

BEYOND REPRESENTATION: FEMALE LEADERSHIP AND EMPLOYEE CREATIVITY THROUGH PSYCHOLOGICAL EMPOWERMENT

¹Arshad Iqbal, ²Qaiser Kamran, ³Fasiha Batool

¹PhD Scholar, Department of Leadership and Management Studies (LMS), National Defense University (NDU), Pakistan.

²Government College University, Lahore

³The University of Faisalabad

Email: arshad5387@ndu.edu.pk

*Email: theqaiserkamran@gmail.com

Email: fasihabatool.NBS@tuf.edu.pk

Article History

Keywords:

Female Leadership, Employee Creativity, Psychological Empowerment, Social Exchange Theory

Article History

Received on 14 May 2026

Accepted on 01 June 2026

Published on 02 June 2026

Copyright @Author

Corresponding Author: *

Qaiser Kamran

Abstract

Drawing upon Social Exchange Theory, this study investigates the direct effect of female leadership on employee creativity and the mediating role of psychological empowerment. A quantitative cross-sectional research design was employed, and data were collected from employees working in the higher education sector through a structured questionnaire. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The findings reveal that female leadership positively influences employee creativity and significantly enhances employees' psychological empowerment. Furthermore, psychological empowerment positively affects employee creativity and serves as a significant mediator in the relationship between female leadership and employee creativity. These results suggest that female leaders foster innovative work behaviors by creating supportive and empowering environments that strengthen employees' confidence, autonomy, and sense of purpose. The study contributes to leadership literature by extending Social Exchange Theory to the context of female leadership and highlighting psychological empowerment as a key explanatory mechanism. Practically, the findings provide guidance for organizations seeking to enhance creativity through leadership diversity and empowerment-oriented management practices. The study concludes by discussing theoretical implications, managerial recommendations, limitations, and directions for future research.

Introduction

The world's organizations are increasingly becoming to function in dynamic, uncertain and innovation-driven environments, where employee creativity is a key source of their competitive advantage. Creativity helps employees to produce new and valuable ideas that can bring improvements to the way an organization operates, the product it produces, and the services it provides, which in turn enhances the effectiveness of the organization and its sustainability (Nguyen et al., 2022). Leadership is simultaneously one of the most impactful variables that contributes to the attitudes, behaviors and performance of employees. Over the last few years, the focus has shifted towards women's leadership and organizations have been aiming to have more women in managerial roles in order to become more gender diverse and inclusive. Despite the growing participation of women in the workforce, women remain underrepresented in senior leadership positions, and studies of women's leadership outcomes are timely and important, according to reports from around the world. Women leaders are known to be participative, supportive and transformational, which can lead to positive work environments, employee motivation, and innovative thinking, and thereby improve organizational performance and competitiveness.

While the number of women in leadership roles has slowly risen, many companies are not yet making the most of female leaders in fostering employee innovation and creativity. This is of particular significance as creativity is now being recognized as a strategic capability of public and private sector organizations. Previous studies on leadership have mostly concentrated on transformational, ethical, servant and inclusive leadership styles, and less research has been conducted to better understand the impact of female leadership on employee creativity. Thus, it is necessary to study the mechanisms of female leaders in contributing to employees' creative performance in modern organizations.

Female leadership is defined as leadership behaviors exhibited by women in managerial/supervisory roles. It is found that women leaders often use collaborative, supportive and empowering leadership styles that positively contribute to employee performance and development (Bin Bakr & Alfayez, 2022). Employee creativity is the creation of new and useful ideas that help to improve the organization (Nguyen et al., 2022). Psychological empowerment is the employees' sense of meaning, competence, self-determination and impact in their job roles (Alif & Nastiti, 2022). Previous research has consistently found that empowering leadership



and transformational leadership positively impact employee creativity by way of psychological empowerment (Ibrahim et al., 2023; Aristana et al., 2025).

Although there has been a lot of research on leadership and creativity, there are still some important issues that have yet to be resolved. First, existing studies have mostly focused on the transformational leadership, empowering leadership, ethical leadership, inclusive leadership, coaching leadership, and servant leadership as predictors of employee creativity (Ahmad et al., 2023; Hwang et al., 2023; Khan et al., 2022). Female leadership is an under-researched leadership phenomenon, and there is a lack of theoretical literature on it. Secondly, psychological empowerment has been extensively studied as a mediator between different leadership styles and employee creativity (Alhosani & Ahmad, 2024; Gelaidan et al., 2022; Gyamerah et al., 2022). But there is limited empirical research that explores the psychological empowerment as an explanation for the link between women's leadership and employees' creativity. This is a significant empirical and mediating process gap. Third, the results of previous studies are mostly obtained from organizations like higher education, hospitality, telecommunications, healthcare, and public sector organizations (Badar et al., 2023; Nguyen et al., 2022; Zhang et al.,

2022). As a result, evidence of female leadership and creativity is found in a piecemeal manner in organizational contexts, which represents a gap in the context. Lastly, the lack of combining female leadership, psychological empowerment and employee creativity into a single framework limits the understanding of how female leaders can impact employee creative performance and warrants further research.

Creativity is becoming an essential ingredient of competitiveness and the ability to adjust to environmental changes for organizations. Despite the significant investment by many organizations in leadership development programs, however, many are still struggling to get creative behaviours to stick with their employees. Although leadership is known to be a key factor in creativity, little is known about the role of female leaders in enhancing creativity. Moreover, psychological empowerment is recognized as a powerful motivational mechanism affecting employee outcomes but its role in explaining the link between female leadership and creativity is under-researched. This lack of understanding adds uncertainty for organizations looking to reap the maximum benefits from gender-diverse leadership structures. Since there is no clear empirical evidence on these relationships, organizations may be unable to create effective

leadership strategies that can help increase employee creativity. Thus, it is imperative to solve this problem in order to enhance the effectiveness of the organization and the development of leadership theory. This study aims to analyze the influence of female leadership on employee creativity and to find out the role of psychological empowerment as a mediator between female leadership and employee creativity. The study aims to offer empirical findings on how female leaders can affect employees' creative performance. The study is based on Social Exchange Theory (SET) which posits employees respond positively to supportive and empowering treatment from leaders by reciprocating with positive behaviours in the workplace. A female leader who builds trust, support and empowerment can elicit higher levels of employee engagement, motivation and creativity. This study adds to the theoretical literature by building on the leadership and creativity literature by looking at female leadership. In practice, it offers guidance to organization looking to improve their creativity by implementing gender-inclusive leadership practices. Contextually, it enhances the understanding of the psychological empowerment as the explanation of the influence of female leadership on employee creativity.

Theoretical Foundation:

Social Exchange Theory

The Social Exchange Theory (SET) (Blau, 1964) is a powerful theory that could be used to explain how the leadership behaviors affect employee attitudes and behaviors. It is based on the theory that people react to positive treatment with positive attitudes and behaviors, and that social interaction is a process of reciprocity. In organizations, supportive leadership behaviors are seen as a valuable resource and employees respond by being more committed, engaged, and productive. At the core of SET is the idea that relationships develop over time, with an increasing number of interactions that build trust, obligation, and loyalty between individuals. Positive exchange relationships between leaders and followers which result from leadership behaviors that show concern, support, and developmental opportunities motivate employees to go above and beyond the call of duty. Thus, creativity can be considered as a positive reciprocation, in which workers willingly spend cognitive resources to produce new and useful ideas.

The significance of SET for this study is that it could be used to understand the potential of female leadership in inducing psychological empowerment and, in turn, increasing employee creativity. Women leaders are often linked to



participative decision making, interpersonal sensitivity, collaboration and employee development. These leadership traits can be considered as socio-emotional resources offered to employees that enhance exchange relationships and perceptions of organizational support.

Psychological empowerment is the employee's sense of competence, self-determination, meaning and impact as they gain more trust and autonomy. Empowered employees are more likely to engage in creative problem solving as they feel more ownership of their work and are more confident in their ability.

SET has been widely used in recent years to understand the impact of transformational, empowering, servant and inclusive leadership on innovative outcomes. For instance, Ibrahim et al. (2023) applied a social exchange lens to understand the transformational leadership's role in fostering employee creativity through psychological empowerment. Likewise, Khan et al., (2022) posited that servant leadership encourages innovative work behavior through a reciprocal relationship that is marked by trust and empowerment. Gupta et al. (2022) and Wen et al. (2023) also found that empowering and inclusive leadership behaviours boost employee motivation through psychological empowerment, which in turn fuels innovation-related behaviours. Overall, these results

reinforce the basic premise of SET; that positive leadership behaviors elicit positive reactions from employees.

Although it has been applied extensively, its previous theoretical applications show that there are several restrictions. First, most of the SET-based studies have focused on styles of leadership and not the characteristics of the leader, and thus the impact of female leadership is under-explored. Second, despite some evidence that suggests that the mechanisms of reciprocal exchange vary across contexts, existing research often assumes that they are the same across organizations and cultures. Third, many studies focus on direct leadership effects and offer little in the way of understanding of the psychological processes by which exchange relationships are converted to creative outcomes. These restrictions suggest that there is a need for more research into understanding psychological empowerment as a mediator between female leadership and employee creativity. Therefore, SET is an appropriate model to explain that supporting interaction initiated by women leaders can create empowerment perception which can stimulate employee creativity.

Hypotheses Development Female Leadership and Employee Creativity

Creativity of employees is a strategic organizational function because it helps companies to come up with

new solutions, adjust to changes in the environment and maintain a competitive advantage. Leadership is one of the most important factors in promoting such creativity, influencing the psychological and behavioral reactions of employees with respect to their work. In today's leadership literature, women leaders have been receiving a growing amount of research attention because they tend to focus on cooperation, helping others, participative decision making, and developing their employees. These characteristics are especially pertinent to creativity, where creative output may thrive in a workplace where employees feel valued, trusted, and empowered to come up with new ideas. According to the Social Exchange Theory, employees are likely to respond positively to supportive behavior on the part of the leader, and they will respond in positive discretionary acts that will benefit the organization.

Empathy, inclusiveness and mutual respect are often hallmarks of high-quality relational exchanges that female leaders can create, which may lead to more cognitive effort by employees to engage in creative problem solving. This is backed up by recent empirical evidence. Nguyen et al. (2022) reported that transformational leadership has a positive impact on employee creativity, as it fosters an environment where employees are

encouraged to think creatively. Ahmad et al. (2023) also pointed out that empowering leadership fosters creativity through self-esteem and development opportunities, and Hwang et al. (2023) showed that leadership behaviors that encourage employee voices had a significant impact on creativity. All these results indicate that supportive and empowering leadership styles can inspire employees to be innovative in idea generation and execution.

Although there is increasing evidence of a relationship between leadership and creativity, there are some key inconsistencies. Previous research has mainly been on leadership styles like transformational, empowering, inclusive, ethical and servant leadership as opposed to looking at female leadership as a phenomenon of leadership (Gupta et al., 2022; Khan et al., 2022; Alwali, 2024). As such, the ways in which women leaders impact creativity are not well understood. Furthermore, the results of the effects of leadership on creativity have been different across different contexts, such as industries and countries, in terms of the extent and importance of the effects. The positive relationship is robust in some studies, but there are indications that this impact could be reduced by organizational culture, employee traits, and contextual factors (Li et al., 2025). Many investigations are cross sectional, and this has methodological

drawbacks in terms of the ability to draw causal conclusions and the understanding of the longer-term impacts of leadership. Moreover, previous studies have tended to view gender as a control variable, and not as a variable that may make a special contribution to employee creativity. This gap is a theoretical and empirical gap in literature on leadership. The direct effect of female leadership on employee creativity is not only theoretically relevant but also practically important, as there is a growing number of women in managerial roles and workplace innovation is becoming more and more crucial. Therefore, the following hypothesis is proposed:

H1: Female leadership has a positive and significant effect on employee creativity.

Female Leadership and Psychological Empowerment

Psychological empowerment is now a key psychological state that can lead to increased employee motivation, engagement and effectiveness at work. It is an expression of personal meaning, competence, self-determination and impact in the execution of work-related activities. Leadership is acknowledged as one of the most powerful factors that can influence the psychological empowerment of employees since it is the leader that dictates the level of autonomy and participation employees enjoy and whether they feel confident about

their work roles. In this context, female leadership is especially relevant as female leaders tend to be participative, interpersonally sensitive, collaborative and supportive in their communication. These leadership qualities help to foster a workplace where workers feel more trusted, more engaged and more in control of their jobs. Social Exchange Theory suggests that leaders who offer socio-emotional support, recognition, and development opportunities will receive positive psychological responses and organizational attachment from employees. Females leaders' relational and inclusive leadership styles can reinforce employees' self-efficacy and self-worth, which can help to improve psychological empowerment. This can be backed up by empirical evidence. Bin Bakr and Alfayez (2022) revealed that transformational leadership has a positive and significant impact on psychological empowerment, which in turn encourages the employee's confidence and participation. In the same vein, Wen et al. (2023) found that empowering leadership positively influences employees' sense of autonomy and control, and Ibrahim et al. (2023) showed how supportive and empowering leadership behaviors impact positively on employees' psychological empowerment. These results indicate that trust and employee development-focused



leadership practices foster empowerment.

Although there is significant evidence of the relationship between leadership and psychological empowerment, there are still key areas of research that are lacking. Previous studies have mainly focused on transformational, empowering, inclusive, and ethical leadership styles, and few studies have dedicatedly explored female leadership as a unique factor for empowerment (Alwali, 2024; Abuzaid et al., 2024). Thus, what is known about these leadership behaviors and their association with empowerment is limited in terms of whether these behaviors are the same across organizational settings and whether they have the same empowerment consequences. Moreover, previous research has yielded inconsistent findings, which may be attributed to the differences in contexts and cultures. For example, empowerment mechanisms can be different in collectivist and individualist cultures, as employee expectations of autonomy and authority can be very different (Wen et al., 2023). There are also methodological limitations as many studies are cross-sectional and use self-report measures, which limits causal interpretations and can lead to common method bias. Further, empowerment is often studied as an outcome of leadership, as opposed to being a key mechanism through which

leadership affects employee actions. The importance of the role of women leaders in psychological empowerment of employees is both theoretical and practical with the growing focus of organizations on diversity and inclusion in leadership. This gap could be filled to gain a better understanding of the psychological mechanisms that underlie the impact of female leaders on employee outcomes. Therefore, the following hypothesis is proposed:

H2: Female leadership has a positive and significant effect on psychological empowerment.

Psychological Empowerment and Employee Creativity

Psychological empowerment has been widely studied in the literature as an important motivational process that can lead to employees' effectiveness and innovative behavior. Creativity involves challenging assumptions, considering other solutions, experimenting, and all of these are uncertain and risky. As a result, when employees believe they are competent, autonomous, and can influence the outcomes in the organization, they will be more likely to engage in creative behaviors.

Psychological empowerment gives these perceptions through a sense of meaning, self-determination, competence and impact in the workplace. According to the Social Exchange Theory, when employees

feel empowered, they feel that the organization and its leaders trust and value their contributions. This positive exchange relationship motivates employees to reciprocate with proactive and discretionary behaviours such as the development of innovative ideas. Empowered employees are intrinsically motivated, more confident and have a sense of ownership, which allows them to be more proactive and participate in creative problem solving. This correlation has been well supported by recent empirical research. Han et al. (2022) reported that psychological empowerment has a significant positive effect on creativity, as it boosts people's confidence and encourages them to try new methods. Likewise, Gyamerah et al. (2022) revealed that empowered employees have higher level of creativity as empowerment boosts employee motivation and personal initiative. Alif and Nastiti (2022) also found that the psychological empowerment motivates the creative work effort through self-leadership and responsibility of employees. In sum, these results indicate that psychological empowerment is a significant psychological resource which can motivate creative performance.

Although there is already a consensus on the positive impact of psychological empowerment on the creativity, there are still some inconsistencies that have not been

resolved. The majority of studies indicate that the effects are substantial and positive, but the nature of this relationship is highly dependent on the organizational setting and the segment of employees. For instance, Gelaidan et al. (2022) identified that empowerment has a positive impact on creativity in high growth contexts, while other research indicated that empowerment can be undermined by organizational constraints, rigid organizational structures, and lack of managerial support. Furthermore, Zhang et al. (2022) noted that contextual factors like workplace climate and leadership styles may affect how empowerment influences innovation-related outcomes. Findings are also limited by methodological issues. Many studies are based on cross section design and it is hard to establish causal relationship between empowerment and creativity. Furthermore, creativity has been considered as a direct result of leadership and the contribution of psychological empowerment has been less studied. These restrictions suggest that the mechanisms by which empowerment impacts creative behavior are not well understood in various organizational contexts. Since employee innovation is becoming more vital in today's organizations, more in-depth studies of psychological empowerment as a predictor of creativity are still

justified. Therefore, the following hypothesis is proposed:

H3: Psychological empowerment has a positive and significant effect on employee creativity.

Mediating Role of Psychological Empowerment

The psychological mechanisms that mediate the process between leadership and employee creativity must be understood to explain how leadership affects employee creativity. The research literature on leadership is beginning to acknowledge that the impact of leadership is often indirect and that it may occur through employees' cognition and motivation. Psychological empowerment has become one of the most powerful mediators because it provides an understanding of how leadership behaviors influence employees' beliefs of competence, autonomy, meaning and impact and, in turn, their behaviors in the workplace. Based on the Social Exchange Theory, supportive leadership behaviors foster positive relationships of exchange, which in turn will elicit positive psychological and behavioral responses from employees. Empathy, participation, collaboration and developmental support are valuable socio-emotional resources that leaders who demonstrate these traits bring to employees in the context of female leadership. These resources enhance employees' sense of empowerment and consequently

boost their motivation to be creative. Empowered employees are more likely to take initiative, try out new ideas, and question the status quo, as they feel they have more control over their work environment. This is an indirect process supported by empirical evidence. Ibrahim et al. (2023) revealed that psychological empowerment is a mediator between transformational leadership and employee creativity, meaning that the positive effect of transformational leadership on employee creativity is through psychological empowerment. In the same vein, Alhosani and Ahmad (2024) showed that psychological empowerment is an important mediation mechanism that explains how leadership contributes to creative performance in government institutions. Gelaidan et al. (2022) and Hwang et al. (2023) also found that empowerment through leadership encourages innovation and creativity, as they boosted employee confidence and intrinsic motivation.

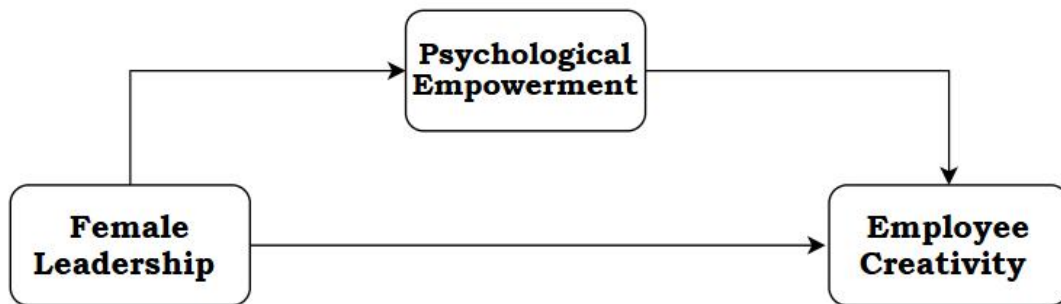
There are significant theoretical and empirical gaps in the study of the mediating role of psychological empowerment, despite the significant evidence. The majority of the studies have studied the mediation effect in transformational, empowering, servant, ethical, coaching, and inclusive leadership styles (Abuzaid et al., 2024; Gupta, et al., 2022; Khan, et al., 2022). There has been relatively limited research



on the mediating role of psychological empowerment between female leadership and employee creativity. The implications are that it is unclear if the relational and collaborative qualities that are often attributed to women leaders lead to creativity in the same ways that other leadership frameworks are known to empower people. Moreover, mediation strengths have been found to vary across organizational and cultural settings which may impact the effectiveness of empowerment mechanisms. There are also methodological issues as many studies are based on cross-sectional data and it is difficult to draw

conclusions about the temporal and causal relationships between leadership, empowerment and creativity. Furthermore, the literature has focused on leadership styles and neglected leader demographics and characteristics which might impact on employee perceptions differently. This gap in knowledge is an important one, as it relates to understanding the role of female leadership in innovative outcomes through psychological processes. To fill this gap can give a more complete picture of the ways in which female leaders stimulate employee creativity. Therefore, the following hypothesis is proposed:

H4: Psychological empowerment mediates the positive relationship between female leadership and employee creativity.



Methodology

This study adopts the positivist philosophy of research because it aims to analyze the relationships between female leadership, psychological empowerment, and employee's creativity objectively using empirical observation and statistical testing. Positivism is especially suitable when the researchers want to test the hypothesis that is theoretically

derived using quantifiable data and standardized measurement procedures (Ghanad, 2023). In line with this philosophy, the study employs a deductive approach, with hypotheses being derived from Social Exchange Theory and a review of the literature, and then tested empirically. The research design used is a quantitative explanatory research design as it allows the investigation of causal



relationship among multiple constructs and it allows to generalize the findings to a larger population. The survey strategy is chosen because it is an efficient method of obtaining standardized information from a relatively large number of respondents, and it is consistent in measurement. Moreover, the study is conducted by a cross-sectional time horizon, which means that data are gathered at one specific time. This design is suitable because it enables the analysis of existing perceptions and relations between variables and is time, cost and access friendly (Maier et al., 2023).

The target population consists of the employees of the higher education sector, which includes academic staff and administrative staff in public and private universities. Higher education is chosen because creativity and innovation are now more crucial than ever for the effectiveness of institutions and the production of knowledge. Employee directories from participating universities will be used to create a sampling frame. A non-probability technique of purposive sampling is used in the study as the respondents need to have enough interaction with the female supervisors/managers to assess leadership behaviors accurately. According to the suggestion for structural equation modeling, the sample size of more than 300 respondents is large enough to obtain the statistical power and

stability of the model. The data will be collected using a structured self-administered questionnaire, which will be sent electronically and in print. All responses will be voluntary and the respondents will be informed about the purpose of the study, confidentiality, anonymity and the right to withdraw at any time. The informed consent will be taken before completing the questionnaires and the information gathered will be used only for academic research.

The questionnaire includes previously validated measurement scales that have been adapted from existing studies and have been content validated for measurement accuracy. Female leadership is measured using items that tap supportive, participative, and developmental leadership behaviors of female supervisors. Psychological empowerment is captured by the dimensions of meaning, competence, self-determination and impact, and employee creativity by the items of new and useful ideas in the workplace. All items are answered on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The wording of items will be improved after expert review by academic researchers and practitioners to improve clarity and contextual relevance. A pilot study with a small number of respondents will be carried out prior to data collection to assess the reliability, comprehensibility and the structure



of the questionnaire. SmartPLS 4 and the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique will be used to analyze the data. PLS-SEM is suitable for the simultaneous estimation of measurement and structural models, in the presence of complex mediation relationships, and for predictive and theory-testing studies (Fauzi, 2022; Henseler & Schubert, 2022; Cheah et al., 2024; Sarstedt et al., 2024; Schubert et al., 2023).

Data Screening and Cleaning

The data set was screened for accuracy, completeness and suitability for multivariate analysis before hypothesis testing. The missing values were checked and mean substitution was performed when required, as the percentage of missing values was less than the

suggested limit of 5%. Standardized z-scores and Mahalanobis distance were used to evaluate outliers; no outlier exceeded acceptable limits. Skewness and kurtosis statistics were used to assess normality, and values were within the recommended range of ± 2 and ± 7 , respectively. Variance inflation factor (VIF) values were used to check multicollinearity, and none of the VIF values exceeded the threshold value of 3.3. Harman's single factor test was used to test common method bias and the first factor explained less than 50% of the total variance, indicating that there was no significant common method bias issue. Data coding and entry procedures were also checked for analytical accuracy and consistency (Ghanad, 2023; Hair et al., 2025).

Table 1

Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	198	56.6
	Female	152	43.4
Age	21-30 years	102	29.1
	31-40 years	138	39.4
	41-50 years	79	22.6
	Above 50 years	31	8.9
Education	Bachelor's	96	27.4
	Master's	187	53.4
	PhD	67	19.2
Experience	Less than 5 years	78	22.3
	5-10 years	143	40.9
	11-15 years	82	23.4
	More than 15 years	47	13.4
Sector	Higher Education	350	100.0
Position	Academic Staff	224	64.0
	Administrative Staff	126	36.0



The demographic profile indicates a balanced and professionally diverse sample drawn from the higher education sector. Male respondents represented 56.6% of the sample, while females accounted for 43.4%, providing adequate gender representation for examining perceptions of female leadership. Most respondents were between 31 and 40 years old, suggesting substantial professional maturity and organizational exposure. More than half of the respondents possessed a master's degree, reflecting the highly educated nature

of university employees. Furthermore, a significant proportion reported between five and ten years of work experience, indicating familiarity with organizational leadership practices. The demographic composition therefore provides a suitable basis for investigating the proposed relationships among female leadership, psychological empowerment, and employee creativity while enhancing the credibility and relevance of the study findings.

Table 2

Reliability Analysis and Correlation Matrix

Variable	Cronbach's Alpha	FL	PE	EC
Female Leadership (FL)	0.912	1		
Psychological Empowerment (PE)	0.903	0.641**	1	
Employee Creativity (EC)	0.917	0.598**	0.684**	1

The reliability analysis shows good internal consistency of all the constructs. Female leadership ($\alpha = .912$), psychological empowerment ($\alpha = .903$) and employee creativity ($\alpha = .917$) met the recommended criterion of .70, which indicates satisfactory reliability and measurement stability (Hair et al., 2025). Correlation analysis also showed that all the variables of the study were positively correlated and statistically significant. The results showed that female leadership had a

strong positive correlation with psychological empowerment ($r = .641, p < .01$) and a moderate positive correlation with employee creativity ($r = .598, p < .01$). Likewise, psychological empowerment was the most highly correlated with employee creativity ($r = .684, p < .01$). The results offer initial evidence for the proposed conceptual model, indicating that increased perception of female leadership is linked to increased employee empowerment and creativity.

Table 3

Measurement Model Assessment

Construct	Outer Loadings	Cronbach's Alpha	rho_A	CR	AVE
Female Leadership	0.744–0.891	0.912	0.915	0.928	0.646



Psychological Empowerment	0.751–0.903	0.903	0.907	0.921	0.661
Employee Creativity	0.768–0.912	0.917	0.921	0.934	0.681

The results of the measurement model assessment showed that the reliability and convergent validity were satisfactory. The indicator loadings were all above the recommended value of 0.70, which indicates good indicator reliability (Hair et al., 2025). All constructs had Cronbach's alpha, rho_A, and composite reliability values greater than 0.70, which is considered to be strong. In addition, the AVE values were between 0.646 and 0.681, which is above the threshold value of 0.50

and indicates convergent validity. The results indicate that the measurement items are good indicators of their respective latent constructs and account for a significant amount of variance. The measurement model exhibits acceptable psychometric properties, and, in accordance with the literature on PLS-SEM, the next step is to assess the discriminant validity of the model and evaluate the structural model (Fauzi, 2022; Henseler & Schuberth, 2022).

Table 4

**Discriminant Validity Assessment
Fornell-Larcker Criterion**

Construct	FL	PE	EC
FL	0.804		
PE	0.641	0.813	
EC	0.598	0.684	0.825

Discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT). All HTMT values were below the conservative threshold of 0.85, indicating adequate discriminant validity (Rosli et al.,

2024). These results confirm that female leadership, psychological empowerment, and employee creativity represent conceptually distinct constructs despite being positively related.

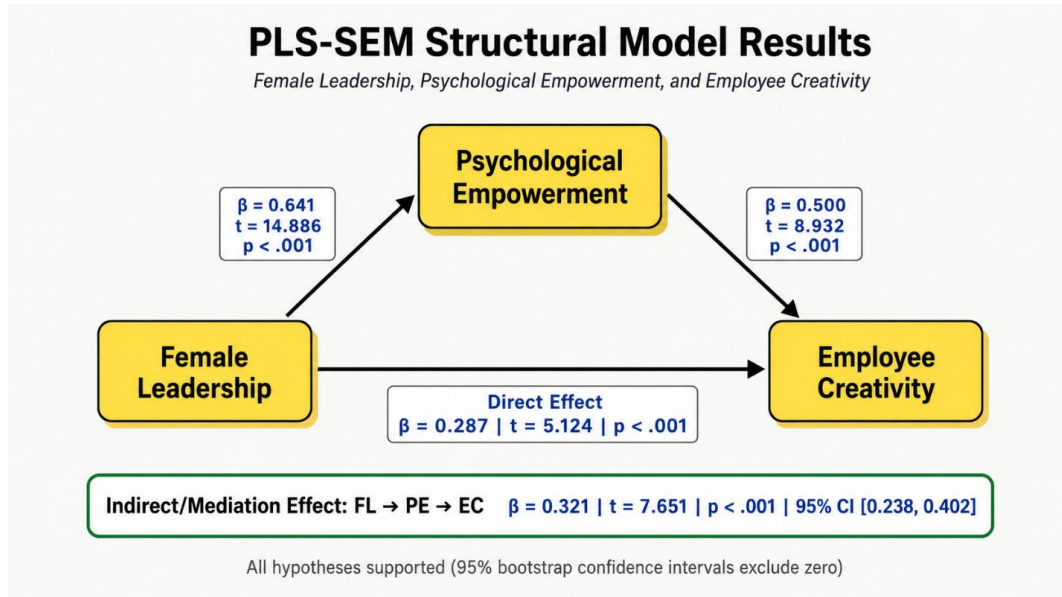


Table 5

Structural Model and Hypothesis Testing

Hypothesis	Path	Beta	t-value	p-value	95% CI	Decision
H1	FL → EC	0.287	5.124	< .001	[0.182, 0.391]	Supported
H2	FL → PE	0.641	14.886	< .001	[0.561, 0.719]	Supported
H3	PE → EC	0.500	8.932	< .001	[0.394, 0.606]	Supported
H4	FL → PE → EC	0.321	7.651	< .001	[0.238, 0.402]	Supported

The results of the structural model support the hypotheses well. The result showed that female leadership had a significant positive effect on employee creativity, as shown in the data $\beta = .287$, $t = 5.124$, $p < .001$, which means that the hypothesis H1 was accepted. Female leadership also had a significant impact on psychological empowerment ($\beta = .641$, $t = 14.886$, $p < .001$), thus supporting H2. H3 was supported as psychological empowerment significantly predicted employee

creativity ($\beta = .500$, $t = 8.932$, $p < .001$) in line with Social Exchange Theory. Most importantly, the indirect effect of female leadership on employee creativity via psychological empowerment was significant ($\beta = .321$, $t = 7.651$, $p < .001$), which confirmed the mediation role of psychological empowerment and thus supported H4. These results indicate that women leaders not only directly increase employee creativity but also indirectly by increasing perceptions of



empowerment in employees. The findings are consistent with earlier research on leadership and empowerment and further support

the role of psychological mechanisms in understanding leadership effectiveness (Ayu et al., 2024; Chidambaram et al., 2021).

Table 6

Multi-Group Analysis

Path	Male	Female	Difference	p-value
FL → PE	0.618	0.669	0.051	0.312
PE → EC	0.486	0.527	0.041	0.284
FL → EC	0.274	0.302	0.028	0.421

The multi-group analysis was conducted to examine whether the structural relationships differed significantly across respondent gender groups. The results indicated no statistically significant differences between male and female respondents across the examined paths, as all p-values exceeded the .05 threshold. This finding suggests that the effects of female leadership on psychological empowerment and employee creativity are relatively stable across gender categories. The absence of significant group differences enhances the robustness and generalizability of the proposed model. Furthermore, the findings indicate that employees respond similarly to empowering leadership behaviors exhibited by female leaders regardless of their gender, reinforcing the universal applicability of the theoretical mechanisms proposed in Social Exchange Theory.

Discussion

The results show that women's leadership has a positive impact on employee creativity, indicating that

leadership is not just formal but also relational and developmental in their interactions with employees. This relationship can be understood by the unique attributes that are generally attributed to female leadership, such as empathy, collaboration, inclusiveness and participative decision making. Through these leadership behaviours, employees are able to feel psychologically safe to share ideas, try out new solutions, and think creatively to solve problems. Employees who feel supported and respected by female leaders are likely to respond by engaging in discretionary behaviors that are good for the organization, such as being creative, in line with Social Exchange Theory. The results support the notion that creativity is enhanced by a lack of control and supervision, and a sense of trust and interpersonal support for employees. The findings also show that there is a significant effect of female leadership on psychological empowerment. This discovery indicates that female leaders are vital in enhancing employee's sense



of competence, autonomy, meaning and impact in their work. Women leaders tend to engage employees and offer developmental opportunities which boost employees' self-confidence in their skills and decision-making. Theoretically, these interactions are helpful as they make employees feel empowered due to the fact that their contributions are valued and trusted. As a result, staff are more likely to take responsibility, take the initiative and go the extra mile. This discovery is consistent with the theory that leadership behaviors are important antecedents to psychological states that, in turn, impact work outcomes. Moreover, psychological empowerment was found to be an important predictor of employee creativity. This result indicates the role of intrinsic motivation and self-belief in encouraging innovative behaviours. When employees feel more in control, they are more inclined to think outside the box, take risks with new concepts, and keep going when faced with obstacles. Empowered individuals are more likely to have a sense of ownership over their work and are more willing to put in cognitive effort into creative work. The result indicates that creativity is not only the result of the influence of the leader, but also is determined by the internal psychological resources of the employees. So, empowerment is a motivational tool which converts

organizational support into creative performance.

The results of the mediation give a better understanding of how the leadership can affect the creativity of employees through the mediation of women. The results show that the female leaders create the conditions to increase the psychological empowerment of employees, thus promoting creativity. It does not seem that women's leadership is necessarily directly linked to creative outputs but rather that it is through the supportive leadership behaviors that they build their employees' confidence, autonomy, and sense of purpose, which in turn leads to creative engagement. This discovery is consistent with the core tenets of Social Exchange Theory, which is based on the idea that positive social interactions result in psychological obligations and motivational states that promote positive behaviors in the workplace. Thus, the mediation effect offers a more complete explanation of the relationship between leadership and creativity and the significance of psychological processes in organizational behavior.

The results are consistent with prior research on leadership and its impact on creativity and innovation, which highlights the positive role of transformational, empowering, servant, ethical, coaching, and inclusive leadership in fostering creativity and innovation (Ibrahim et al., 2023; Ahmad et al., 2023; Hwang

et al., 2023; Gupta et al., 2022). Likewise, previous research has consistently found that psychological empowerment is an important mediator between leadership and creative outcomes (Alhosani & Ahmad, 2024; Gelaidan et al., 2022; Gyamerah et al., 2022). The current research, however, builds on this research in particular by examining female leadership and not leadership in general. The results of this study suggest that the positive impact of female leadership is still strong in the context of higher education despite some previous studies indicating that contextual factors like organizational culture, hierarchy, and employee characteristics can diminish the impact of leadership on creativity (Li et al., 2025; Zhang et al., 2022). These variations might be attributed to the differences in the organizational structure, professional autonomy and knowledge-intensive work environment in higher education institutions.

Theoretical Implications

This study has several important theoretical implications for the literature on leadership and organizational behavior. First, it expands the Social Exchange Theory to show that women's leadership can be a positive social resource that can produce positive psychological and behavioral consequences. Previous research has mainly used the theory to explain transformational, servant, empowering and inclusive

leadership styles; however, in the present study, the reciprocity mechanisms of Social Exchange Theory were also found to be applicable in the context of the effectiveness of female leadership. Thus, the study extends the theoretical relevance of the Social Exchange Theory to the current research on leadership.

Second, results add to the literature on psychological empowerment, supporting the key role of psychological empowerment as a mediating mechanism between leadership and creativity. The findings lend credence to the notion that leadership has an impact on employee outcomes not just through the direct control of actions, but through psychological processes. This discovery helps to clarify the current conceptual models and shows that empowerment is an important explanatory mechanism through which female leaders promote innovative behavior. Third, the study fills a gap in the literature by examining female leadership as an independent variable not as a demographic factor or control variable. In doing so, the study helps to better understand the impact of leadership diversity on organizational outcomes, and offers a starting point for future theory development regarding gender and leadership effectiveness.

Practical Implications

The results have several implications for organizational leaders, policy



makers, and higher education institutions. Firstly, organizations should identify women leaders as a strategic resource, which can improve the creativity and innovations of the employees. It is important to see initiatives to promote women's representation in leadership roles, then, as a way of enhancing organizational performance as well as diversity. Relational leadership skills, including communication, employee involvement, building trust, and supportive supervision, should be emphasized in leadership development programs as these behaviors have a large impact on employee empowerment and creativity.

Second, managers need to pay attention to developing empowering workplaces that reinforce employees' sense of competence, autonomy, and contribution. Policies that promote engagement in decision-making, professional development and knowledge sharing within the organization can boost psychological empowerment and stimulate creative performance. Third, policies and administrators of education should encourage leadership practices that foster inclusiveness and employee development. These programs can help create a culture of innovation in schools and make them more effective. In conclusion, the empowerment of women leaders can be a significant force for innovation

and sustainable success in organizations.

Limitations and Future Research Directions

The study has some limitations. First, a cross-sectional research design does not allow causal relationships to be drawn between the research variables. Future research needs to adopt longitudinal designs to explore the time series of female leadership, psychological empowerment, and employee creativity. Second, the data was gathered in one sector, higher education, and so the results may not be transferable to other sectors. Future studies should be done to replicate the model in other sectors like healthcare, manufacturing and service organizations. Third, the study used self-reported data that could have a response bias even though common method variance was minimized. The use of multi-source data collection techniques could be considered for future studies. Lastly, future studies may explore other mediators and moderators such as psychological safety, organizational support, innovative climate, and employee engagement to gain a more complete picture of the mechanisms and boundary conditions of the link between female leadership and employee creativity.

References

Abuzaid, A. N., Ghadi, M. Y., Madadha, S. A. M., & Alateeq, M. M. (2024). The effect of



- ethical leadership on innovative work behaviors: A mediating-moderating model of psychological empowerment, job crafting, proactive personality, and person-organization fit. *Administrative Sciences*, 14(9), 191.
- Ahmad, T., Hamid, A. R., Abbas, A., Anwar, A., Ekowati, D., Fenitra, R. M., & Suhariadi, F. (2023). Empowering leadership: role of organizational culture of self-esteem and emotional intelligence on creativity. *Journal of Management Development*, 42(3), 201-214.
- Alhosani, A. A., & Ahmad, S. Z. (2024). Charting creativity in government: the relationship between transformational leadership, psychological empowerment and employee creative performance. *Transforming Government: People, Process and Policy*, 18(1), 33-48.
- Alif, M. I., & Nastiti, T. (2022). Empowering leadership in creativity and work-effort: An elucidation through the psychological empowerment and self-leadership of the millennials generation. *Gadjah Mada International Journal of Business*, 24(3), 269-288.
- Alwali, J. (2024). Innovative work behavior and psychological empowerment: the importance of inclusive leadership on faculty members in Iraqi higher education institutions. *Journal of Organizational Change Management*, 37(2), 374-390.
- Aristana, I. N., Wisnawa, I. M. B., Widyani, A. A. D., Salain, P. P. P., Vipraprastha, T., & Wardana, I. M. A. (2025). Transformational Leadership and Employee Creativity: Role Psychological Empowerment as Mediator. *Calitatea*, 26(205), 222-234.
- Ayu, R., Abdullah, N. A., Wan Sulaiman, W. S., & Bin Selamat, M. N. (2024). Structural Equation Modeling based SmartPLS 3.0 Software in Measuring Psychological Empowerment and Readiness to Strengthen Structural Transformation. *International Journal on Advanced Science, Engineering & Information Technology*, 14(4).
- Badar, K., Kundi, Y. M., Siddiquei, A. N., & Abualigah, A. (2023). Linking environmentally-specific empowering leadership to hotel employees' green creativity: understanding mechanisms and boundary conditions. *Journal of Service*



- Theory and Practice, 33(3), 412-435.
- Bin Bakr, M., & Alfayez, A. (2022). Transformational leadership and the psychological empowerment of female leaders in Saudi higher education: an empirical study. *Higher Education Research & Development, 41*(6), 1805-1820.
- Cheah, J. H., Magno, F., & Cassia, F. (2024). Reviewing the SmartPLS 4 software: the latest features and enhancements.
- Chidambaram, V., Shanmugam, K., & Sivamani, B. (2021). Effect of project team integration on the performance of Indian construction project: SMART PLS Structural Equation Approach. *International Journal of Construction Supply Chain Management, 11*(1), 1-20.
- Fauzi, M. A. (2022). Partial Least Square Structural Equation Modelling (PLS-SEM) in Knowledge Management Studies: Knowledge Sharing in Virtual Communities. *Knowledge Management & E-Learning, 14*(1), 103-124.
- Gelaidan, H. M., Houtgraaf, G., & Al-kwafi, O. S. (2022). Creativity and innovation in rapidly developing Qatar: the impact of leadership and the mediation of psychological empowerment amidst rapid growth. *International Journal of Public Sector Management, 35*(3), 257-275.
- Ghanad, A. (2023). An overview of quantitative research methods. *International journal of multidisciplinary research and analysis, 6*(08), 3794-3803.
- Gupta, S., Nawaz, N., Tripathi, A., Arif Chaudhry, S., & Agrawal, K. (2022). Impact of inclusive leadership on innovation performance during coronavirus disease 2019 outbreak: Mediating role of employee innovation behavior and moderating role of psychological empowerment. *Frontiers in Psychology, 13*, 811330.
- Gyamerah, S., He, Z., Asante, D., Ampaw, E. M., & Gyamerah, E. E. D. (2022). Paternalistic leadership, employee creativity, and retention: The role of psychological empowerment. *International Journal of Cross Cultural Management, 22*(1), 83-104.
- Hair, J. F., Babin, B. J., Ringle, C. M., Sarstedt, M., & Becker, J. M. (2025). Covariance-based structural equation modeling (CB-SEM): a SmartPLS 4 software tutorial: JF Hair et al.
- Han, S., Liu, D., & Lv, Y. (2022). The influence of psychological safety on students' creativity



- in project-based learning: the mediating role of psychological empowerment. *Frontiers in psychology*, 13, 865123.
- Henseler, J., & Schubert, F. (2022). Partial least squares as a tool for scientific inquiry: Comments on Cadogan and Lee. *European Journal of Marketing*, 57(6).
- Henseler, J., & Schubert, F. (2022). Partial least squares as a tool for scientific inquiry: Comments on Cadogan and Lee. *European Journal of Marketing*, 57(6).
- Hwang, C. Y., Kang, S. W., & Choi, S. B. (2023). Coaching leadership and creative performance: A serial mediation model of psychological empowerment and constructive voice behavior. *Frontiers in Psychology*, 14, 1077594.
- Ibrahim, N., Ismail, A., Mat, N., & Erhan, T. (2023). Relationship between transformational leadership and employees' creativity with psychological empowerment as mediator. *The South East Asian Journal of Management*, 17(2), 1-25.
- Khan, M. M., Mubarik, M. S., Islam, T., Rehman, A., Ahmed, S. S., Khan, E., & Sohail, F. (2022). How servant leadership triggers innovative work behavior: exploring the sequential mediating role of psychological empowerment and job crafting. *European Journal of Innovation Management*, 25(4), 1037-1055.
- Li, X., Ling, C. D., & Zhu, J. (2025). Implications of inclusive leadership for individual employee outcomes: A meta-analytic investigation of the mediating mechanisms and boundary conditions. *Asia Pacific Journal of Management*, 42(4), 2257-2294.
- Maier, C., Thatcher, J. B., Grover, V., & Dwivedi, Y. K. (2023). Cross-sectional research: A critical perspective, use cases, and recommendations for IS research. *International Journal of Information Management*, 70, 102625.
- Nguyen, T. P. L., Nguyen, T. T., Duong, C. D., & Doan, X. H. (2022). The effects of transformational leadership on employee creativity in Vietnam telecommunications enterprises. *Management decision*, 60(3), 837-857.
- Rosli, M. S., Awalludin, M. F. N., Han, C. T., Saleh, N. S., & Noor, H. M. (2024). Unlocking insights: a comprehensive dataset analysis on the acceptance of computational thinking skills among undergraduate university students through the lens of extended technology acceptance model, HTMT, covariance-based SEM, and



- SmartPLS. *Data in Brief*, 54, 110463.
- Sani, S. A., Yusuf, T., Aliyu, S. E. A., & Yakubu, R. A. (2023). Impact of Audit Committee Attributes on Financial Reporting Quality of Deposit Money Banks in Nigeria: An Empirical Analysis Using Structural Equation Modelling (Smart-PLS). *African Banking and Finance Review Journal*, 3(3).
- Sarstedt, M., Richter, N. F., Hauff, S., & Ringle, C. M. (2024). Combined importance-performance map analysis (cIPMA) in partial least squares structural equation modeling (PLS-SEM): a SmartPLS 4 tutorial. *Journal of Marketing Analytics*, 12(4), 746-760.
- Schuberth, F., Zaza, S., & Henseler, J. (2023). Partial least squares is an estimator for structural equation models: A comment on Evermann and Rönkkö (2021). *Communications of the Association for Information Systems*, 52, 711-729.
- Wen, J., Huang, S. S., & Teo, S. (2023). Effect of empowering leadership on work engagement via psychological empowerment: Moderation of cultural orientation. *Journal of Hospitality and Tourism Management*, 54, 88-97.
- Zhang, S., Liu, Y., Li, G., Zhang, Z., & Fa, T. (2022). Chinese nurses' innovation capacity: The influence of inclusive leadership, empowering leadership and psychological empowerment. *Journal of Nursing Management*, 30(6), 1990-1999.