

## Relationship between Transformational and Transactional leadership styles with performance metrics: A study of medical representatives in select pharmaceutical companies in India

Debjyoti Biswas <sup>1,\*</sup> and Dr. Manodip Ray Chaudhuri <sup>2</sup>

<sup>1</sup> Research Scholar in Management, <sup>1</sup>St. Xavier's University, Kolkata, India.

<sup>2</sup> Professor of Management in HR and OB, <sup>2</sup>St. Xavier's University, Kolkata, India.

International Journal of Science and Research Archive, 2025, 14(03), 755-765

Publication history: Received on 27 January 2025; revised on 03 March 2025; accepted on 06 March 2025

Article DOI: <https://doi.org/10.30574/ijrsra.2025.14.3.0630>

### Abstract

In today's competitive business environment, the function of leadership has changed significantly because it is now the leader's unique responsibility to encourage people to gain an impetus for development to harness synergies, and to increase operational efficiency, thereby directing them to make the best use of resources.

This study aims to assess the relationship between transformational and transactional leadership styles and the performance metrics of medical representatives in select pharmaceutical companies in India. Using a mixed-methods approach, the research collects quantitative data through structured surveys and qualitative insights from in-depth interviews with medical representatives and their managers.

Performance metrics such as sales targets, incentive earnings, bagging rewards, and taking regular initiatives are analyzed to evaluate the impact of different leadership styles. The study hypothesizes that transformational leadership is characterized by valuing all ideas and skills of team members, inspiring superior performance and motivation & trust, while transactional leadership focuses on structured task achievement and rewards and quick decision-making abilities.

Statistical analysis of the Spearman correlation matrix has been used, and the findings are that there exists a relationship between the Transformational and Transactional leadership styles and Performance metrics of Medical Representatives in select pharmaceutical companies in India.

**Keywords:** Transformational leadership style; Transactional leadership style; Employee performance; Performance Metrics; Pharmaceutical Industry India

### 1. Introduction

The Indian pharmaceutical industry not only plays an important role in the nation's economic health but also has a social commitment to the world which is producing world-class quality medicines at an affordable and low price which is why it is known as the "pharmacy of the world" (Department of Pharmaceuticals, 2020). It is the third largest globally in terms of volume and the fifteenth largest in terms of value (Department of Pharmaceuticals, 2020). It accounts for about 8% of all Indian exports of goods and about 2% of the GDP (Dutta & Gajbhiye, 2021). This was only possible due to the people who run the pharmaceutical industry in India and their leaders who have been continuously showing them the path to achieve organizational objectives year on year.

\* Corresponding author: Debjyoti Biswas

The leader recognizes the importance of the technological revolution in living in a competitive setting, which is compounded by continuous shifts in the larger ecological gears. He provides his followers with unique practices in a wide range of technological situations, assisting them in developing the values, skills, and intellectual discipline necessary to maximize their potential. A modern-day leader is in charge of harmonizing and consolidating both human and material resources so that they are capable of manufacturing results or providing services effectively and efficiently, allowing individuals and businesses to improve their performance. Effective leadership involves influencing employee performance within an organization. Effective leadership is crucial for people to reach their full potential and contribute to a common goal with passion and integrity (Walia, 2020).

This research aims to identify and analyze how various leadership styles and attributes affect sales employees' (Medical representatives) performance in the Indian pharmaceutical industry in Eastern India. Performance-enhancing leadership is crucial for motivating employees and creating a more engaged workforce. Clear expectations, support, and advice from leaders are essential for fostering a productive workplace where staff members are inspired and engaged. Employees are more likely to be fruitful and do their best when treated with respect and feel like they have the tools and resources needed to succeed. Gallup (2017) discovered that organizations with employees who are highly engaged had 21% greater profit and 17% greater productivity compared to organizations with low employee engagement. Similarly, Oswald, Proto, and Sgroi (2015) of the University of Warwick found that a 10% improvement in employee engagement results in a 1.1% increase in productivity. Furthermore, McKinsey & Company (2015) found that organizations with effective leadership are more likely to have high-achieving people.

---

## 2. Literature review

This section explains the earlier studies conducted on employee performance and leadership styles. Additionally, it has explained the concept of Transformational and Transactional leadership styles and Employee performance in detail. It included the analysis of research done to look at how these leadership styles affect employee performance and concluded with a gap analysis (Walia, 2020).

### 2.1. Concept and definition of Transformational and Transactional leadership styles and Employee performance

- Leadership styles-** Management functions include leadership, which affects both groups and individuals within an organization. The act of starting group activities to create and achieve goals is known as leadership (Sougui et al., 2015). While employee performance is needed for the business continuity of an organization, it requires able leadership that can show the right path to people to achieve the organizational objective. Leadership is defined as a process when one or more people persuade a group of others to take a particular action (Umar Ibrahim & Ogohi Daniel, 2019). Leadership is the practice of persuading others to work voluntarily and confidently toward an organizational objective (Umar Ibrahim & Ogohi Daniel, 2019). The art of encouraging others to work freely toward the accomplishment of group goals is the most common definition of leadership (Umar Ibrahim & Ogohi Daniel, 2019). A leader is crucial to an organization's success in accomplishing its objectives (Supratman et al., 2019). By overcoming obstacles including a decreased rate of staff turnover, maintaining coordination, and achieving objectives, some firms have expanded globally with the help of their leaders in this cutthroat environment (Bhatti, 2020). The leaders must stick to the right path, to stay inspired to succeed and to set an example for the other workers in the company (Bhatti, 2020). There are multiple leadership styles which have evolved based on the business environment. According to studies, the best leadership style may be a combination of several leadership styles like the combination of servant, transactional and transformative (Sougui et al., 2015).
- Transformational Leadership-** A Transformational leader exerts influence over the expectations of their followers, shaping their values and beliefs, and propelling them towards higher levels of fulfillment (Gadot, 2007). This leadership style fosters innovation, productivity, effectiveness, and satisfaction among factions, as it fosters a shared sense of purpose and mutual trust and respect (Sougui et al., 2015). By empowering subordinates with both the opportunity and confidence to align their actions with the leader's vision, transformational leaders facilitate the attainment of organizational objectives (Anyango, 2015). They challenge employees to embrace innovative approaches when confronted with challenges, thus fostering a culture of adaptability and creativity (Heimerer, 2019). Engaging in collaborative efforts with their teams, transformational leaders identify the necessity for change and devise strategies for its implementation. Through inspiration and effective guidance, they enlist the commitment of their followers, who, in turn, collaborate with them and their team members to enact the desired change (Dastane, 2020). Moreover,

transformational leadership inspires individuals to strive for personal and professional growth, thereby enhancing their performance to unprecedented levels.

- **Transactional Leadership-** Enhancing the efficacy of performance, particularly within formal contexts amenable to precise evaluation and recognition, is achievable through the application of transactional leadership principles (Gadot, 2007). Transactional leadership, a distinct leadership paradigm, places significant emphasis on the interactive exchanges occurring between leaders and their followers (Anyango, 2015). By orchestrating a system of rewards in exchange for specific behaviors, transactional leadership effectively guides and motivates subordinates. These incentives are typically promised to individuals upon successful completion of assigned tasks, thereby catalyzing employee engagement (Anyango, 2015). Rooted in traditional bureaucratic legitimacy and authority structures, transactional leadership operates on the premise of rewarding followers for adhering to established directives. The leader-follower dynamic revolves around a series of implicit agreements, delineating roles, responsibilities, and task-oriented objectives. Consequently, transactional leaders prioritize task fulfillment and adherence to established protocols, relying on organizational rewards and sanctions to influence staff performance (Obasan & Banjo, 2014).

## 2.2. Employee Performance

Employee performance is non-negotiable for the existence of any organization. The prevailing business scenario, which is ever-changing, affects the overall performance of the organization thus challenging the status quo every moment. As such, continuous performance is the key to its survival, which its employees drive. Businesses today run in an environment that is dynamic and chaotic, needing the use of highly competent and adaptable personnel who can provide superior services and enjoy high levels of client retention (Brhane & Zewdie, 2018). Finding out what influences employee performance (EP) has been more important in recent years due to the phenomenon of growing competition between businesses and their need to adapt quickly to both external and internal requirements (Diamantidis & Chatzoglou, 2019).

Employee performance is the core of organizational performance which influences the existence of organizations. To achieve employee performance, a leader must manage several correlated managerial tasks from hiring, transitioning the new member into new culture, training, coaching and guiding him on expectations from his deliveries in order to achieve organizational objectives, driving a culture of performance via execution and rewarding superior performance in terms of results achieved with right performance behaviour.

---

## 3. Methodical approach to the study

### 3.1. Research question

Is there any relationship that exists between Transformational Leadership and Transactional Leadership with Employee Performance?

### 3.2. Hypothesis of the study

- H<sub>10</sub> - There exists no relationship between Transformational Leadership and Transactional Leadership with Employee Performance.
- H<sub>11</sub> - There exists a relationship between Transformational Leadership and Transactional Leadership with Employee Performance.

---

## 4. Research methodology

A survey was administered employing a 5-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) to examine the construct of Transformational Leadership and Transactional Leadership within the leadership domains and their impact on Employee Performance.

- **Reliability Testing:** The results indicate favourable values for the coefficients of Cronbach's  $\alpha$  and McDonald's  $\omega$  across all domains, including Inclusive Leadership and Employee Performance. These coefficients range from 0 to 1, with values exceeding 0.70 considered acceptable for reliability (Fei&st et al., 2019). Furthermore, the minimal variation between Cronbach's  $\alpha$  and McDonald's  $\omega$  further supports the robustness of the reliability findings.

**Table 1** Summary of values of Cronbach's  $\alpha$  and McDonald's  $\omega$ 

Domain name	Cronbach's $\alpha$	McDonald's $\omega$
Transformational Leadership	0.880	0.884
Transactional Leadership	0.850	0.854
Employee Performance	0.726	0.744

#### 4.1. Test of Normality

In statistical analysis, normality refers to the distribution pattern of each metric variable and its alignment with the standard normal distribution. Skewness measures the symmetry of a data distribution, indicating whether deviations from the mean are more pronounced in one direction. Kurtosis, on the other hand, assesses whether the frequency distribution curve is more peaked or flattened compared to a normal distribution. Evaluating skewness and kurtosis is essential, as deviations from normality—whether in terms of symmetry or peakness—can impact the validity of statistical procedures that assume normality.

According to Kline (2011), Curran et al. (1996), Byrne (2010), and Hair et al. (2010), a skewness value within  $\pm 2.0$  and a kurtosis value within  $\pm 7.0$  are considered acceptable indicators of normality. However, as shown in Table (2), the skewness and kurtosis values for all attributes across both domains exceed these thresholds, indicating that the data does not conform to a normal distribution.

**Table 2** Summary of values of Skewness and Kurtosis

Domain name	Statistics	Attribute 1	Attribute 2	Attribute 3	Attribute 4
Transformational Leadership	Skewness	-1.98	-2.37	-1.38	-1.71
	Kurtosis	4.61	6.82	3.44	3.72
Transactional Leadership	Skewness	-1.45	-1.48	-2.21	-1.32
	Kurtosis	2.36	2.55	6.24	1.85
Employee Performance	Skewness	-1.21	-1.05	-1.27	-2.31
	Kurtosis	1.83	1.22	1.46	7.66

#### 4.2. Respondent's Demographic profile

The workforce is predominantly male (97.34%) and highly educated, with 51.33% holding degrees in science. The largest age group falls within 30-35 years (38.74%), closely followed by those aged 25-29 years (36.56%). A significant portion of employees have relatively short tenure in their current roles, with 27.12% having 1-2 years of experience, while a considerable number possess 5-10 years of total job experience (38.74%). Employees with over 10 years of tenure are relatively few, indicating that the workforce is young, experienced, and largely science educated.

#### 4.3. Spearman correlation matrix

**Concept-** A Spearman correlation matrix is a square matrix that presents Spearman's rank correlation coefficients for all variable pairs within a dataset. The diagonal elements of the matrix are always equal to one, as each variable is perfectly correlated with itself. The primary objective of this analysis is to assess whether the Spearman correlation coefficient significantly differs from zero, thereby indicating a statistically significant monotonic relationship between the variables (De Winter, Gosling, & Potter, 2016).

**Monotonicity** is determined by the correlation coefficient, which reveals the direction of the monotonic connection (growing or decreasing), but not its exact shape (De Winter, Gosling, & Potter, 2016).

**Interpretation:** The values range from -1 to +1. Positive values interpret perfect positive monotonic relationships. Zero interprets no monotonic relationship and negative values, a Perfect negative monotonic relationship (De Winter, Gosling, & Potter, 2016).

**Process-** The first step was to create short names for all the attributes so that the correlation matrix can be populated in one page. Below is a table that can be referred to the change in name of all attributes.

**Table 3** Attributes redefined

Domains	Attributes	Renamed
Transformational Leadership	My manager values all the ideas and skills which I bring during meetings and joint field working.	TRFLS A1
	My manager inspires me towards the achievement of the targets assigned in my division.	TRFLS A2
	I have complete trust and faith in acts and decisions of my manager.	TRFLS A3
	I feel encouraged and motivated to work when my manager supervises me.	TRFLS A4
Transactional Leadership	My manager is highly task-oriented and focus on getting the job done.	TRSLs A1
	My manager sets clear-cut targets and holds team members accountable for their performance.	TRSLs A2
	My manager motivates team members to achieve targets by influencing us to earn rewards like incentives and Achiever's foreign trips.	TRSLs A3
	My manager makes quick decisions when necessary and ensures continuity of work at any cost.	TRSLs A4
Employee Performance	I am consistently achieving my sales targets in overall product basket.	EP A1
	I am consistently achieving my sales target in new product basket.	EP A2
	I am consistently earning incentives and rewards from my organization.	EP A3
	I am regularly taking initiatives in order to increase sales in my headquarter.	EP A4

**Table 4** Correlation Matrix of Employee Performance with Transformational Leadership

		TRFLS A1	TRFLS A2	TRFLS A3	TRFLS A4	EP A1	EP A2	EP A3	EP A4
TRFLS A1	Spearman's rho	—							
	p-value	—							
TRFLS A2	Spearman's rho	0.539	—						
	p-value	<.001	—						
TRFLS A3	Spearman's rho	0.593	0.533	—					
	p-value	<.001	<.001	—					
TRFLS A4	Spearman's rho	0.64	0.593	0.57	—				
	p-value	<.001	<.001	<.001	—				
EP A1	Spearman's rho	0.5	0.508	0.506	0.533	—			
	p-value	<.001	<.001	<.001	<.001	—			
EP A2	Spearman's rho	0.503	0.613	0.603	0.512	0.499	—		
	p-value	<.001	<.001	<.001	<.001	<.001	—		

EP A3	Spearman's rho	0.578	0.622	0.61	0.591	0.496	0.577	—	
	p-value	<.001	<.001	<.001	<.001	<.001	<.001	—	
EP A4	Spearman's rho	0.215	0.339	0.275	0.262	0.195	0.315	0.336	—
	p-value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	—

All four attributes of the domain Transformational Leadership have Spearman's rho values as positive and p-values < 0.001. This indicates that this attribute of the domain Transformational Leadership style used by FLMs is positively and strongly correlated with all four attributes of (MR's) Employee performance in select pharmaceutical companies in India (Schober, Boer, & Schwarte, 2018), hence under this circumstances the null hypothesis “ **H1<sub>0</sub>**- There exists no relationship between Transformational Leadership and Employee Performance” is being rejected and alternate hypothesis “**H1<sub>1</sub>**- There exists relationship between Transformational Leadership and Employee Performance has been accepted.

**Table 5** Redefined attributes of transformational leadership style

Domains	Attributes	Renamed attributes
Transformational Leadership	My manager values all the ideas and skills which I bring during meetings and joint field working.	<b>TRFLS A1</b>
	My manager inspires me towards the achievement of the targets assigned in my division.	<b>TRFLS A2</b>
	I have complete trust and faith in acts and decisions of my manager.	<b>TRFLS A3</b>
	I feel encouraged and motivated to work when my manager supervises me.	<b>TRFLS A4</b>

**Table 6** Correlation Matrix of Employee Performance with Transactional Leadership

		TRSLA A1	TRSLA A2	TRSLA A3	TRSLA A4	EP A1	EP A2	EP A3	EP A4
TRSLA A1	Spearman's rho	—							
	p-value	—							
TRSLA A2	Spearman's rho	0.575	—						
	p-value	<.001	—						
TRSLA A3	Spearman's rho	0.628	0.653	—					
	p-value	<.001	<.001	—					
TRSLA A4	Spearman's rho	0.527	0.526	0.628	—				
	p-value	<.001	<.001	<.001	—				
EP A1	Spearman's rho	0.477	0.597	0.548	0.425	—			
	p-value	<.001	<.001	<.001	<.001	—			
EP A2	Spearman's rho	0.446	0.605	0.595	0.51	0.499	—		
	p-value	<.001	<.001	<.001	<.001	<.001	—		
EP A3	Spearman's rho	0.543	0.635	0.643	0.636	0.496	0.577	—	
	p-value	<.001	<.001	<.001	<.001	<.001	<.001	—	
EP A4	Spearman's rho	0.247	0.252	0.269	0.316	0.195	0.315	0.336	—
	p-value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	—

All four attributes of the domain Transactional Leadership have Spearman's rho values as positive and p-values < 0.001. This indicates that this attribute of the domain Transactional Leadership style used by FLMs is positively and strongly correlated with all four attributes of (MR's) Employee performance in select pharmaceutical companies in Eastern India (Schober, Boer, & Schwarte, 2018), hence under this circumstances the null hypothesis “ **H1<sub>0</sub>**- There exists no relationship between Transactional Leadership and Employee Performance” is being rejected and alternate hypothesis “**H1<sub>1</sub>**- There exists relationship between Transactional Leadership and Employee Performance has been accepted.

**Table 7** Redefined attributes of transformational leadership style

Domains	Attributes	Renamed attributes
Transactional Leadership	My manager is highly task-oriented and focus on getting the job done.	TRSLs A1
	My manager sets clear-cut targets and holds team members accountable for their performance.	TRSLs A2
	My manager motivates team members to achieve targets by influencing us to earn rewards like incentives and Achiever's foreign trips.	TRSLs A3
	My manager makes quick decisions when necessary and ensures continuity of work at any cost.	TRSLs A4

## 5. Future scope of study

The effectiveness of any sales team is heavily influenced by the leadership style of the first-line managers, regardless of the industry or geographical area to which they cater. The pharmaceutical industry is no different. To drive the performance of the sales team, every manager/leader attached to the industry uses a leadership style of some form or the other, which is most dominant to his or her personality. However, there is limited study available on leadership styles used by first line managers of the sales department in India within the pharmaceutical industry and its impact on employee performance metrics like sales achievement and sales growth. These leaders are the bridge between the ground sales team and the senior management; their leadership skills are most important for the organization's long-term sustainability.

Secondly, most of the studies conducted on leadership styles and their impact on employee performance are focused on portraying the positive sides of the leadership styles; there is no significant study, which has portrayed the negative side of these leadership styles.

Thirdly, most studies on leadership and employee performance are qualitative, there is further scope to conduct quantitative studies, and a combination of both to deep dive into the subject.

Pharmaceutical firms in the region might benefit from leadership development programs that teach first-line managers how to adjust their leadership styles to the industry's changing needs. Future study should investigate the impact of leadership styles at various hierarchical levels and locations to have a more thorough knowledge of their impact on organizational success.

## 6. Conclusion

Finally, this study emphasizes the importance of first-line managers' leadership styles in molding performance indicators in select pharmaceutical companies in India. The findings show that transformational leadership, which is defined by valuing ideas, inspiration, trust, and motivation, is widely used along with Transactional leadership.

Moreover, both Transformational leadership and Transactional leadership styles of the First line managers have a positive correlation with the performance of Medical representatives and can be enhanced with superior Transformational leadership and Transactional leadership styles. Organizations may take note of it and train their first line managers for better organizational effectiveness.

---

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

---

## References

- [1] Anyango, C. A. (2015). Effects of leadership styles on employee performance at Boa Kenya limited.
- [2] Arif, M., Endah Syaifani, P., and Siswadi, Y. (2019). Effect of Compensation and Discipline on Employee Performance. *Proceeding of The 3rd International Conference on Accounting, Business and Economics*, (UII-ICABE 2019)
- [3] Aydogdu, S., and Asikgil, B. (2011). The effect of transformational leadership behavior on organizational culture. An application in pharmaceutical industry. *International Review of Management and Marketing*, 1(4), 65-73. Microsoft Word - 1 ok sinem aydogdu2.doc (dergipark.org.tr)
- [4] Bala, K., and Sharma, K. (2019). Role of medical representatives in influencing medicine prescription behaviour of doctors. *Journal of Business Thought*, Vol 10, DOI: 10.18311/jbt/2019/23767, April 2019 – March 2020. <https://pdfs.semanticscholar.org/2d59/25b72e9a446c8962f4e1bb15461002e0f082.pdf>
- [5] Basit, A., Sebastian, V., and Hassan, Z. (2017). Impact of leadership style on employee performance (A Case study on a private organization in Malaysia). *International Journal of Accounting and Business Management*, 5(2), 112-130.
- [6] Bataineh, K. adnan. (2019). Impact of Work-Life Balance, Happiness at Work, on Employee Performance. *International Business Research*, 12(2), 99. <https://doi.org/10.5539/ibr.v12n2p99>
- [7] Beltrán-Martín, I., and Bou-Llusar, J. C. (2018). Examining the intermediate role of employee abilities, motivation and opportunities to participate in the relationship between HR bundles and employee performance. *BRQ Business Research Quarterly*, 21(2), 99–110. <https://doi.org/10.1016/j.brq.2018.02.001>
- [8] Bhatti, H. S. (2020). The Impact of Leadership on Employee Performance in SMEs of Australia The Analysis of Antecedents of Customer Loyalty in the Australian Mobile Telecommunication Market View project. *The Middle East International Journal for Social Sciences*. <https://www.researchgate.net/publication/348394290>
- [9] Brhane, H., and Zewdie, S. (2018). A Literature Review on the Effects of Employee Relation on Improving Employee Performance. In *Journal International Journal in Management and Social Science* (Vol. 6). <http://ijmr.net.in>
- [10] Chandrawaty, C., and Widodo, W. (2020). An Empirical Effect of Grit on Task Performance: Mediating by Transformational Leadership and Job Involvement. *Journal of Xi'an University of Architecture and Technology*.
- [11] Clark, L. A., and Watson, D. (2019). Constructing validity: New developments in creating objective measuring instruments. *Psychological assessment*, 31(12), 1412.
- [12] Cochran, W. G. (1977). Sampling techniques (3rd ed.). John Wiley & Sons.
- [13] Da, A., Carvalho, C., Riana, G., De, A., Soares, C., Carvalho, A. D. C., Post, I., and Program, G. (2020). Motivation on Job Satisfaction and Employee Performance. *International Research Journal of Management, IT and Social Sciences IRJMIS*, 7(5), 13–23. <https://doi.org/10.21744/irjmis.v7n5.960>
- [14] De Winter, J. C., Gosling, S. D., & Potter, J. (2016). Comparing the Pearson and Spearman correlation coefficients across distributions and sample sizes: A tutorial using simulations and empirical data. *Psychological Methods*, 21(3), 273–290. <https://doi.org/10.1037/met0000079>
- [15] Diamantidis, A. D., and Chatzoglou, P. (2019). Factors affecting employee performance: an empirical approach. *International Journal of Productivity and Performance Management*, 68(1), 171–193. <https://doi.org/10.1108/IJPPM-01-2018-0012>

- [16] Dutta, S and Gajbhiye, D. (2021). Drivers of Indian Pharmaceutical Exports. *RBI Bulletin*. [https://www.rbi.org.in/Scripts/BS\\_ViewBulletin.aspx?Id=20379#:~:text=India percentage20ranks percentage20third percentage20worldwide percentage20for,the percentage20country percentage27s percentage20total percentage20merchandise percentage20exports](https://www.rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=20379#:~:text=India%20ranks%20third%20worldwide%20for,the%20country%20total%20merchandise%20exports).
- [17] Esthi, R. B., and Savhira, I. (2019). The Influence of Work Training, Competence and Discipline of work on Employee Performance in Pt. Lestarindo Perkasa. *Journal of Research in Business, Economics, and Education*. <http://e-journal.stie-kusumanegara.ac.id>
- [18] Ferrer-Urbina, R., Ramírez, Y., Mena-Chamorro, P., Carmona-Halty, M., and Sepúlveda-Páez, G. (2024, February 20). Naive skepticism scale: development and validation tests applied to the chilean population. *Psicología: Reflexão E Crítica*, 37(1). <https://doi.org/10.1186/s41155-024-00288-0>
- [19] George, B. M., Janodia, M. D., Subrahmanyam, V. M., and Rao, J. V. (2011) Indian Pharmaceutical Industry Leaders and their Leadership Styles. *Journal of Asia Pacific Business Innovation and Technology Management* 001 (2011) 0031-0046. [http://www.isbitm.org/journal/2/file/20160622123859\\_JAPBITM\\_v1\\_n2\\_1.pdf](http://www.isbitm.org/journal/2/file/20160622123859_JAPBITM_v1_n2_1.pdf)
- [20] Government of India, Ministry of Chemicals and Fertilizers. (2021). *Annual Reports. Department of Pharmaceuticals*. [https://pharmaceuticals.gov.in/sites/default/files/english percentage20Annual percentage20Report percentage202020-21.pdf](https://pharmaceuticals.gov.in/sites/default/files/english%20Annual%20Report%202020-21.pdf)
- [21] Government of India, Ministry of Chemicals and Fertilizers. (2020). *Annual Reports. Department of Pharmaceuticals*. [https://pharmaceuticals.gov.in/sites/default/files/English percentage20Annual percentage20Report percentage202021-22 percentage20 percentage281 percentage29.pdf](https://pharmaceuticals.gov.in/sites/default/files/English%20Annual%20Report%202021-22%20percentage20%20percentage281%20percentage29.pdf)
- [22] Harwiki, W. (2016). The Impact of Servant Leadership on Organization Culture, Organizational Commitment, Organizational Citizenship Behaviour (OCB) and Employee Performance in Women Cooperatives. *Procedia - Social and Behavioral Sciences*, 219, 283–290. <https://doi.org/10.1016/j.sbspro.2016.04.032>
- [23] Hauke, J., & Kossowski, T. (2011). Comparison of values of Pearson's and Spearman's correlation coefficients on the same sets of data. *Quaestiones Geographicae*, 30(2), 87–93. <https://doi.org/10.2478/v10117-011-0021-1>
- [24] Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, 21(5), 967-988.
- [25] Ichsan R. (2021). The influence of leadership styles, organizational changes on employee performance with an environment work as an intervening variable at pt. Bank sumut binjai branch. *Journal of Contemporary Issues in Business and Government*, 27(02). <https://doi.org/10.47750/cibg.2021.27.02.032>
- [26] Iskanto, D. (2021). Stress and Its Impact on Employee Performance. *International Journal of Social and Management Studies*. <http://www.ijosmas.org>
- [27] Kawiana, I. G. P. (2018). The influence of organizational culture, employee satisfaction, personality, and organizational commitment towards employee performance. *International Research Journal of Management, IT and Social Sciences*. <https://doi.org/10.21744/irjm.v5i3.666>
- [28] Kim, M., Lee, J., and Kim, J. (2019). The Role of Grit in Enhancing Job Performance of Frontline Employees: The Moderating Role of Organizational Tenure (pp. 61–84). *Advances in Hospitality and Leisure, Volume 15*, 6184 Copyright©2019 by Emerald Publishing Limited. <https://doi.org/10.1108/s1745-354220190000015004>
- [29] Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., de Vet Henrica, C. W., and van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: A systematic review. *Journal of Occupational and Environmental Medicine*, 53(8), 856–866. <https://doi.org/10.1097/JOM.0b013e318226a763>
- [30] Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International.
- [31] Krijgsheld, M., Tummers, L. G., and Scheepers, F. E. (2022). Job performance in healthcare: a systematic review. *BMC Health Services Research*, 22(1). <https://doi.org/10.1186/s12913-021-07357-5>
- [32] Lovell, E. (2020). Grit, Personality, and Job Performance: Exploring Nonlinear Grit, Personality, and Job Performance: Exploring Nonlinear Relationships Relationships. In *Tech Digital Commons Louisiana Tech Digital Commons Doctoral Dissertations Graduate School Spring (Vol. 5, Issue 2020)*. <https://digitalcommons.latech.edu/dissertations>
- [33] Memon, M. A., Ting, H., Cheah, J. H., Thurasamy, R., Chuah, F., & Cham, T. H. (2020). Sample size for survey research: Review and recommendations. *Journal of Applied Structural Equation Modeling*, 4(2), 1–20
- [34] Napierala, M. A. (2012). What is the Bonferroni correction? *AAOS Now*, 6(6), 40–41.

- [35] Obasan Kehinde, A., and Hassan Banjo, A. (2014). A test of the impact of leadership styles on employee performance: A study of department of petroleum resources. *International Journal of Management Sciences*, 2(3), 149-160. <https://www.researchgate.net/publication/311231059>
- [36] Paaïs, M., and Pattiruhu, J. R. (2020). Effect of Motivation, Leadership, and Organizational Culture on Satisfaction and Employee Performance. *Journal of Asian Finance, Economics and Business*, 7(8), 577–588. <https://doi.org/10.13106/JAFEB.2020.VOL7.NO8.577>
- [37] Putera Utama Siahaan, A., Rusiadi, R., Setiawan, A., Azwar Hasibuan, H., U Siahaan, A. P., Isa Indrawan, M., Fatmawati, I., Wakhyuni, E., Astuti, D., Novalina, A., and Rahayu, S. (2018). Ade Novalina, Sri Rahayu, Dimensions of Cultural Intelligence and Technology Skills on Employee Performance. *International Journal of Civil Engineering and Technology (IJCIET)*, 9(10), 50–60. <https://doi.org/10.31227/osf.io/gvghqm>
- [38] Rozi, A., and Sunarsi, D. (2020). The Influence of Motivation and Work Experience on Employee Performance at PT. Yamaha Saka Motor in South Tangerang. *Jurnal Office*, 5(2), 65. <https://doi.org/10.26858/jo.v5i2.13378>
- [39] Sabuhari, R., Sudiro, A., Irawanto, D. W., and Rahayu, M. (2020). The effects of human resource flexibility, employee competency, organizational culture adaptation and job satisfaction on employee performance. *Management Science Letters*, 10(8), 1777–1786. <https://doi.org/10.5267/j.msl.2020.1.001>
- [40] Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>
- [41] Sendawula, K., Nakyejwe Kimuli, S., Bananuka, J., and Najjemba Muganga, G. (2018). Training, employee engagement and employee performance: Evidence from Uganda's health sector. *Cogent Business and Management*, 5(1), 1–12. <https://doi.org/10.1080/23311975.2018.1470891>
- [42] Sharma, A. (2021, December 21). Pharma, healthcare industry looks to sustain momentum in 2022 - The Economic Times. *The Economic Times*; [economictimes.indiatimes.com. https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/pharma-healthcare-industry-looks-to-sustain-momentum-in-2022/articleshow/88446921.cms?from=mdr](https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/pharma-healthcare-industry-looks-to-sustain-momentum-in-2022/articleshow/88446921.cms?from=mdr)
- [43] Sudiardhita K. (2018). The-effect-of-compensation-motivation-of-employee. *Academy of Strategic Management Journal*.
- [44] Supratman, O. V., Entang, M., and Tukiran, M. (2020). The Relationship of Charismatic Leadership, Employee Personality, and Employee Performance: Evidence from PT. Karya Abadi Luhur. *INTERNATIONAL JOURNAL OF SOCIAL AND MANAGEMENT STUDIES*. <https://www.ijosmas.org>
- [45] Sverke, M., Låstad, L., Hellgren, J., Richter, A., and Näswall, K. (2019). A meta-analysis of job insecurity and employee performance: testing temporal aspects, rating source, welfare regime, and union density as moderators. In *International Journal of Environmental Research and Public Health* (Vol. 16, Issue 14). MDPI AG. <https://doi.org/10.3390/ijerph16142536>
- [46] Taherdoost, H. (2016). Sampling methods in research methodology: How to choose a sampling technique for research. *International Journal of Academic Research in Management (IJARM)*, 5(2), 18–27.
- [47] Top 10 Pharma Companies in India 2024. In [linkedin.com](https://www.linkedin.com/pulse/top-10-pharma-companies-india-2024-pharmahoperspvtltd-tx2yc/). Retrieved from <https://www.linkedin.com/pulse/top-10-pharma-companies-india-2024-pharmahoperspvtltd-tx2yc/>
- [48] Umar Ibrahim, A., and Ogohi Daniel, C. (2019). Impact of leadership on organisational performance. *Int. J. Bus. Manag. Soc. Res*, 06(02), 367–374. <https://doi.org/10.18801/ijbmsr.060218.39>
- [49] van Zyl, L. E., van Oort, A., Rispens, S., and Olckers, C. (2021). Work engagement and task performance within a global Dutch ICT-consulting firm: The mediating role of innovative work behaviors. *Current Psychology*, 40(8), 4012–4023. <https://doi.org/10.1007/s12144-019-00339-1>
- [50] Vigoda-Gadot, E. (2007), "Leadership style, organizational politics, and employees' performance: An empirical examination of two competing models", *Personnel Review*, Vol. 36 No. 5, pp. 661-683. <https://doi.org/10.1108/00483480710773981>
- [51] Vijay, A., and Krishnaveni V. (2021), "Role of Manager's Leadership Style on Sales Executives Performance and Satisfaction in pharmaceutical sector, Kerela". *Karpagam Journal of Commerce and Management*, Volume 1, Issue 2, January – March, 2021. 06-Arun-Vijay.pdf ([karpagampublications.com](http://karpagampublications.com))

- [52] Wolor, C. W., Solikhah, S., Fidhyallah, N. F., and Lestari, D. P. (2020). Effectiveness of E-Training, E-Leadership, and Work Life Balance on Employee Performance during COVID-19. *Journal of Asian Finance, Economics and Business*, 7(10), 443–450. <https://doi.org/10.13106/jafeb.2020.vol7.no10.443>
- [53] McChesney, Chris, et al. *The 4 Disciplines of Execution: Achieving Your Wildly Important Goals*. Simon and Schuster, 2021.