

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 8; August 2024; Page No. 534-538

Received: 27-05-2024
Accepted: 06-07-2024

Indexed Journal
Peer Reviewed Journal

A study on impact of self efficacy on leadership styles

¹Disha Agarwal, ²Govind Singh Kushwaha, ³Basu Anand and ⁴Komal Sharma

¹Ph.D. Scholar, G.B. Pant University of Agriculture and Technology, Pantnagar, Udham Singh Nagar, Uttarakhand, India

²Professor, G.B. Pant University of Agriculture and Technology, Pantnagar, Udham Singh Nagar, Uttarakhand, India

³Ph.D. Scholar, Department of Agricultural Extension and Communication, N.M.C.A, NAU, Navsari, Gujarat, India

⁴M.Sc. Scholar, Department of Agricultural Extension Education, CCS Haryana Agricultural University, Hisar, Haryana, India

DOI: <https://doi.org/10.33545/26180723.2024.v7.i8h.977>

Corresponding Author: Basu Anand

Abstract

The present study was conducted in May month of 2024 and examines the role of self-efficacy in the various leadership models within the student population of G.B. Pant University of Agriculture and Technology. This research employed a quantitative research design, where data were gathered from a pool of 100 respondents by administering an online survey. The tool included the measurement of the General Self-Efficacy Scale and the Multifactor Leadership Questionnaire to explain the relationship that exists between self-efficacy and leadership in one of three styles: transformational, transactional, or passive/avoidant. The examination disclosed notable positive associations between self-efficacy and transformational as well as transactional leadership styles, which explained 36.5% and 28.9% of the variance, respectively. In contrast, no meaningful correlation was observed between self-efficacy and passive/avoidant leadership. These findings highlight the critical importance of self-efficacy in fostering effective leadership practices, providing significant implications for the improvement of leadership development programs within educational contexts.

Keywords: Self-efficacy, leadership styles, transformational leadership, transactional leadership, avoidant leadership, leadership

Introduction

Self-efficacy, as articulated by Bandura (1996) ^[1], denotes the conviction in one's capacity to orchestrate and carry out the actions required for navigating forthcoming circumstances. This construct is crucial in determining individual conduct, cognitive processes, and motivational levels, acting as a cornerstone for individuals' methodologies toward tasks and obstacles (Saks and Ashforth, 2000) ^[16]. Within the context of leadership, self-efficacy assumes added importance, impacting the attitudes and behaviours of leaders, and consequently influencing their effectiveness and leadership approaches.

Leaders are one of the most important factors affecting their subordinates' self-efficacy. Effective leaders guide followers toward specific behaviours and often inspire them to accomplish more than expected and perform better (Walumbwa *et al.*, 2008; Iqbal *et al.*, 2018; Elsaied, 2019) ^[20, 7, 4]. Through the establishment of a nurturing environment, leaders have the capacity to bolster their followers' self-confidence and conviction in their skills, consequently improving their levels of self-efficacy (Pillai and Williams, 2004) ^[12]. This connection between leadership and self-efficacy holds significant importance, as it influences followers' dedication, innovative thinking, and competence in addressing intricate tasks.

There is a growing concern to a number of researchers relating self-efficacy and different styles of leadership. Different styles of leadership, such as transformational,

transactional, and laissez-faire, have different effects on the self-efficacy of their followers. For instance, transformational leaders inspire and enthuse their followers to reach higher performance standards, thus increasing self-efficacy by setting high expectations but providing the necessary help and resources to meet those expectations (Vega-Vázquez *et al.*, 2012; López-Domínguez *et al.*, 2013) ^[19, 9].

Transactional leadership, defined by distinct frameworks, incentives, and sanctions, can influence self-efficacy through the provision of specific expectations and constructive feedback. Conversely, passive-avoidant leadership, due to its absence of direction or assistance, may adversely affect self-efficacy.

Notwithstanding the considerable body of literature concerning leadership and self-efficacy, the distinct effects of self-efficacy across various leadership styles necessitate additional inquiry. This research endeavours to fill this void by examining the influence of self-efficacy on different leadership styles within the student population of G.B. Pant University of Agriculture and Technology. Comprehending these interactions is essential for formulating leadership strategies that foster individual growth and cultivate a constructive academic atmosphere. This research will add not only to the extant literature on leadership and self-efficacy but also contribute some worthwhile practical viewpoints for student leaders and educators in an attempt to foster educational leadership.

Objectives of the study

1. To study the impact of self-efficacy on transformational leadership style.
2. To study the impact of self-efficacy on transactional leadership style.
3. To study the impact of self-efficacy on passive/avoidant leadership style.

Materials and Methods

This research adopted a quantitative methodological framework of understanding the influence of self-efficacy on leadership styles among the student population of G.B. Pant University of Agriculture and Technology, Pantnagar. A convenience sampling technique was adopted wherein a sample of 100 participants was considered to have reasonable representations of the student population of the university under study. Convenience sampling was employed because of the easy access to the respondents and also because the data collection period was short.

The data was collected through an online survey conducted using Google Forms in May 2024. The questions used for the research included an interview schedule that allowed information gathering on demographic variables such as gender, age, college affiliation, degree program, and year of study. Further, standardized instruments measuring self-efficacy and leadership styles were included in the survey. Self-efficacy was assessed using the General Self-Efficacy Scale (GSE), a 10-item scale that evaluates individuals' beliefs in their ability to manage various challenges. The GSE has demonstrated strong internal reliability, with Cronbach's alpha values ranging from 0.76 to 0.90 (Schwarzer & Jerusalem, 1995) [17]. Responses were recorded on a 4-point Likert scale ranging from 1 (Not at all true) to 4 (Exactly true), with higher scores indicating greater self-efficacy.

The leadership styles were measured using the Multifactor Leadership Questionnaire (MLQ) developed by Bass and Avolio in 2004 [3]. This instrument includes several statements that describe various aspects related to leadership styles: transformational, transactional, and passive/avoidant leadership. The participants rated each statement on a 5-point Likert scale, ranging from 0; Not at all to 4; Frequently, if not always; negatively worded statements were reverse scored.

Data collection spanned two weeks to optimize participant engagement. Upon completion, data were exported from Google Forms to a spreadsheet for analysis. Descriptive statistics were computed to summarize the demographic variables and scores on the GSE and MLQ. Additionally, Z-scores were calculated to standardize the data, facilitating comparisons across different measures. The formula used for Z-score standardization is given by:

$$Z = \frac{(X - \mu)}{\sigma}$$

Where, X represents the raw score, μ represents the mean,

and σ represents the standard deviation.

The average scores were rescaled to a common scale to facilitate comparative analysis. The rescaling formula employed was:

$$\text{Rescaled Score} = \frac{(X - \text{Minimum Score})}{(\text{Maximum Score} - \text{Minimum Score})}$$

Pearson correlation was employed to determine the relationship between self-efficacy and leadership attributes, and multiple regression analysis was performed to evaluate the predictive power of self-efficacy on various leadership styles.

The Pearson correlation coefficient formula used was:

$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum(X - \bar{X})^2 \sum(Y - \bar{Y})^2}}$$

where X and Y are the individual sample points and \bar{X} and \bar{Y} are the sample means.

Multiple regression analysis was performed to evaluate the predictive power of self-efficacy on various leadership styles, determine the p-values and confirm the results of correlation analysis between self-efficacy and the different leadership styles. The regression model is represented as:

$$Y = \beta_0 + \beta_1 X + \epsilon$$

where Y represents the dependent variable (leadership style), β_0 is the intercept, β_1 is the coefficient for the independent variable (self-efficacy), and ϵ is the error term. The primary focus was on the p-values to assess the significance of the relationships.

All statistical analysis were conducted using MS-Excel. By following these steps, the study aims to provide a comprehensive analysis of the impact of self-efficacy on different leadership styles.

Results and Discussion

Demographic characteristics of respondents

Table 1 describes in detail demographic background based on individual characteristics: age and gender, and their relationships with the various colleges and degree programs. There are trends reflecting the diverse nature of this research sample. Of the subjects, 66% were between 18 and 24 years old, while 58% were males and 42% females. The College of Agriculture represents the majority, or 81% of this sample. Furthermore, 51% of the respondents are studying towards a Master of Science, and another 30% are pursuing a Doctor of Philosophy. This demographic snapshot provides a key context for understanding the relationship between self-efficacy and leadership styles among different groups involved in the study.

Table 1: Demographic profile of the respondents (n=100)

Demographic Variable	Categories	Frequency	Percentage
Age	18-24	66	66.00%
	25 and above	34	34.00%
Gender	Male	58	58.00%
	Female	42	42.00%
	Other	00	00.00%
College	College of Agriculture	81	81.00%
	College of Basic Sciences and Humanities	16	16.00%
	College of Community Science	02	02.00%
	College of Technology	01	01.00%
Degree Programme	Bachelor of Science	17	17.00%
	Master of Science	51	51.00%
	Doctor of Philosophy	30	30.00%
	Agri-business Management	02	02.00%

Self-efficacy

The levels of self-efficacy among the respondents were assessed by arranging them into three different classes, as seen in Table 2, according to the deviation between the maximum and minimum scores. The results indicated that there was a wide dispersion of self-efficacy among the respondents: 7% were low in self-efficacy, while 44% had medium and 49% high in self-efficacy. This simply means that nearly half of the respondents have strong beliefs in their abilities. Nonetheless, the fact that people are low in self-efficacy shows the need to acknowledge and deal with factors likely to decrease their self-confidence.

Table 2: Self-efficacy of the respondents (n=100)

Low (10-19)	07	07.00%
Medium (20-29)	44	44.00%
High (30-40)	49	49.00%

Leadership styles

There were distinct trends observed in total, mean Z-scores, and rescaled metrics that distinguish between transformational leadership, transactional leadership, and passive/avoidant leadership. Scores for transformational leadership were highest on average, which displays a great degree of transformational characteristics among the respondents, such as inspiring and motivating followers, setting expectations high, and providing all needed help from a leader to his or her followers. Transactional leadership was associated with moderate Z-scores and rescaled scores, reflecting a balanced but comparatively less assertive influence relative to transformational leadership. This leadership approach is distinguished by characteristics such as establishing explicit expectations, upholding standards, and acknowledging accomplishments. Conversely, Passive/Avoidant leadership displayed the lowest scores, indicating that the traits linked to this style—including a tendency to evade engagement, decision-making, and responsibilities—are the least commonly observed among the participants, as demonstrated in Table 3.

Table 3: Summary of Leadership Styles (n=100)

Leadership Styles	Mean Z-score	Mean rescaled score
Transformational	0.51	0.76
Transactional	0.34	0.63
Passive/Avoidant	-0.48	0.28

Self-efficacy and leadership styles

A correlation analysis was thus done to establish the relationship between self-efficacy and different leadership styles. The results are as shown in Table 4. The results indicated high correlations between both transformational and transactional leadership styles; on the other hand, passive/avoidant leadership style did not establish a significant relationship with self-efficacy.

The correlation coefficient, $r = 0.604$, for transformational leadership, indicates a moderate to strong positive relationship with self-efficacy; its corresponding p-value is $2.82E-11$, making this relationship statistically significant at the 0.05 level. This means that as self-efficacy increases, more pronounced transformational leadership behaviours would be expected. Leaders high in self-efficacy may inspire and motivate followers to attain higher performance and novelty.

Also, transactional leadership style was strongly positively correlated with self-efficacy with $r = 0.537$ and the p-value equals $8.25E-09$. These results are indicative that individuals who are high in self-efficacy tend to engage themselves more in transactional leadership behaviours. This correlation also suggests that self-efficacy plays an important role in applying effective reward-based management.

In contrast, the passive/avoidant leadership style showed the smallest and statistically non-significant relation to self-efficacy with $r = -0.017$ and a p-value of 0.863. This means that self-efficacy is not an important determinant of passive/avoidant leadership behaviours. As such, leaders exhibiting low levels of engagement and who try to avoid decision-making activities do not seem to be affected by their level of self-efficacy.

Correlatively, these substantial positive relationships suggest that self-efficacy would be an essential factor in the exercise of successful leadership. High self-efficacy leaders tend to engage in transformational and transactional behaviours; all these may therefore lead to superior performance and a heightened state of motivation among followers. In contrast, the non-significant correlation with passive or avoidant leadership suggests that self-efficacy does not influence the more withdrawn and passive approaches to leadership. These findings can be useful in developing programs for leadership development and organizational strategies that seek to enhance leadership competencies by enhancing self-efficacy as suggested by

Posner, 2004^[14]. These results are also consistent with the research by Bandura, 1997^[2]; Ng *et al.*, 2008^[11]; Ramchunder and Martins, 2014^[15]; Mehdinezhad and Mansouri, 2016^[10]; Hoxha and Hyseni-Duraku, 2017^[5]; Liu and Gumah, 2020^[8]; Polatcan, 2023^[13].

Table 4: Correlation Coefficient of Self-efficacy with each Leadership style

Leadership Styles	Correlation coefficient (r)	p-value
Transformational	0.604*	2.82E-11
Transactional	0.537*	8.25E-09
Passive/Avoidant	-0.017 ^{NS}	0.863

*Significant at 0.05 level of significance

This was further confirmed by the regression analysis, which returned self-efficacy as a significant and positive predictor of transformational leadership. Indeed, this finding is consistent with the earlier reviewed correlation analysis, which showed that self-efficacy is one of the underlying factors that influence transformational leadership behaviours. This model produced an R^2 value of 0.365, indicating self-efficacy explains 36.5% of the variation in transformational leadership. That foregrounds the role of self-efficacy, but it also suggests that there are other factors at work in producing the variations evident in transformational leadership. Indeed, the results of the ANOVA test confirmed the overall significance of the regression model with an F-statistic of 56.35 and a p-value of 2.82E-11, which confirms that the correlation is statistically significant. The regression coefficient for self-efficacy here was 0.024 (p-value = 2.82E-11), denoting that

for every increase of one unit in self-efficacy, transformational leadership also increases by 0.024 units at 0.017 to 0.030 with a 95% confidence interval. The model's intercept was -0.066, not significant with a p-value of 0.478, thus indicating that the baseline level of transformational leadership when self-efficacy is zero does not differ significantly from zero.

The regression analysis for transactional leadership showed self-efficacy as a significant and positive predictor. The model resulted in an R^2 value of 0.289, indicating that self-efficacy explains 28.9% of the variance observed in transactional leadership. The results of the ANOVA further supported the significance of the regression model and were shown with an F-statistic value of 39.770, with a p-value of 8.25E-09. The coefficient for self-efficacy was noted at 0.021, which indicates that increasing self-efficacy by one-unit results in a corresponding increase of 0.021 units in transactional leadership, as shown in Table 5.

The passive/avoidant leadership regression analysis, in contrast, does not prove self-efficacy to be a significant predictor. The test showed an extremely low coefficient of correlation, Multiple R = 0.017, together with almost zero R^2 of 0.0003, thereby indicating that self-efficacy explains almost none of the variability of passive/avoidant leadership. Non-significance of the model was further confirmed through ANOVA by the F-statistic of 0.030 and a p-value of 0.863. Besides, the regression coefficient of self-efficacy was negative and non-significant: $\beta = -0.0008$ at p-value = 0.863. This means that there is no significant relationship between self-efficacy and passive/avoidant leadership behaviours.

Table 5: Regression Analysis for Leadership Styles (n=100)

Statistic	Transformational	Transactional	Passive/Avoidant
Multiple R	0.604	0.537	-0.017
R Square	0.365	0.288	0.0003
Adjusted R Square	0.359	0.281	-0.010
Standard Error	0.199	0.212	0.292
ANOVA			
Regression df	1	1	1
Regression SS & MS	2.231	1.795	0.003
Residual df	98	98	98
Residual SS	3.880	4.423	8.369
Residual MS	0.040	0.045	0.085
F Value	56.351	39.77	0.030
Significance F	2.82E-11	8.25E-09	0.863
Coefficients			
Self-Efficacy Lower 95%	0.017	0.014	-0.010
Self-Efficacy Upper 95%	0.030	0.028	0.008
Intercept Coefficient	-0.066	-0.011	0.349
Self-Efficacy Coefficient	0.024	0.021	-0.001

Conclusion

The study underlines the key role of self-efficacy in shaping the leadership styles of students at G.B. Pant University of Agriculture and Technology. A high degree of self-efficacy strongly correlated with transformational leadership, which is characterized by inspiring and motivating followers, explaining 36.5%. Self-efficacy also positively correlates with transactional leadership, accounting for 28.9% of the variance, thereby making a leader more effective in reward-based leadership. However, no strong relationship was evident between self-efficacy and passive/avoidant

leadership, indicating that self-efficacy has little impact on devolved leadership behaviours. These findings highlight the importance of self-efficacy in propagating active leadership styles and have implications for how leadership training programs are designed for educational settings.

Summary

In summary, the study presents valuable perspectives on the impact of self-efficacy on leadership, offering recommendations for nurturing assured and proficient leaders within educational environments.

References

- Bandura A, Watts RE. Self-efficacy in changing societies. Cambridge University Press; c1996.
- Bandura A. Self-efficacy: The exercise of self-control. New York: Freeman; c1997.
- Bass BM, Avolio BJ. Multifactor leadership questionnaire. Menlo Park, CA: Mind Garden; c2004.
- Elsaied M. Supportive leadership and EVB: The mediating role of employee advocacy and the moderating role of proactive personality. *J Manag Dev.* 2019;38(3):225-237.
- Hoxha L, Hyseni-Duraku Z. The relationship between educational leadership and teachers' self-efficacy. *Eur J Soc Behav Sci.* 2017;20(3):2508-2519. Available from: <https://doi.org/10.15405/ejsbs.221>
- Hussain M, Hassan H. Leader's self-efficacy and effectiveness of leadership styles. *Abasyn Univ J Soc Sci.* 2016;9(1):86-102.
- Iqbal S, Farid T, Ma J, Khattak A, Nurunnabi M. The impact of authentic leadership on organizational citizenship behaviours and the mediating role of corporate social responsibility in the banking sector of Pakistan. *Sustainability.* 2018;10(7):2170. Available from: <https://doi.org/10.3390/su10072170>
- Liu W, Gumah B. Leadership style and self-efficacy: The influences of feedback. *J Psychol Afr.* 2020;30(4):289-294. Available from: <https://doi.org/10.1080/14330237.2020.1812470>
- López-Domínguez M, Enache M, Sallan JM, Simó P. Transformational leadership as an antecedent of change-oriented organizational citizenship behavior. *J Bus Res.* 2013;66(10):2147-2152. Available from: <https://doi.org/10.1016/j.jbusres.2012.03.012>
- Mehdinezhad V, Mansouri M. School principals' leadership behaviours and its relation with teachers' sense of self-efficacy. *Int J Instr.* 2016;9(2):51-60. Available from: <https://doi.org/10.12973/iji.2016.924a>
- Ng KY, Ang S, Chan KY. Personality and leader effectiveness: A moderated mediation model of leadership self-efficacy, job demands, and job autonomy. *J Appl Psychol.* 2008;93(4):733-743. Available from: <https://doi.org/10.1037/0021-9010.93.4.733>
- Pillai R, Williams EA. Transformational leadership, self-efficacy, group cohesiveness, commitment, and performance. *J Organ Change Manag.* 2004;17(2):144-159. Available from: <https://doi.org/10.1108/09534810410530584>
- Polatcan M. The influence of leadership self-efficacy on college students' leadership practice: The mediating role of motivation to lead. *Int J Educ Leadersh Manag.* 2023;11(2). Available from: <https://doi.org/10.17583/ijelm.9551>
- Posner BZ. A leadership development instrument for students: Updated. *J Coll Stud Dev.* 2004;45(4):443-56. Available from: <https://doi.org/10.1353/csd.2004.0051>
- Ramchunder Y, Martins N. The role of self-efficacy, emotional intelligence and leadership style as attributes of leadership effectiveness. *SA J Ind Psychol.* 2014;40(1):1-11. Available from: <https://doi.org/10.4102/sajip.v40i1.1206>
- Saks AM, Ashforth BE. Change in job search behaviors and employment outcomes. *J Vocat Behav.* 2000;56(2):277-287. Available from: <https://doi.org/10.1006/jvbe.1999.1713>
- Schwarzer R, Jerusalem M. Generalized Self-Efficacy scale. In: Weinman J, Wright S, Johnston M, editors. *Measures in health psychology: A user's portfolio. Causal and control beliefs.* Windsor, UK: NFER-NELSON; c1995. p. 35-37.
- Ullah I, Wisetsri W, Wu H, Shah SMA, Abbas A, Manzoor S. Leadership styles and organizational citizenship behavior for the environment: The mediating role of self-efficacy and psychological ownership. *Front Psychol.* 2021;12:683101. Available from: <https://doi.org/10.3389/fpsyg.2021.683101>
- Vega-Vázquez M, Cossío-Silva FJ, Martín-Ruiz D. Does the firm's market orientation behaviour influence innovation's success? *Manag Decis.* 2012;50(8):1445-1464. Available from: <https://doi.org/10.1108/00251741211260327>
- Walumbwa FO, Avolio BJ, Gardner WL, Wernsing TS, Peterson SJ. Authentic leadership: Development and validation of a theory-based measure. *J Manag.* 2008;34(1):89-126. Available from: <https://doi.org/10.1177/0149206307308913>