

# Applying Leader Member Exchange (LMX) Model to Investigate Leadership Styles and Leadership Effectiveness in Higher Education Institutions

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## Abstract

Indian higher education sector is phenomenally growing, thereby posing a challenge to education leaders to manage their institutions effectively. The present article is aimed at investigating different styles of leadership and their impact on leadership effectiveness in higher education institutions (HEIs), studying gender as a moderating variable. LMX model has been used to examine different leadership styles. structural equation modelling (SEM) and an Independent Sample t-test were applied on a sample of 361 respondents who were randomly selected from the population of leaders and followers working in HEIs in Jammu and Kashmir. The study found that different leadership styles impact leadership effectiveness differently. Further, the study revealed that gender makes a significant difference in different leadership styles, and males and females lead differently, which was coherent in the light of the existing research in HEIs. The study has added significant insights into the domain of leadership by adopting a sound methodology for different leadership styles and leadership effectiveness using LMX perspective. The present research contributes to existing literature by investigating the moderating effects of gender on leadership effectiveness.

## Keywords

Leadership styles, leadership effectiveness, gender leadership, leader–member exchange (LMX), HEI

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## **Introduction**

Social scientists have studied leadership in academic settings for many years (Badura et al., 2022), and yet there is no agreement upon what defines leadership (Jyoti & Bhau, 2015). There is no single dominant paradigm for studying leadership (Evans, 2022), as researchers have approached it from different perspectives (Sajjad et al., 2024). Research reveals the significant relationship of leadership on organisational performance (Wachira & Wainaina, 2025) and has gained continuous attention among academicians and practitioners (Igbackemen & Odivwri, 2015; Khajeh, 2018). A recent Web of Science search for leadership turned up over 165,000 articles, demonstrating the growth of leadership research in academia. The leadership styles are seen to be crucial for accomplishing organisational objectives and motivating subordinates to succeed (Farhani et al., 2025). Research reveals how a leader's style affects the organisation's success (Kaiser et al., 2008). Although leadership theory and research emerged more than a century ago, scrupulous theory development and empirical research on leadership were stagnant until around 1990 (Gardner et al., 2010) when there was a renaissance of interest in charismatic leadership (Conger & Kanungo, 1987) and transformational leadership (Bass, 1997). The leadership field continued to thrive and remained vibrant during the past three decades, with many new perspectives being tested (Dinh et al., 2014).

Beyond the idea that people are born leaders, researchers have been concentrating on how to create effective leaders. In higher education institutions (HEIs), the significance of leadership has been recognised, particularly in allocating resources to train future generations as leaders. A search of the top 50 universities as ranked by US News and World Report (2018) showed that every department in the ranking list offers some form of leadership development for the students. However, little is known about the efficacy of leadership development approaches, despite their apparent widespread use. Leadership has been suggested to be a dispositional trait (Judge et al., 2002), although research suggests that it can also be developed through experience (Day et al., 2014; Lacerenza et al., 2017).

## **Theoretical Background**

Katz and Kahn developed Leader–Member Exchange (LMX) model in the late 1960s, which deals with the interpersonal interactions between leaders and followers. Higher levels of trust, involvement, support, and rewards are characteristics of high-quality exchanges compared to low-quality ones. The LMX, also referred to as vertical dyad linkage, is concerned with relationships between a leader and a member. Although there are not many studies that look at transformational leadership and LMX combined, early research found a strong correlation between transformational leadership traits and high-quality LMX (Basu & Green, 1997; Deluga, 1992; Howell & Hall-Merenda, 1999).

### ***LMX Dynamics and Leadership Styles***

The relationship between LMX and leadership styles remains an area of immense importance for the present work, given its implications for employee

engagement, performance, and organisational success. While LMX model highlights the differentiated, dyadic relations among leaders and individual followers, leadership styles describe broad patterns of leader behaviours that influence the quality of these exchanges. Transformational leadership behaviours—idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration—align closely with the relational dimensions of high LMX. Transformational leadership positively predicts LMX quality through enhanced psychological empowerment and trust. Recent longitudinal research by Breevaart and Bakker (2018) further supports the notion that transformational leadership fosters high-quality exchanges, which in turn improve engagement with work over time. While less relational in nature, transactional leadership—especially contingent reward—can promote moderate LMX quality through clear expectations and fairness. Liao and Chuang observed that contingent reward behaviours strengthen LMX quality when paired with consistent leader communication and perceived procedural justice.

Authentic leadership, categorised by self-awareness, relational transparency, and moral behaviour, enhances openness and trust, which are critical to LMX quality. Hassan and Ahmed (2017) demonstrated that authentic leadership is significantly related to LMX, with trust mediating this effect. More recently, Schoemaker et al. highlighted the role of authentic leadership in nurturing relational-based exchanges in public sector organisations. Krasikova et al. (2017) showed that destructive leadership behaviours, including authoritarianism, diminish LMX and contribute to negative follower outcomes.

## *Literature Review and Hypotheses Development*

### *Leadership Styles and Leadership Effectiveness*

Even though research on leadership has grown significantly over the last 75 years, there are still concerns about how male and female leaders experience leadership and achieve successful outcomes. Leadership style is defined as a certain behaviour that a leader in an organisation uses to inspire staff members to accomplish the intended results (Haque et al., 2015; Igbackemen & Odivwri, 2015). Xenikou (2017) revealed that leadership style is the way in which a leader chooses to act towards his/her subordinates.

There is no agreement on what constitutes ‘the best style’ of leadership (Bolman & Deal, 2017). There is an adequate amount of research which substantiates the fact that leaders exhibit different leadership styles and produce outcomes differently (Andersen, 2015; Zacher & Rosing, 2015). Further, research reveals that gender plays a significant role in exhibiting different leadership styles and has an impact on leadership effectiveness (Anna Gorska, 2016; Eagly & Miller, 2016; Zenger & Folkman, 2019).

The classical research in leadership reveals different fundamental approaches of leadership as autocratic, democratic, task-oriented and relationship-oriented (Bass & Avolio, 1990; Eagly & Karau, 2002). Autocratic leadership has been defined by researchers as the leader making choices completely by themselves

without consulting the group members (De Cremer, 2007). Autocratic bosses constantly want their staff to follow their instructions (Al Khajeh, 2018) and therefore, retain the decision-making rights with them (Obiwuru et al., 2011).

On the other hand, *democratic* leadership is participative, consultative and involves the group in decision-making (Bass & Avolio, 1990; Gastil, 1994; Nwokocha & Iheriohanma, 2015). Nwokocha and Iheriohanma (2015) suggest that there is a possibility of poor decision-making by the subordinates as a result of the leader depending on subordinates. Lewin et al. (1939) found that the democratic style is better because it enhances autonomy, satisfaction, and group effectiveness. However, more recent meta-analyses (Foels et al., 2000) have revealed the impact of certain variables that could moderate these results. Leaders who use a *task-oriented* style mainly emphasise achieving the group task, whereas the *relationship-oriented* leaders emphasise the quality of relations with members (Hersey & Blanchard, 1982).

Full range leadership (FRL) Model (Bass, 1985) discusses three styles, namely transformational, transactional and laissez-faire. The model comprises nine leadership factors: idealised influence (behaviour), idealised influence (attributed), individualised consideration, inspirational motivation, intellectual stimulation, management-by-exception (active), contingent reward, management-by-exception (passive) and laissez-faire. Transformational leadership has attracted substantial attention from researchers and practitioners because of its significant impact on organisational outcomes. It has become the dominant paradigm over the past 20 years (Kennedy, 1994; Tourish, 2008) and has emerged as the most favoured approach of leadership in organisational settings by practice and empirical evidence (Pawar, 2016). Bass and Avolio (2004) have conceptualised four behavioural components of transformational leadership.

#### *Idealised influence*

The ability to articulate vision clearly, display very high moral standards and do the right things (Yukl, 1998), have charisma (Bass, 1985) and the ability to be a role model for subordinates (Bass, 1985; Bass et al., 2003). The major attributes of idealised influence are integrity, respect, risk-sharing, trust, and vision (Stone & Patterson, 2005). *Inspirational Motivation*: It describes how leaders motivate their followers to accomplish both individual and group objectives (Judge & Piccolo, 2004). *Intellectual stimulation*: Leadership that inspires followers to question their own opinions and ideas and to solve problems creatively (Bass, 1985). *Individualised consideration*: It enables leaders to establish a solid rapport with every follower. There is more to the relationship than just an exchange.

Bass and Avolio (1994) found transactional leadership as a type of contingent-reward leadership that had active and positive exchanges between leaders and followers, whereby followers are rewarded or recognised for accomplishing agreed-upon objectives. *Contingent reward*: Contingent reward leadership focuses on achieving the desired objectives. This leadership behaviour surfaced because of human appreciation for concrete, tangible, and material rewards in exchange for their efforts (Bass & Avolio, 2004). *Management by exception (active)*: Leaders following management by exception (active) have an inherent trust in

their workers to end the job to a satisfactory standard. This type of leadership does not inspire workers to achieve beyond expected outcomes (Bass & Avolio, 2004). *Management by exception (passive)*: Style of transactional leadership in which the leaders avoid specifying agreement, and fail to set goals and standards to be achieved by staff. According to Gill (2014), Laissez-faire leaves subordinates to complete tasks and jobs in the way they choose without adherence to any strict policies or procedures. Leaders who practise laissez-faire show little involvement in important organisational issues.

According to a substantial analysis of 162 studies, women exhibited somewhat less dictatorial and autocratic leadership styles and more democratic and participatory leadership styles (Eagly & Johnson, 1990). Women were shown to have more democratic and participatory leadership styles than men in the meta-analysis of gender differences in leadership conducted by Eagly and Johnson (1990). The study also discovered that there were no gender-based differences in task-oriented approaches and that female leaders were somewhat more relationship-oriented than male leaders.

The meta-analytical results (Eagly & Carli, 2003; Eagly & Johnson, 1990; van Engen & Willemssen, 2004) showed that female leaders adopt democratic and transformational leadership styles to a greater extent than male leaders. Compared to women, men are more likely to choose autocratic and passive leadership styles. Therefore, a significant amount of research regarding leadership suggests that there is a gender effect on leadership and the term leadership has a bias associated with it (Bass & Avolio, 1990; Yoder & Sinnett, 1985). This bias typically favours men and the masculine gender role (Brenner & Bromer, 1981).

Despite the enormous research in LMX theory development, leadership research has not yet approached the phenomenon from the leadership styles, leadership effectiveness and gender difference perspective in a single study. In this context, we try to explore the base of LMX theory in developing new practical insights through theory building between LMX and leadership effectiveness in terms of leadership styles and gender differences in leadership. Based on the above facts, the following hypotheses have been formulated.

- $H_1$ : Different leadership styles impact leadership effectiveness differently.
- $H_2$ : In the LMX, Leadership styles are perceived differently by leaders themselves and their followers.
- $H_3$ : In the LMX, Leadership effectiveness is perceived differently by leaders themselves and their followers.
- $H_4$ : Gender difference in leadership styles has a significant positive impact on leadership effectiveness in the process of LMX.

### *Conceptualisation of the Study*

The study has identified various leadership styles as well as the moderating role of gender that determine leadership effectiveness in HEIs. Leadership styles and gender are presumed to be independent variables that would affect leadership

effectiveness. Leadership effectiveness is presumed to be a dependent variable in the model. To test the various causal relationships between variables in the model, structural equation modelling (SEM) has been used. First, the measurement model has been developed and validated, and then the structural model has been tested, and various path estimates were determined.

## *Methodology*

### *Measurement Scales and Items*

The seven dimensions of Leadership Styles (i.e., Autocratic leadership Style, Democratic leadership Style, Task Oriented Leadership Style, Relationship Oriented Leadership Style, Transformational Oriented Leadership Style, Transactional Oriented Leadership Style and Laissez-faire Leadership Style) have been identified and measured from the exiting contemporary literature in the area of leadership. The measurement scales have been adopted from the prominent research studies, including Avolio et al. (1999), Bergman and Hallberg (2002), Bass and Avolio (1990), Boyd (2008), Luthar (1996). The 15-item scale of leadership effectiveness has been adopted from Christina (2005). The statements were developed on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

### *Questionnaire Development and Administration*

The list of items were developed on the basis of a literature review representing each dimension. The items were discussed with experts in the field, and the questionnaire was tested for its face and content validity. The necessary changes were incorporated in the final version of the questionnaire.

### *Sample and Data Collection*

The study employed a purposive sampling technique followed by a systematic random sampling method to collect the data from the universe. There are various studies which explore the application of purposive sampling and discuss its combination with other sampling methods, including systematic sampling, to address specific research needs (Campbell et al., 2020). The whole population was divided into three regions, namely Jammu, Kashmir and Ladakh. Keeping in view the proper gender proportion out of 22 districts, which comprise these three regions, 10 districts were drawn purposively. The final sample from the institutes selected was drawn randomly from the available sampling frame. The study was conducted among male and female leaders at different capacities, holding key positions and also among the individuals working in various higher educational institutions. The reason behind selecting the higher education sector is the immense significance of effective leadership in higher educational institutions in providing quality output. Also, the under-representation of females at top positions in universities and colleges across the state of Jammu and Kashmir was a key factor in taking up the present study. This study estimated the required sample size based on the ratio of sample size to variables/items under examination. For that

reason, 5:1 ratio is regarded as minimum, 10:1 ratio is considered more acceptable (Hair et al., 2010). With 44 items explored in this study, a sample size of a minimum of 440 (i.e.,  $44 \times 10 = 440$ ) was considered adequate (Hair et al., 2010). Thus, 450 respondents were approached for data collection, and after data cleaning, 361 questionnaires were retained for final examination, resulting in an 80.2% response rate (i.e.,  $361/450 = 80.2\%$ ).

## *Application of Statistical Tools and Results*

### *Confirmatory Factor Analysis, Reliability and Validity Analysis*

SEM and AMOS software were used to run factor analysis. First CFA was performed for validity analysis (Hair et al., 2010). The results illustrated the model's acceptable fit to the data:  $\chi^2 = 577.474$ ;  $df = 197$ ;  $\chi^2/df = 2.93$ ; CFI = 0.96; NFI = 0.94; TLI = 0.95; GFI = 0.87; ( $p < .000$ ), RMSEA = 0.075; and SRMR = 0.48 (Bentler, 1992).

Further, to evaluate the performance of the second-order measurement model, a hierarchical (or second-order) confirmatory factor analysis was conducted using AMOS 20 through maximum likelihood estimation. This analysis modelled autocratic leadership styles, democratic leadership styles, task-oriented leadership styles, relationship-oriented leadership, transformational leadership styles, transactional leadership styles and laissez leadership style correlated constructs measured in this study. The results have been presented in Figure 1, as per the results, the loadings of second-order factors were in the accepted range of 0.73–0.91, which is above the recommended threshold, and the entire factor loadings were statistically significant at  $p < .005$ . However, items AS4, ROS2, ROS5, TAS4 and a single item of Laissez leadership style have been subjected to deletion due to weak loading of less than 0.50, thus resulting in a six-dimensional leadership style construct. The fit indices show that the measurement model achieved a good fit for the sample data, with fit indices mentioned in Table 1 (see also Figure 2). Construct reliability was also evaluated by using Cronbach's alpha, as displayed in Table 1. As indicated, each of the values surpassed the critical threshold of  $>0.7$ , thus representing an adequate scale reliability.

### *Structural Model*

Model's fitness to the data was evaluated by drawing on the  $\chi^2$  statistic, comparative fit index (CFI), normed fit index (NFI), goodness of fit index (GFI), and tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA) (Bentler, 1992). Model fit is considered satisfactory if CFI  $> 0.95$ , NFI  $> 0.90$ , GFI  $> 0.90$ , TLI  $> 0.90$ , and RMSEA  $< 0.07$  (Hair et al., 2010). The proposed model provided an adequate overall fit:  $\chi^2 = 233$ ,  $p = .05$ ,  $df = 79$ ,  $\chi^2/df = 2.949$ , CFI = 0.948, NFI = 0.939, GFI = 0.929, TLI = 0.938, and RMSEA = 0.057. The SEM results indicate that different leadership styles impact leadership effectiveness differently, hence supporting  $H_1$  (Table 3).



Independent Sample t-test

It was hypothesised that ‘Leadership styles are perceived differently by leaders themselves and their followers’. To verify the hypothesis, an independent sample *t*-test was applied. The hypothesis was tested at 0.05 level of significance.

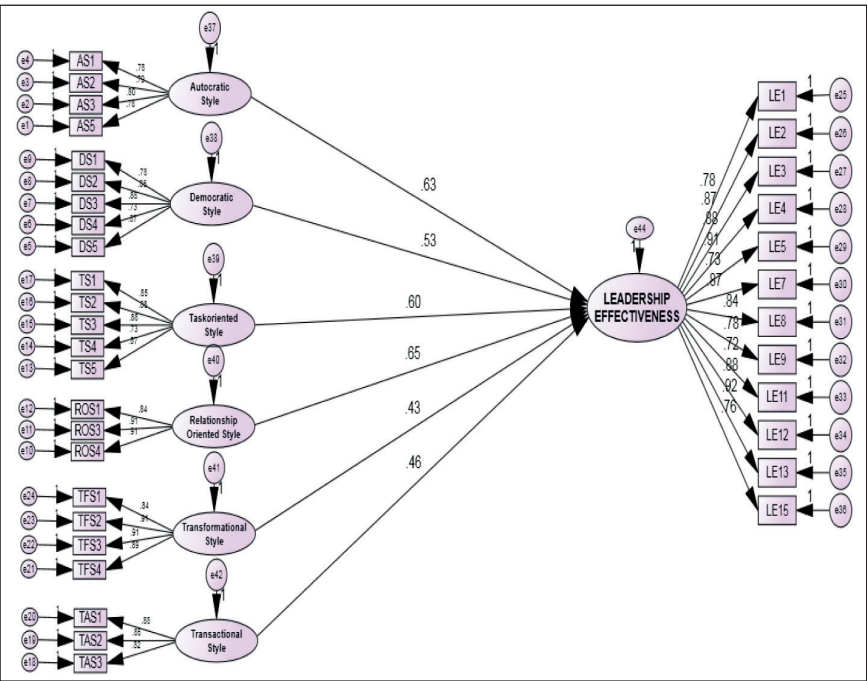


Figure I. Structural Model Analysis.

Source: Authors Analysis using AMOS.

Table I. Psychometric Properties of the Measurement Scale.

Construct and Item	SL	CR	AVE	$\alpha$
Leadership styles				
Autocratic style (AS)		0.956	0.778	0.934
AS1	0.78			
AS2	0.79			
AS3	0.80			
AS5	0.78			
Democratic style (DS)		0.943	0.824	0.942
DS 1	0.78			
DS 2	0.85			
DS 3	0.88			
DS 4	0.73			
DS 5	0.87			

(Table I continued)



(Table 1 continued)

Construct and Item	SL	CR	AVE	$\alpha$
Task-oriented style (TS)		0.968	0.845	0.932
TS1	0.85			
TS2	0.86			
TS3	0.88			
TS4	0.73			
TS5	0.87			
Relationship oriented style (ROS)		0.973	0.819	0.915
ROS1	0.84			
ROS3	0.91			
ROS4	0.91			
Transformational style		0.946	0.831	0.925
TFS1	0.84			
TFS2	0.94			
TFS3	0.91			
TFS42	0.89			
Transactional style (TAS)		0.954	0.826	0.931
TAS1	0.88			
TAS2	0.86			
TAS3	0.82			

Source: Authors Analysis using SEM.

Note: SL = Standard loadings,  $\alpha$  = Cronbach's alpha, CR = Composite reliability, AVE = Average variance extracted.

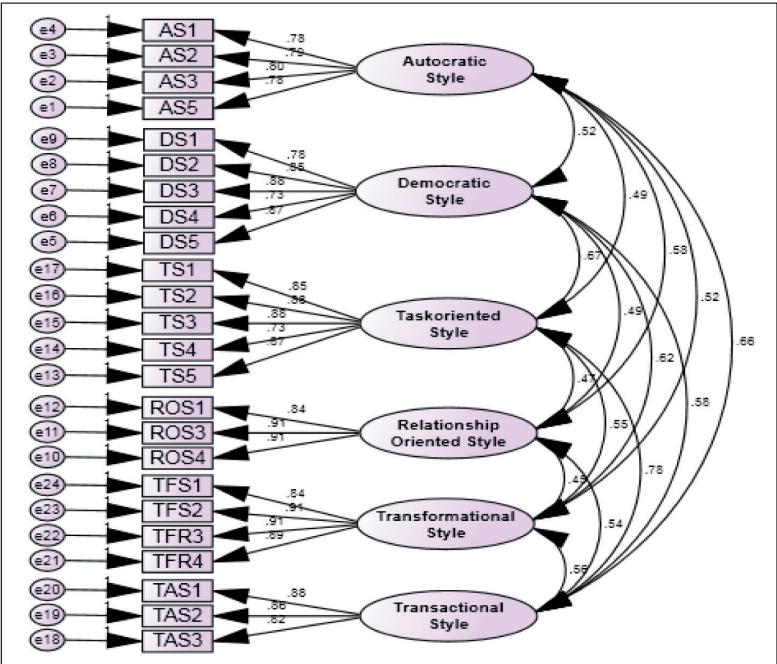


Figure 2. First Order Confirmatory Factor Analysis.

Source: Authors Analysis using AMOS.

Figure 3 given above shows the results of second order confirmatory factor analysis. The model achieved a good fit as all the fit indices were as per the recommended threshold value.

The Table 2 shows the results of discriminant validity analysis. The diagonal axis denotes average variance explained and horizontal axis denotes squared correlations. Discriminant validity was achieved as all the values were significant at recommended threshold values.

Table 4 depicts the mean scores of leaders of HEIs and their subordinates with reference to Leadership Styles dimension on 5-point Likert scale. The mean score

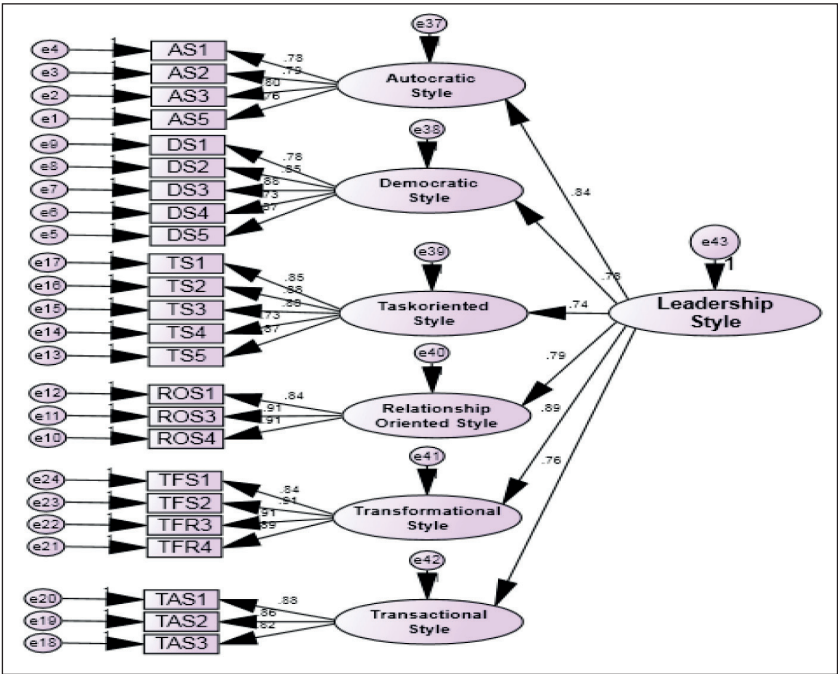


Figure 3. Second Order Confirmatory Factor Analysis.

Source: Authors Analysis using AMOS.

Table 2. Discriminant Validity.

Variables	AS	DS	TS	ROS	TFS	TAS
Autocratic leaders	<b>0.61*</b>					
Democratic style	0.27	<b>0.62*</b>				
Task-oriented leadership	0.24	0.44	<b>0.70*</b>			
Relationship-oriented style	0.33	0.24	0.22	<b>0.78*</b>		
Transformational leadership	0.27	0.35	0.30	0.20	<b>0.78*</b>	
Transactional leadership	0.43	0.33	0.59	0.29	0.31	<b>0.72*</b>

**Note:** Diagonal axis (\*) = AVE and horizontal axis is square correlation, AS = Autocratic leaders, DS = Democratic style, TS = Task-oriented leadership, ROS = Relationship-oriented style, TFS = Transformational leadership, TAS = Transactional leadership.

**Table 3.** Results of SEM Model.

Paths		Estimate ( $\beta$ )	C.R
Autocratic leadership style	→ Leadership effectiveness	0.63	14.32**
Democratic leadership style	→ Leadership effectiveness	0.53	5.20**
Task-oriented leadership style	→ Leadership effectiveness	0.60	13.98**
Relationship-oriented leadership style	→ Leadership effectiveness	0.45	9.32**
Transformational-oriented leadership style	→ Leadership effectiveness	0.43	15.32**
Transactional-oriented leadership style	→ Leadership effectiveness	0.46	11.32**

**Source:** Authors Analysis using SEM.

**Note:** \*\* denotes that the relationship between the variables is highly significant.

**Table 4.** Result of Independent Sample t-test.

Leadership Styles	Statistics	Leaders	Subordinates	t-value
Autocratic style	Mean	3.8	3.29	3.69**
	SD	0.994	0.986	
Democratic style	Mean	3.17	3.01	2.42*
	SD	0.993	0.992	
Task-oriented style	Mean	3.42	3.50	2.20*
	SD	1.03	1.01	
Relationship-oriented style	Mean	3.25	3.8	1.13
	SD	0.965	0.995	
Laissez-faire	Mean	3.33	3.52	1.23
	SD	0.967	0.889	
Transformational style	Mean	3.2	4.01	3.10**
	SD	0.789	0.865	
Transactional style	Mean	3.6	3.4	1.04
	SD	0.973	0.921	

**Source:** Authors Analysis using SEM.

**Notes:** \*\*significant at 99% confidence level.

\*significant at 95% confidence level.

of leaders was found between 3.2 and 3.8. While the mean score of subordinates was slightly higher, with a mean ranging between 3.01 and 4.01.

The difference in the mean scores of Leadership Styles dimension across the two groups, that is, leaders and the subordinates, was found significant for autocratic style ( $t$ -value = 3.69), democratic style ( $t$ -value = 2.42), task-oriented style ( $t$ -value = 2.20) and transformational style ( $t$ -value = 3.10). However, the mean scores, which were found insignificant, are relationship-oriented style ( $t$ -value = 1.13), laissez-faire style ( $t$ -value = 1.23) and transactional style ( $t$ -value = 1.04). Since the differences in mean scores for all the leadership styles were not found statistically significant, it was concluded that the  $H_2$  is partially rejected.

The third hypothesis of the study was that 'leadership effectiveness is perceived differently by leaders themselves and their followers'. To verify the hypothesis, an

independent sample *t*-test was applied. The hypothesis was tested at 0.05 level of significance.

The mean score of leaders scored high (Mean = 3.9) with respect to leadership effectiveness as compared to the subordinates working under their supervision (Mean = 3.1), and this difference is significant at 99% confidence level (see Table 5). Since the difference between the two groups was significant, we accept the hypothesis and conclude that leadership effectiveness is perceived differently by leaders and followers.

The fourth hypothesis of the study aimed at measuring the relationship between gender with leadership styles and their influence on leadership effectiveness. Moderation analysis was done to test the hypothesis. The effect of gender, the independent and dependent variable, was assessed by path estimates. Moderation analysis was performed using AMOS 20. Path estimates across the genders were assessed along with Z-scores to check the significance of the difference, as shown in Table 6. The values in Table 6 clearly show that gender has a moderating role on leadership styles, which in turn has a bearing on leadership effectiveness. For this purpose, gender was converted into the dichotomous variables of male and female groups.

The results reveal that the path estimates of Model 1 for gender difference that have significant Z-scores are AS → LE (Z-score = 3.063), DS → LE (Z-score = -4.69) and TO → LE (Z-score = -3.82). The paths that show the insignificant Z-scores are RO → LE (Z-score = 0.250), TR → LE (Z-score = 0.171) and TA → LE (Z-score = 0.014). So, the

**Table 5.** Results of Independent Sample *t*-test.

Leadership Effectiveness	Statistics	Leaders	Subordinates	t-value
	Mean	3.9	3.1	0.069**
	SD	.994	.986	

**Source:** Authors Analysis using SEM.  
**Note:** \*\*significant at 99% confidence level.

**Table 6.** Moderating Impact of Gender on Path Estimates of SEM Model-I.

Variable	Category	Gender		Z-score
		Male	Female	
Paths	<b>AS → LE</b>	0.655**	0.340**	3.603**
	<b>DS → LE</b>	0.468*	0.498**	-4.69**
	<b>TO → LE</b>	0.612**	0.368**	-3.82**
	<b>RO → LE</b>	0.515**	0.762**	0.250
	<b>TR → LE</b>	0.497*	0.438**	0.171
	<b>TA → LE</b>	0.784**	0.141**	0.014

**Source:** Authors Analysis using SEM.  
**Notes:** AS = Autocratic leadership style, DS = Democratic leadership style, TO = Task-oriented leadership style, RO = Relationship-oriented leadership style, TR = Transformational-oriented leadership style, TA = Transactional-oriented leadership style and LE = Leadership effectiveness.  
1. The significance of path estimates was represented by (\*\*) and (\*) at 99% and 95% confidence level with *p* value of < .01 and < .05, respectively.  
2. Z-score results represent significance difference across the genders at 99% confidence level with (\*\*) having *p* value < .01 and 95% confidence level with (\*) having *p* value < .05.

$H_4$  is partially rejected, and we conclude that gender differences lead to differences in leadership styles, which in turn impact the overall leadership effectiveness.

The findings are in consonance with earlier research, which reveals that gender influences leadership styles. Meta-analyses by Eagly and Carli (2018) and Madsen et al. (2021) suggest that women leaders in higher education are more likely to adopt transformational, collaborative, and relational leadership approaches, while men more often exhibit transactional or directive styles. Chin (2020) emphasised that women leaders tend to prioritise consensus-building, empowerment, and communication—styles increasingly recognised as effective in complex, diverse educational environments. However, Tzanakou and Pearce (2019) caution that framing women's leadership as inherently 'soft' can reinforce restrictive gender stereotypes and devalue women's authority.

Recent research reveals that gendered perceptions affect how leadership effectiveness is judged. Hoyt and Murphy (2016) demonstrated that both men and women are subject to role incongruity bias—where leadership is stereotypically associated with masculine traits, disadvantaging women in leadership evaluation. Moreover, Miller et al. found that women leaders in education often face double binds: they are expected to display both assertiveness (traditionally male-coded) and warmth (female-coded), with deviations from either norm resulting in penalisation or diminished legitimacy. Grogan and Shakeshaft (2017) found that women principals are more likely to implement inclusive practices, foster positive school climates, and improve teacher morale and student engagement. Recent scholarship emphasises strategies to advance gender equity in educational leadership. Madsen et al. (2021) advocate for targeted leadership development programs, mentorship, and gender-sensitive institutional policies.

## Discussion

Our research primarily focused on how leadership approaches contribute to the diverse HEIs. Firstly, there is not a single leadership approach that works best for leading the diversity agenda in higher education. Instead, leaders use a combination of transformational, democratic, autocratic, task-oriented, relationship-oriented, and transactional leadership styles, which is very similar to full-range leadership (Adserias et al., 2018; Kezar & Eckel, 2008). Second, each leader requires to know when to execute a certain approach because different situations require different approaches. The findings of this research revealed that leadership styles (like transformational, democratic, autocratic, task-oriented, relationship-oriented and transactional leadership styles) significantly influenced leadership effectiveness. This study also adds to literature by exploring the possible moderating effects of gender on leadership effectiveness. Therefore, the purpose of this study is to offer a unifying and comprehensive perspective on the body of literature exploring the factors which contribute to leadership styles and investigate the possible combinations of factors that lead to leadership effectiveness. In the process, this research offers many notable theoretical and managerial contributions.

### *Theoretical Contribution*

Through our conceptualisation, we have attempted to fill a gap in leadership management literature by linking leadership styles and leadership effectiveness in HEIs. This study is a first attempt to understand leadership styles and leadership effectiveness among HEIs in India. Research also claims that the underlying mechanism of gender moderation in leadership effectiveness is less clear and needs to be further explored. The present study thereby contributes to the literature by examining the possible moderating effects of gender on leadership effectiveness. Theoretically, our analyses also contribute to the development of LMX-based insight by uncovering effects of specific leadership styles on ensuing leadership effectiveness in HEIs, thus responding to Adserias et al. (2018)'s call for future research on leadership dynamics in a higher education context. Further, leaders exhibit different leadership styles to influence their followers. The present study revealed that it is better for leaders to exercise transformational leadership approach which is characterised by articulating and representing vision, influencing the ideas of followers, emphasise a collective sense of mission and values, challenging the assumptions of followers' beliefs, considering the individual needs of followers and encouraging a two-way exchange in communication etc. The results are consistent with previous research (e.g., Dvir et al., 2002; Erkutlu, 2008; Testa, 2002). The second leadership style, which scored high on mean values in this study, is a relationship-oriented style which is characterised by providing encouragement and support to followers, backing employees up, giving credit to employees, consulting employees, providing opportunities to employees, etc.

On the other hand, task-oriented style, transactional leadership style and autocratic leadership styles are characterised by 'not providing a clear explanation to employees, not determining what resources are needed, focusing on clearly defined tasks, believing in active management by exception, intervening only after errors have been detected, determining policies and procedures, managing group with iron hand, taking responsibility for assigning work and refusing participative decision making' etc. Such factors lead to boredom and demotivation among followers and, therefore, should not be predominantly exhibited as leadership styles in higher education. Interestingly, the democratic leadership style, which is characterised by making policies as a matter of discussion, encouraging group decision making, sharing information with the group, encouraging group members to make choices, making everyone free to work with whomever one chooses, etc., scored the lowest mean values. This gives a clear indication that leaders do not create a real democratic setup for followers to work with enthusiasm, which has an adverse impact on their performance in particular and the higher educational sector in general.

### *Practical Implications*

The findings of this study have several practical implications. Leaders should identify that leading people requires a number of judgments every day, which needs sensitivity and understanding of various leadership strategies. Each

leadership style is a mixture of different types of behaviour and characteristics of leaders. If there is a need to make an instant decision and take necessary action, a leader may depend on the autocratic style. If the group is poorly organised and undisciplined, the autocratic leadership style is more efficient. The transformational leadership style matches with attempts to encourage followers to reorganise their needs by transcending self-interests and striving for higher-order needs. Relatedly, transactional strategies have been most likely to be adopted by leaders of middle-phase or stage institutions, as they sought to 'broaden the ownership' (Kezar & Eckel, 2008) of the agenda, and began to utilise data to drive decision-making processes and implement accountability measures. Similarly, the democratic leadership style matches with a well-organised and stable group. In the longer term, the democratic style of leadership, which includes giving employees a certain freedom and involving them in decision-making, is more productive. The results suggest the need for more transformational and relationship-oriented leaders to reform higher education sector and to address contemporary challenges. Transformational and relationship-oriented leadership has been widely recognised as the most sustainable and effective style of leading people for better results (Adserias et al., 2018; Kezar & Eckel, 2008; Pounder, 2003).

Relatedly, one of the prominent inputs for policymakers, as revealed by the current study, is that in the LMX, leadership effectiveness is perceived differently by leaders themselves and their followers in HEIs. Therefore, the systems and processes of evaluating leadership effectiveness in HEIs need to be strengthened. The findings of the study revealed that gender makes a difference in leadership styles and males and females lead differently, which was coherent in the light of the existing research by Ozga (1993) and Currie et al. (2002) in higher education management. Since men and women have been created with various physiological differences, have different upbringings, cultural orientations, etc., these differences have an impact on how an individual will behave in a particular role. Furthermore, this study contributes to providing suggestions for the people who hold the top ranks in HEIs to formulate the policies oriented at transformation and change, which is substantiated by the existing research (Knight & Trowler, 2001; Young, 2004). The findings of this study can be replicated by the managers in different sectors to enhance leadership effectiveness and to make their organisations gender friendly by promoting gender equality at all levels within their organisations, which is consistent with the earlier research (McKinsey & Company & Manyika, 2017). In conclusion, leadership in HEIs should be cognizant of their leadership style. In addition, leadership styles should be continuously reviewed and modified if required. The efforts should be constantly made to create a successful linkage between leadership styles and leadership effectiveness.

### *Specific Policy Recommendations*

The Indian HEIs require transformational leadership to compete with the best practices and competencies existing at the global level. Leadership is the primary tool to take Indian universities into the world's best rankings, which is not evident at present, as hardly any Indian universities fall in the QS 100 world rankings. The current study offers policy recommendations based on the findings of the research. Leadership in



HEIs should adopt a holistic and inclusive governance model that emphasises shared decision-making and stakeholder engagement, ensuring that faculty, students, staff, and external partners have meaningful voices in institutional affairs. Policies in educational leadership should promote equity, diversity, and inclusion by embedding measurable goals in recruitment, curriculum design, and campus climate initiatives. Embracing data-informed strategic planning is critical, where evidence-based insights guide academic offerings, resource allocation, and long-term sustainability. Leaders must foster academic innovation and lifelong learning by supporting interdisciplinary programs, flexible learning modalities, and continuous education to meet the evolving needs of diverse learners. Enhancing student success and wellbeing through comprehensive support services—such as academic advising, mental health resources, and career development—is imperative. Concurrently, investing in faculty and staff development through professional growth opportunities and equitable career pathways strengthens institutional capacity. A forward-looking approach to technology and digital transformation should prioritise the integration of emerging tools to enhance teaching, research, and administration while safeguarding digital accessibility and cybersecurity. Finally, robust financial stewardship and global engagement—through diversified funding streams, international partnerships, and transparent accountability measures—will ensure institutional resilience and global competitiveness.

### ***Limitations and Future Research***

Although this research contributes to the leadership literature, it also comes with some limitations that offer opportunities for further research. Firstly, this research is specific to a single culture (Indian) and service context (higher education). Thus, to generalise this study's findings, further exploration (e.g., because of the replication of our research design) across different cultures and service settings (e.g., retailing, banking, tourism) to further validate the model is recommended.

Secondly, due to the cross-sectional design of this research, the data collected does not allow for an assessment of the direction of causality. Results for this research should thus be considered exploratory. This study offers new doors for further research. For purposes of causality, it will be interesting to replicate this study in a longitudinal design to determine if the findings of the relationships tested are likely to be sustained. Third, as this study particularly focused on just seven leadership styles, it will be helpful to include other leadership styles (like ethical, authentic, and servant) in future research. Finally, the insertion of extra predictor variables (such as the leader's age and tenure) can allow for the predictive role of leadership style to be placed in context.

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## References

- Adserias, R. P., Charleston, L. J., & Jackson, J. F. (2018). What style of leadership is best suited to direct organizational change to fuel institutional diversity in higher education? *Building the Anti-Racist University*, 26–42.
- Al Khajeh, E. H. (2018). Impact of leadership styles on organizational performance. *Journal of Human Resources Management Research*, 2018, 1–10.
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72, 441–462.
- Badura, K. L., Galvin, B. M., & Lee, M. Y. (2022). Leadership emergence: An integrative review. *Journal of Applied Psychology*, 107(11), 2069–2100. <https://doi.org/10.1037/ap10000997>
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, 13(3), 26–40.
- Bass, B. M. (1997). Does the transactional–transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist*, 52(2), 130.
- Bass, B. M., & Avolio, B. J. (1990). Developing transformational leadership: 1992 and beyond. *Journal of European Industrial Training*, 14(5).
- Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques. In M. M. Chemers & A. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 49–80). Academic Press.
- Bass, B. M., & Avolio, B. J. (Eds.). (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications.
- Bass, B. M., & Avolio, B. J. (2004). *Multifactor Leadership Questionnaire: MLQ; manual and sampler set*. Mind Garden.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, 88(2), 207.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112(3), 400.
- Bergman, B., & Hallberg, L. R. M. (2002). Women in a male-dominated industry: Factor analysis of a women workplace culture questionnaire based on a grounded theory model. *Sex Roles*, 46(9–10), 311–322.
- Bolman, L. G., & Deal, T. E. (2017). *Reframing organizations: Artistry, choice, and leadership*. John Wiley & Sons.
- Boyd, D. M. (2008). *Taken out of context: American teen sociality in networked publics*. University of California.
- Brenner, O. C., & Bromer, J. A. (1981). Sex stereotypes and leaders' behavior as measured by the agreement scale for leadership behavior. *Psychological Reports*, 48, 960–962.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652–661.
- Chin, J. L. (2020). Women and leadership: Transforming visions and diverse voices. *Journal of Leadership Studies*, 14(1), 7–13.

- Conger, J. A., & Kanungo, R. N. (1987). Toward a behavioral theory of charismatic leadership in organizational settings. *Academy of Management Review*, 12(4), 637–647.
- Currie, J., Hens, T., & Thiele, B. (2002). *Gendered universities in globalised economies*. Lexington Books.
- Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. *The Leadership Quarterly*, 25(1), 63–82.
- De Cremer, D. (2007). Emotional effects of distributive justice as a function of autocratic leader behavior. *Journal of Applied Social Psychology*, 37, 1385–1404.
- Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J. (2014). Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives. *The Leadership Quarterly*, 25(1), 36–62.
- Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, 45(4), 735–744.
- Eagly, A. H., & Carli, L. L. (2003). The female leadership advantage: An evaluation of the evidence. *The Leadership Quarterly*, 14(6), 807–834.
- Eagly, A. H., & Carli, L. L. (2018). Women and the labyrinth of leadership. In *Contemporary Issues in Leadership* (pp. 147–162). Routledge.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, 108(2), 233.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109, 573–598.
- Eagly, A. H., & Miller, D. I. (2016). Scientific eminence: Where are the women? *Perspectives on Psychological Science*, 11(6), 899–904.
- Erkutlu, H. (2008). The impact of transformational leadership on organizational and leadership effectiveness: The Turkish case. *Journal of Management Development*, 27(7), 708–726.
- Evans, L. (2022). Is leadership a myth? A ‘new wave’ critical leadership-focused research agenda for recontouring the landscape of educational leadership. *Educational Management Administration & Leadership*, 50(3), 413–435.
- Farhani, M. F., Rismayadi, B., & Pertiwi, W. (2025). Analysis of leadership style in improving the performance of employees of the National Narcotics Agency of Karawang District. *International Journal of Management, Economic, Business and Accounting*, 4(1), 55–73.
- Foels, R., Driskell, J. E., Mullen, B., & Salas, E. (2000). The effects of democratic leadership on group member satisfaction: An integration. *Small Group Research*, 31, 676–701.
- Gardner, W. L., Lowe, K. B., Moss, T. W., Mahoney, K. T., & Coglisier, C. C. (2010). Scholarly leadership of the study of leadership: A review of *The Leadership Quarterly*’s second decade, 2000–2009. *The Leadership Quarterly*, 21(6), 922–958.
- Gastil, J. (1994). A meta-analytic review of the productivity and satisfaction of democratic and autocratic leadership. *Small Group Research*, 25, 384–410.
- Gill, E. (2014). What is laissez-faire leadership? How autonomy can drive success. <http://online.stu.edu/laissez-faire-leadership>
- Grogan, M., & Shakeshaft, C. (2017). *Women and educational leadership*. Jossey-Bass.
- Hair Jr, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). SEM: An introduction. In *Multivariate data analysis: A global perspective* (5th ed., pp. 629–686).
- Haque, A. U., Faizan, R., Zehra, N., Baloch, A., Nadda, V., & Riaz, F. (2015). Leading leadership style to motivate cultural-oriented female employees in IT sector of

- developing country: IT sectors' responses from Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 5, 280–302.
- Hersey, P., & Blanchard, K. H. (1982). *Management of organizational behavior: Utilizing human resources* (4th ed.). Prentice-Hall.
- Hoyt, C. L., & Murphy, S. E. (2016). Managing to clear the air: Stereotype threat, leadership self-efficacy, and gender. *The Leadership Quarterly*, 27(3), 387–399.
- Igbaekemen, G. O., & Odivwri, J. E. (2015). Impact of leadership style on organization performance: A critical literature review. *Arabian Journal of Business and Management Review*, 5(5), 1–7.
- Jyoti, J., & Bhau, S. (2015). Impact of transformational leadership on job performance: Mediating role of leader–member exchange and relational identification. *SAGE Open*, 5(4), 2158244015612518.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765–780.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768.
- Kaiser, R. B., Hogan, R., & Craig, S. B. (2008). Leadership and the fate of organizations. *American Psychologist*, 63(2), 96.
- Kennedy, J. G. (1994). *The individual's transformational learning experience as a cross-cultural sojourner: Descriptive models* (Doctoral dissertation). Fielding Institute.
- Kezar, A. J., & Eckel, P. D. (2008). Advancing diversity agendas on campus: Examining transactional and transformational presidential leadership styles. *International Journal of Leadership in Education*, 11(4), 379–405.
- Knight, P., & Trowler, P. (2001). *Departmental leadership in higher education*. McGraw-Hill Education.
- Lacerenza, C. N., Reyes, D. L., Marlow, S. L., Joseph, D. L., & Salas, E. (2017). Leadership training design, delivery, and implementation: A meta-analysis. *Journal of Applied Psychology*, 102(12), 1686.
- Lewin, K., Lippitt, R., & White, R. K. (1939). Patterns of aggressive behavior in experimentally created 'social climates'. *The Journal of Social Psychology*, 10(2), 269–299.
- Luthar, H. K. (1996). Gender differences in evaluation of performance and leadership ability: Autocratic vs. democratic managers. *Sex Roles*, 35, 337–361.
- Madsen, S. R., Longman, K. A., & Daniels, J. R. (2021). Women's leadership development in higher education: A global perspective. *Journal of Leadership & Organizational Studies*, 28(2), 160–175.
- Martinez, M. R. (1982). A comparative study on the relationship of self-perceptions of leadership styles between Chicano and Anglo teachers (Doctoral dissertation, Bowling Green State University). *Dissertation Abstracts International*, 43, 766A.
- McKinsey & Company & Manyika, J. (2017). *Technology, jobs, and the future of work*. McKinsey Insights.
- Nwokocho, I., & Iheriohanma, E. B. J. (2015). Nexus between leadership styles, employee retention and performance in organizations. *European Scientific Journal*, 11(13), 186–209.
- Obiwuru, T. C., Okwu, A. T., Akpa, V. O., & Nwankwere, I. A. (2011). Effects of leadership style on organization performance: A survey of selected small scale enterprises in Ikosi-Ketu Council Development Area of Lagos State, Nigeria. *Australian Journal of Business and Management Research*, 1(7), 100–111.
- Ozga, J. (Ed.). (1993). *Women in educational management*. Open University Press.
- Pawar, A. (2016). Transformational leadership: Inspirational, intellectual and motivational stimulation in business. *International Journal of Enhanced Research in Management & Computer Applications*, 5(5), 14–21.

- Pounder, J. S. (2003). Employing transformational leadership to enhance the quality of management development instruction. *The Journal of Management Development*, 22(1), 6–13.
- Sajjad, A., Eweje, G., & Raziq, M. M. (2024). Sustainability leadership: An integrative review and conceptual synthesis. *Business Strategy and the Environment*, 33(4), 2849–2867.
- Stone, A. G., & Patterson, K. (2005, August). The history of leadership focus. *Servant Leadership Research Roundtable*, Regent Publishing, 1–23.
- Testa, M. R. (2002). Leadership dyads in the cruise industry: The impact of cultural congruency. *International Journal of Hospitality Management*, 21(4), 425–441.
- Tourish, D. (2008). Challenging the transformational agenda: Leadership theory in transition? *Management Communication Quarterly*, 21(4), 522–528.
- Tzanakou, C., & Pearce, R. (2019). Moderate feminism and the politics of the university workplace. *Gender, Work & Organization*, 26(8), 1113–1129.
- Van Engen, M. L., & Willemsen, T. M. (2004). Sex and leadership styles: A meta-analysis of research published in the 1990s. *Psychological Reports*, 94(1), 3–18.
- Wachira, M. W., & Wainaina, L. (2025). Strategic leadership and organizational performance: A case of National Bank of Kenya. *International Academic Journal of Human Resource and Business Administration*, 5(1), 1–18.
- Xenikou, A. (2017). Transformational leadership, transactional contingent reward, and organizational identification: The mediating effect of perceived innovation and goal culture orientations. *Frontiers in Psychology*, 8, 1754.
- Yoder, J. D., & Sinnett, L. M. (1985). Is it all in the numbers? A case study of tokenism. *Psychology of Women Quarterly*, 9, 413–418.
- Young, P. (2004). Leadership and gender in higher education: A case study. *Journal of Further and Higher Education*, 28(1), 95–106.
- Yukl, G. (1998). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *The Leadership Quarterly*, 10(2), 285–305.
- Zacher, H., & Rosing, K. (2015). Ambidextrous leadership and team innovation. *Leadership & Organization Development Journal*, 36(1), 54–68.
- Zenger, J., & Folkman, J. (2019). Women score higher than men in most leadership skills. *Harvard Business Review*, 92(10), 86–93.