ownership and team innovative



behavior, with psychological safety as a moderating factor, this research contributes to expanding the theoretical understanding of how collective leadership models function in knowledge-intensive, service-driven environments such as higher education institutions.

First, the study reinforces the applicability of Social Exchange Theory (Blau, 1964) within the context of higher education, a sector traditionally underrepresented in leadership and team dynamics research. The results confirm that when leadership responsibilities and influence are distributed among team members, individuals perceive these actions as valuable social exchanges, prompting reciprocal positive attitudes and behaviors such as increased psychological ownership and innovation. This extends SET by providing empirical evidence of its relevance in non-corporate, academic organizational settings, thus broadening its theoretical boundary.

Second, by positioning team psychological ownership as a mediating mechanism, the study advances leadership literature by identifying a crucial cognitive-affective process through which shared leadership influences team innovative behavior. While previous research has predominantly focused on direct outcomes of shared leadership such as performance and satisfaction, this study highlights how fostering a sense of collective ownership serves as a psychological driver for innovative actions within teams. This finding contributes to the growing body of work emphasizing the importance of psychological states in mediating the relationship between leadership styles and organizational outcomes.

Third, the inclusion of psychological safety as a moderating variable offers nuanced insights into the boundary conditions under which shared leadership can effectively foster innovation. The study confirms that the presence of psychological safety amplifies the positive effects of shared leadership on both psychological ownership and innovation. This contributes to leadership and organizational climate research by underscoring the importance of contextual factors in shaping leadership effectiveness, especially in

environments where interpersonal risk and autonomy are inherently high, such as academic teams.

Practical Implication of the study

The findings of this study hold valuable practical implications for leadership development, human resource management, and organizational culture enhancement within higher education institutions. As universities and colleges increasingly face demands for innovation in teaching, research, and administration, understanding how to foster team-level innovation through effective leadership practices has become crucial.

First, the positive relationship between shared leadership and team psychological ownership highlights the importance of adopting distributed leadership models in academic and administrative teams. Higher education leaders should actively encourage participative decision-making, shared responsibilities, and open communication structures that empower team members to assume informal leadership roles. This practice not only decentralizes authority but also nurtures a collective sense of responsibility and belonging among team members, which can translate into higher commitment and ownership of team tasks and outcomes.

Second, the study underscores the critical role of psychological ownership as a driver of team innovative behavior. Managers and institutional leaders should implement strategies that enhance employees' sense of psychological ownership, such as involving them in goal setting, problem-solving discussions, and the design of work processes. Recognizing individual contributions and providing meaningful work experiences can further strengthen this ownership, motivating employees to contribute creatively and proactively.

Third, the moderating effect of psychological safety provides a strong case for higher education institutions to prioritize building psychologically safe team environments. Leadership development programs should train team leaders and supervisors in creating supportive, inclusive, and open climates where members feel secure to



express ideas, question norms, and take interpersonal risks without fear of negative consequences. Establishing formal feedback mechanisms, promoting open dialogues, and normalizing constructive dissent can further reinforce a psychologically safe culture.

Lastly, this study suggests that leadership practices in higher education should not rely solely on formal hierarchies. By encouraging shared leadership structures and fostering psychologically safe environments, institutions can enhance team-level innovation, crucial for academic excellence, operational efficiency, and institutional competitiveness. These findings offer actionable insights for policy formulation, leadership training, and organizational development initiatives aimed at cultivating innovative, resilient, and high-performing teams in higher education.

Limitations and future research

While this study provides valuable theoretical and practical insights into the relationships between shared leadership, team psychological ownership, innovative behavior, and psychological safety within higher education institutions, several limitations should be acknowledged to contextualize its findings and guide future research.

First, the study's cross-sectional research design restricts the ability to draw definitive causal inferences between variables. Although the proposed relationships are grounded in established theoretical frameworks, longitudinal or experimental studies would offer stronger evidence regarding the directionality and temporal dynamics of these relationships.

Second, the study was conducted within the higher education sector of a specific cultural and organizational context, which may limit the generalizability of the findings. Organizational structures, leadership styles, and team dynamics can vary significantly across industries and cultural settings. Future research could replicate this study in different sectors such as healthcare, technology, or public administration, and across diverse cultural contexts, to examine the consistency and applicability of the results.

Finally, the conceptual model did not consider potential mediators beyond psychological ownership that might explain how shared leadership promotes innovative behavior. Constructs such as team commitment, work engagement, or collective efficacy could serve as additional psychological mechanisms. Future research should test more complex, multi-mediator models to deepen theoretical insights into the leadership-innovation linkage.

Conclusion

The present study adopts a unique methodology, integrating theoretical and practical viewpoints to investigate the phenomena of team innovative behavior and team adaptability. The research is poised to explore these concepts through the frameworks of social exchange theory and shared leadership theory. The existing literature has proposed diverse of shared leadership and team-level psychological ownership strategies to enhance both team innovative behavior and team adaptability.

REFERENCES

- Abdullatif, T. N. (2017). The factors influencing innovative work behavior among academicians in Iraq. *Universiti Utara Malaysia*.
- Adamson, W. L. (1983). *Hegemony and revolution: A study of Antonio Gramsci's political and cultural theory*: Univ of California Press.
- Aggarwal, A., Baker, H. K., & Joshi, N. A. (2024). Organizational innovation as business strategy: A review and Bibliometric analysis. *Journal of the Knowledge Economy*, 1-27.
- Aithal, P. S., & Maiya, A. K. (2023). Innovations in higher education industry-Shaping the future. *International Journal of Case Studies in Business, IT, and Education (IJCSBE)*, 7(4), 283-311.



- Al-Husseini, S., El Beltagi, I., & Moizer, J. (2019). Transformational leadership and innovation: the mediating role of knowledge sharing amongst higher education faculty. *International Journal of Leadership in Education*, 1-24. doi: 10.1080/13603124.2019.1588381
- Alabdali, M. A., Yaqub, M. Z., Agarwal, R., Alofaysan, H., & Mohapatra, A. K. (2024). Unveiling green digital transformational leadership: Nexus between green digital culture, green digital mindset, and green digital transformation. *Journal of Cleaner Production*, 450, 141670.
- Alahmari, M., Issa, T., Issa, T., & Nau, S. Z. (2019). Faculty awareness of the economic and environmental benefits of augmented reality for sustainability in Saudi Arabian universities. *Journal of Cleaner Production*, 226, 259-269. doi: 10.1016/j.jclepro.2019.04.090
- Ali, A., Wang, H., & Johnson, R. E. (2020). Empirical analysis of shared leadership promotion and team creativity: An adaptive leadership perspective. *Journal of Organizational Behavior*, 41(5), 405-423.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management Journal*, 39(5), 1154-1184.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, 88(3), 588.
- Bhatti, S. H., Kiyani, S. K., Dust, S. B., & Zakariya, R. (2021). The impact of ethical leadership on project success: the mediating role of trust and knowledge sharing. *International Journal of Managing Projects in Business*.
- Blau, P. M. (1964). Justice in social exchange. *Sociological Inquiry*, 34(2), 193-206.
- Cai, W., Lysova, E. I., Khapova, S. N., & Bossink, B. A. (2019). Does entrepreneurial leadership foster creativity among employees and teams? The mediating role of creative efficacy beliefs. *Journal of Business and Psychology*, 34, 203-217.
- Carmeli, A., Reiter-Palmon, R., & Ziv, E. (2010). Inclusive leadership and employee involvement in creative tasks in the workplace: The mediating role of psychological safety. *Creativity Research Journal*, 22(3), 250-260.
- Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of management Journal*, 50(5), 1217-1234.
- Chanakan Chavaha, N. L., Krisada Chienwattanasook, Kittisak Jernsittiparsert. (2021). THE IMPACT OF SERVANT LEADERSHIP ON THE ORGANIZATIONAL CITIZENSHIP BEHAVIOR: MEDIATING ROLE OF PSYCHOLOGICAL OWNERSHIP. *Psychology and Education Journal*, 58(2), 3083-3097.
- Cropanzano, R., Anthony, E. L., Daniels, S. R., & Hall, A. V. (2017). Social exchange theory: A critical review with theoretical remedies. *Academy of Management Annals*, 11(1), 479-516.
- Cross, C., & Dundon, T. (2019). 18. Social exchange theory, employment relations and human resource management.
- DeRue, D. S., & Myers, C. G. (2014). Leadership development: A review and Agenda for future research.
- Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annu. Rev. Organ. Psychol. Organ. Behav.*, 1(1), 23-43.
- Fitzpatrick, T., Janzen, B., Abonyi, S., & Kelly, I. (2012). Factors associated with perceived time pressure among employed mothers and fathers. *Psychology*, 3(02), 165.



- Garaika, G., Margahana, H. M., & Negara, S. T. (2019). Self efficacy, self personality and self confidence on entrepreneurial intention: study on young enterprises. *Journal of Entrepreneurship Education*, 22(1), 1-12.
- Gray, K., Young, L., & Waytz, A. (2012). Mind perception is the essence of morality. *Psychological inquiry*, 23(2), 101-124.
- Hair, J. F. (2013). *Essentials of Marketing Research*.
- Harvey, J.-F., Bresman, H., Edmondson, A. C., & Pisano, G. P. (2022). A strategic view of team learning in organizations. *Academy of Management Annals*, 16(2), 476-507.
- Harvey, J.-F., Johnson, K. J., Roloff, K. S., & Edmondson, A. C. (2019). From orientation to behavior: The interplay between learning orientation, open-mindedness, and psychological safety in team learning. *human relations*, 72(11), 1726-1751.
- Hoch, J. E. (2013). Shared leadership and innovation: The role of vertical leadership and employee integrity. *Journal of Business and Psychology*, 28(2), 159-174.
- Homans, G. C. (1961). *Social Behavior: Its Elementary Forms* Harcourt. Brace & World, New York.
- Hülsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: a comprehensive meta-analysis spanning three decades of research. *Journal of Applied psychology*, 94(5), 1128.
- Isaksen, S. G., & Ekvall, G. (2010). Managing for innovation: The two faces of tension in creative climates. *Creativity and Innovation Management*, 19(2), 73-88.
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of occupational and organizational psychology*, 73(3), 287-302.
- Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of organizational behavior*, 25(2), 201-215.
- Janssen, R., & Eriksson, B. J. (2022). Embryonic expression patterns of Wnt genes in the RTA-clade spider *Cupiennius salei*. *Gene Expression Patterns*, 44, 119247.
- Javed, B., Khan, A. K., & Quratulain, S. (2018). Inclusive leadership and innovative work behavior: examination of LMX perspective in small capitalized textile firms. *The Journal of psychology*, 152(8), 594-612.
- Karakose, T., & Tülübaş, T. (2023). Digital leadership and sustainable school improvement—a conceptual analysis and implications for future research. *Educational Process: International Journal*, 12(1), 7-18.
- Kim, M., & Beehr, T. A. (2017). Self-efficacy and psychological ownership mediate the effects of empowering leadership on both good and bad employee behaviors. *Journal of Leadership & Organizational Studies*, 24(4), 466-478.
- Kozlowski, S. W., & Bell, B. S. (2013). *Work groups and teams in organizations*.
- Lašáková, A., Bajžíková, L., & Dedze, I. (2017). Barriers and drivers of innovation in higher education: Case study-based evidence across ten European universities. *International Journal of Educational Development*, 55, 69-79.
- Le Blanc, P. M., González-Romá, V., & Wang, H. (2021). Charismatic leadership and work team innovative behavior: The role of team task interdependence and team potency. *Journal of Business and Psychology*, 36(2), 333-346.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: a critical review and meta-analysis. *Journal of applied Psychology*, 87(1), 52.



- Liu, X., Kassa, A., & Tekleab, A. G. (2025). Are intrateam trust and organizational trust substitutable? Effects on team reflexivity, engagement and performance. *Journal of Business Research*, 189, 115164.
- Matilainen, A., Koch, M., Zivojinovic, I., Lähdesmäki, M., Lidestav, G., Karppinen, H., . . . Colson, V. (2019). Perceptions of ownership among new forest owners—A qualitative study in European context. *Forest Policy and Economics*, 99, 43-51.
- Mueller, J. S. (2012). Why individuals in larger teams perform worse. *Organizational behavior and human decision processes*, 117(1), 111-124.
- Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review*, 10(3), 313-351.
- Obrenovic, B., Jianguo, D., Khudaykulov, A., & Khan, M. A. S. (2020). Work-family conflict impact on psychological safety and psychological well-being: A job performance model. *Frontiers in psychology*, 11, 475.
- Orekoya, I. O. (2024). Inclusive leadership and team climate: the role of team power distance and trust in leadership. *Leadership & Organization Development Journal*, 45(1), 94-115.
- Pearce, C. L. (2004). The future of leadership: Combining vertical and shared leadership to transform knowledge work. *Academy of Management Perspectives*, 18(1), 47-57.
- Pieterse, A. N., Van Knippenberg, D., Schippers, M., & Stam, D. (2010). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior*, 31(4), 609-623.
- Pu, R., Dong, R. K., & Jiang, S. (2024). Toward the Education for Sustainable Development (ESD): Digital leadership and knowledge-sharing behavior on the higher education institutional change. *Education and Information Technologies*, 1-23.
- Sarker, M., & AL-Muaalemi, M. A. (2022). Sampling techniques for quantitative research *Principles of Social Research Methodology* (pp. 221-234): Springer.
- Sauphayana, S. (2021). Innovation in higher education management and leadership. *Journal of Educational and Social Research*, 11.
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal*, 37(3), 580-607.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: John Wiley & sons.
- Shang, K.-C., Kuo, S.-Y., Hsu, S.-W., Lai, P.-L., & Ye, K.-D. (2024). Leader-member exchange, team-member exchange, employee satisfaction, and service-oriented organizational citizenship behavior in the international logistics industry: The moderating effect of the service climate. *Research in Transportation Business & Management*, 52, 101072.
- Shanker, R., Bhanugopan, R., Van der Heijden, B. I., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of vocational behavior*, 100, 67-77.
- Shao, L., Miao, Y., Ren, S., Cai, S., & Fan, F. (2024). Designing a framework for entrepreneurship education in Chinese higher education: a theoretical exploration and empirical case study. *Humanities and Social Sciences Communications*, 11(1), 1-12.



- Shen, Y., Deng, Y., Xiao, Z., Zhang, Z., & Dai, R. (2025). Driving green digital innovation in higher education: the influence of leadership and dynamic capabilities on cultivating a green digital mindset and knowledge sharing for sustainable practices. *BMC psychology*, 13(1), 1-19.
- Spreitzer, G. M., & Porath, C. (2014). Self-determination as nutriment for thriving: Building an integrative model of human growth at work. *The Oxford handbook of work engagement, motivation, and self-determination theory*, 90, 245-258.
- Stafford, L., & Kuiper, K. (2021). Social exchange theories: Calculating the rewards and costs of personal relationships Engaging theories in interpersonal communication (pp. 379-390): Routledge.
- Syed, S., Arain, G. A., Schalk, R., & Freese, C. (2015). Balancing work and family obligations in Pakistan and the Netherlands: A comparative study. *Global Business and Organizational Excellence*, 34(5), 39-52.
- Thibaut, J. W. (1959). Kelley. HH (1959). *The social psychology of groups*. New York.
- Thurlings, M., Evers, A. T., & Vermeulen, M. (2015). Toward a model of explaining teachers' innovative behavior: A literature review. *Review of educational research*, 85(3), 430-471.
- Useem, M., Davidson, M., & Wittenberg, E. (2002). *Leadership Development Beyond the Classroom: The Value of Leadership Ventures to Instruct Leadership Decision Making*. education, 1, 150-162.
- van Knippenberg, D., Pearce, C. L., & van Ginkel, W. P. (2025). Shared leadership-vertical leadership dynamics in teams. *Organizational Psychology Review*, 15(1), 44-67.
- Wang, Z., Ren, S., Chadee, D., Liu, M., & Cai, S. (2021). Team reflexivity and employee innovative behavior: the mediating role of knowledge sharing and moderating role of leadership. *Journal of Knowledge Management*.
- Wu, Q., Cormican, K., & Chen, G. (2020). A meta-analysis of shared leadership: Antecedents, consequences, and moderators. *Journal of Leadership & Organizational Studies*, 27(1), 49-64.
- Yamao, S. (2024). *Social exchange theory A guide to key theories for human resource management research* (pp. 274-279): Edward Elgar Publishing.
- Zeng, H., Zhao, J. L., & Zhao, X. Y. (2020). Inclusive leadership and taking charge behavior: Roles of psychological safety and thriving at work. *Frontiers in psychology*, 11, 62.