

Role of leadership styles in escalating the employee productivity: Moderating role of knowledge sharing

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Abstract: In the dynamic world, the experience of all kind of professionals is changing; the central role of leadership and transfer the exclusive knowledge among the works has become essential concept. Leaders develop such environment that develops the sense of sharing and collaboration within the organization. The study has set the target to investigate the role of leadership styles (inclusive leadership and authentic leadership) in increase the productivity of employee, to investigation the moderating role of knowledge sharing between leadership styles and employee productivity in the context of Hail health cluster, to find out the theoretical foundation of study. Data is collected with the help of questionnaire developed on the base precious studies. The data of 253 participants were collected from the hospitals of Hail cluster. Further, data is analyzed by using the PLS-SEM. The finding of this study elaborates that authentic leadership has positive and significant relationship with productivity of employee in healthcare center. The result also fount hat inclusive leadership also play important role in enhancing the employee productivity. The knowledge sharing appears as important moderator which performance efficient role to facility the employee with knowledge from leaders. This study has empirical, theoretical and practical contribution in multiple ways. This study expends the understanding of leadership styles with productivity of employees by emphasizing on its dimension authentic leadership and inclusive leadership, instead of merely focusing on general concept of leadership. This study highlights the importance of knowledge sharing in the healthcare sector along with the collaborations of leaders for learning as well as productivity.

Keywords: *Authentic leadership, Employee productivity, Inclusive leadership, Knowledge sharing, Leadership styles,*

1. Introduction

The competition in all the field is increasing and for the sustainable performance organizations develops different strategies. The one of the main strategies for overall performance is investment on the worker/ employee of the organization by different means such knowledge sharing, training and skill development, collaboration of leaders, encouragement etc. these factor help the employee to increase the productivity which further increase the organization performance overall. The employee productivity in all the sectors has great importance but in the healthcare sectors of any country employee's productivity play crucial role. There are many factors those influence the employee productive, while planning and full attentions of the leaders are more important. Leadership is fundamental for managing these crises effectively, ensuring the safety of patients and healthcare professionals, and maintaining the continuity of essential healthcare services(Frank et al., 2020; Rodríguez-Fernández et al., 2021). Further (Afsar & Umrani, 2020; Mansaray, 2019; Shumaila Abid Sana Fayyaz, 2021) explains that Leadership is skill that leader use to motivates the employees to put their capabilities best to get outcome, getting their devotion and rousing them to accomplish a coveted objective and result.

The leadership styles have its importance with respect to employee. One of the important styles of the leader is authentic leadership. This leadership style focuses on stimulating and encouraging employees to achieve their full potential and exceed performance expectations. Authentic leaders generate a vision for the future, foster a positive and supportive work environment, and empower employees to become leaders themselves (Top et al., 2020; Levy (2020).

In the context of Hail health cluster, The need for leadership within Hail Health Cluster is crucial for several reasons such as leadership provides a clear vision and strategic direction for the Hail Health Cluster (Rodríguez-Fernández et al., 2021). Healthcare organizations often face complex decisions related to patient care, resource allocation, and policy implementation (Frank et al., 2020; Hussain et al., 2022; Junior et al., 2021; Williams & Bryan, 2007). Strong leadership style is essential for making informed and timely decisions that impact the overall functioning of the cluster. Moreover, the changing in the technologies has created many challenges for the healthcare sectors (Frank et al., 2020). Strong leadership is essential to foster a culture of adaptability and innovation, enabling the Hail Health Cluster to stay abreast of industry changes and provide cutting-edge healthcare services. Healthcare clusters use to face unexpected crises, such as disease outbreaks or natural disasters(Rodríguez-Fernández et al., 2021).

There is a dust of studies that have given the concept of the leadership (Afsar & Umrani, 2020; Ciulla & Ciulla, 2020; Hoang et al., 2021; Ly, 2020; Mansaray, 2019) and its styles, employee performance and organizational behaviour (King & Lawley, 2022; Kondalkar, 2020) in different perspectives. These studies neither explained different leadership styles that impact the employee performance nor compared these thesis styles with each other. In fact there are few studies that have explain the healthcare system of Hail region such as (Osman et al., 2021) explained about the medication error, (Itumalla et al., 2021) explained the healthcare quality in the Hail and (Alshammari et al., 2021) analysed the risk factors related to patient safety in Hail system Saudi Arabia. Albagawi et al., (2017) conducted study on transformational, transactional and inclusive leadership and hospital workers performance collected data from four government-based hospitals in Hail City applied statistical techniques by using SPSS. To see the importance of the leadership styles this study has selected two leadership styles such as authentic leadership and inclusive leadership. These two styles are important but not used collectively in previous studies for the enhancing the productivity of employee. Therefore, current study has research objects, to investigate the role of leadership styles (inclusive leadership and authentic leadership) in increase the productivity of employee, to investigation the moderating role of knowledge sharing between leadership styles and employee productivity in the context of Hail health cluster, to find out the theoretical foundation of study. These objective help to track the research questions which are:

RQ1: What is the role of authentic leadership and inclusive leadership to enhance the employee productivity?

RQ2: How knowledge sharing moderate the relationship with leadership styles and employee performance?

This study is consisted on section, first section explains the introduction related to study, second section elaborates the literature review of previous studies based on concept of current study. Third section developed the links among the variables and explains the conceptual framework. Further, fourth section elaborated the methodology of data collection and data analysis. Sixth section is consisted on detail discussion about results and theoretical as well practical implication of study.

2. Theoretical Foundation and Literature Review

2.1. Supporting Theory

This study underpinning two theories in the context of variables used in this current article, Expectancy Theory holds significant relevance and importance for leaders to manage the overall company and motive the worker. This theory develops the connection between management and

employee. Further it built the trust among the employee which further enhance the productivity (Hussain, 2024; Lee, 2019).

The goal setting theory underscores the significance of goal acceptance and ensuring that individual objectives align with organizational goals (Mone et al., 2018). Goal Setting Theory offers a structured framework for comprehending how goals impact behavior and performance and rendering it a valuable resource for individuals And organizations aiming to enhance productivity and effectiveness (Locke & Latham, 2019).

2.2. Authentic Leadership

Authentic leadership represents administration body operating his expertise in a proper technique. Authentic leadership develops the engagement of employee, satisfaction of employee and strengthens the identity of employee. Authentic leadership has derived from ethic leadership and transformational leadership (Goestjahjanti et al., 2020). Authentic leader behaves by a particular belief to get the credibility and trust of employee or to build a work team. As a result, authentic leadership is a procedure to build validity or leader obligation through honesty, ethic and by the respect all the inputs from employee. Authentic leadership emphasizes on the self and presupposes because it provides a genuine example. Indeed it does (Novitasari et al., 2020).

In the healthcare sector, Authentic Leadership and Expectancy Theory can play a vital role in enhancing organizational performance, patient and staff motivation. Authentic leaders in healthcare exhibit genuine concern for patients and staff, emphasizing transparency, open communication, and value-driven actions. Their self-awareness and commitment to ethical practices inspire trust and foster a culture of integrity and accountability. When these authentic leaders align their actions and communication with the principles of Expectancy Theory, they create clear expectations about performance standards, patient care outcomes, and rewards. This alignment helps healthcare professionals understand the significance of their roles, believe in the value of their contributions, and feel motivated to deliver high-quality care. As a result, combining Authentic Leadership with Expectancy Theory in the healthcare sector leads to improved patient satisfaction, staff engagement, and overall organizational performance (Mohsin et al., 2021; Naseem et al., 2020; Naseem et al., 2023; Sarfraz et al., 2023).

In the healthcare sector, the integration of Authentic Leadership with Goal Setting Theory can significantly impact organizational effectiveness, quality of care, and staff motivation. Authentic leaders in healthcare prioritize genuine relationships, transparency, and ethical decision-making, fostering a culture of trust and collaboration. They encourage open communication about organizational goals, patient care objectives, and individual performance expectations. By aligning their leadership practices with Goal Setting Theory, authentic leaders help healthcare professionals set clear, challenging, and achievable goals that are meaningful and relevant to patient care and organizational success. This alignment enhances goal commitment, clarifies performance expectations, and promotes wisdom of purpose among staff. As a result, the combination of Authentic Leadership and Goal Setting Theory in the healthcare sector can lead to improved patient outcomes, increased staff engagement, and overall organizational excellence.

2.3. Inclusive Leadership

The perception related to Inclusive leadership introduced by the Nembhard and Edmondson in 2006. The inclusive leadership is known as respected responsible for performance. Furthermore, an inclusive leader is considered as vital entity in forming an inclusive organization (Randel et al., 2018). Inclusive leadership has emphasized on allowing them to contribute their unique abilities and views, responsible for accepting employees for who they are and encouraging them to involve in organizational accomplishments (Roberson & Perry, 2022). Inclusive leadership dedicated on tending to the need of member for the openness and availability of work group (Shore & Chung, 2022).

In the healthcare sector, the combination of Inclusive Leadership with the help of Expectancy Theory develops a motivating atmosphere that promotes diversity, equity, and inclusion while enhancing organizational performance and staff productivity. Inclusive leaders in healthcare value the diverse perspectives, experiences, and contributions of all team members, fostering a culture where everyone feels valued, respected, and empowered to contribute their best (Hussain, 2024). By promoting transparency and open communication, inclusive leaders help clarify performance expectations, potential rewards, and the pathways to achieving organizational goals, aligning with the principles of Expectancy Theory. This alignment builds trust, enhances the belief in the expectancy of effort-performance-reward relationships, and encourages staff to exert effort towards achieving shared objectives. As a result, integrating Inclusive Leadership with Expectancy Theory in the healthcare sector can lead to improved patient care, increased staff satisfaction, and a more collaborative and innovative organizational culture (Hussain, 2024).

In the healthcare sector, integrating Inclusive Leadership with Goal Setting Theory can create a dynamic and inclusive environment that fosters collaboration, innovation, and excellence in patient care. Inclusive leaders in healthcare prioritize equity, diversity, and inclusion, valuing the unique perspectives and contributions of all team members. They actively involve staff in goal-setting processes, ensuring that goals are relevant, challenging, and aligned with both organizational objectives and the diverse needs of patients and communities served. By promoting open communication, transparency, and collaboration, inclusive leaders empower team members to set clear, meaningful, and achievable goals that drive performance and enhance patient outcomes (Naiwen et al., 2021). This collaborative approach to goal setting, enriched by diverse viewpoints and experiences, encourages commitment, fosters a sense of ownership, and promotes continuous learning and improvement. As a result, combining Inclusive Leadership with Goal Setting Theory in the healthcare sector can lead to enhanced staff engagement, improved patient satisfaction, and a more resilient and adaptive healthcare organization.

2.4. Knowledge Sharing

Knowledge sharing is process among the individuals, who is surrounded by a multitude of factors that simplify knowledge exchange (Obrenovic et al., 2020). KS is important approach for gaining competitive advantage, innovate in the market and aiding administrations to raise the performance (Ganguly et al., 2019). The transferring the knowledge promote the culture in which employee feel secure and enhance work productivity (Ahmad & Karim, 2019; Hussain, 2024). Therefore, when the healthcare organizations attain best high performance by encouraging knowledge sharing, emphasizing the value and benefits of shared expertise, experiences, and best practices. This environment of knowledge sharing among healthcare professionals leads to the better patient outcomes, improved clinical practices, and a culture of continuous improvement (Meng et al., 2024; Mohsin et al., 2024; Naiwen et al., 2021; Naseem et al., 2020).

In the healthcare sector, integrating knowledge sharing with Goal Setting Theory drives organizational excellence, innovation, and productivity (Khan et al., 2024). When healthcare organizations prioritize knowledge sharing as a strategic goal and encourage professionals to exchange insights and expertise, an environment use to create that fosters learning, collaboration, and performance (Zamiri & Esmaeli, 2024). As a result, combining knowledge sharing with Goal Setting Theory in the healthcare sector leads to improved patient outcomes, increased staff engagement (Huang & Wang, 2024; Sarfraz et al., 2022, 2023).

2.5. Employee Productivity

Employee productivity has defined as the behavior of employee that contributes positively to the achievement of goals set by organization. Employee productivity needs a pro level of education from an employee (Shuibin et al., 2020). Because when they work they can do their work quickly. Employee productivity is significant factors in improving the performance of PT. Employee productivity is the main part of organizational success (Pang & Lu, 2018).

Employee productivity provides the barometer of efficiency, effectiveness and overall productivity within a company. It includes a variety of factors including task completion and quality of work (Werdiavy et al., 2023). High employee productivity not only leads to high outcomes for the organization but also fosters positive work culture and employee engagement (Meng & Berger, 2019). Employee productivity is valued through various metrics, feedback mechanisms and performance reviews. It is valued by alignment with organizational goals and allowing for continuous improvement. Ultimately, investing in and optimizing employee productivity is important to achieving sustainable growth and competitive advantage in dynamic business landscape of today (Arefieva et al., 2021). In the healthcare sector, linking employee productivity with Goal Setting Theory is practical concept as this theory emphasis to motivate the employee to attain targets set by organization (van Assen, 2020). When healthcare organizations establish specific performance goals aligned with patient care quality, clinical outcomes, and organizational objectives, they provide employees with a clear direction and purpose in their work (Boeykens et al., 2022).

3. Conceptual Framework and Hypothesis Development

This section consisted on the hypothesis development of the research work; this hypothesis development is based on the previous studies.

3.1. Authentic Leadership and Employee Productivity

The concept of authentic leadership has defined as a crucial factor of employee productivity (Ribeiro, Gomes, et al., 2018). Authentic leadership has considered by genuineness, transparency and a focus on moral values. Authentic leadership has been gradually recognized for superior performance among employees and its profound impact on fostering trust (Onyalla, 2018). The positive relationship between authentic leadership and employee productivity is showing how authentic leadership practices contribute to the success of organizations through enhanced job satisfaction, motivation and commitment (Adigüzel & Kuloğlu, 2019).

Authentic leadership lies the authenticity of the leader the ability to demonstrate sincerity, integrity and transparency in interactions with subordinates. When leaders exhibit authenticity, they create a culture of trust and psychological safety within the organization (Zeb et al., 2020). Employees feel empowered to voice their opinions take risks and contribute meaningfully to organizational goals without fear of reprisal or judgment (Kim et al., 2023). This environment of trust and openness fosters strong interpersonal relationships between leaders and employees and laying the foundation for collaborative teamwork and collective achievement (AHMED, 2024).

Authentic leaders serve as role models for ethical behavior and values alignment. By consistently adhering to moral principles and displaying integrity in decision-making, authentic leaders inspire their followers to emulate similar behaviors (Qu et al., 2019). Employees are more likely to uphold ethical standards and act in the best interests of the organization when they perceive their leaders as ethical and trustworthy. This alignment of values cultivates a sense of shared purpose and organizational citizenship, driving employees to go above and beyond their formal job responsibilities to contribute to the overall success of the company (Al Halbusi et al., 2021).

Another key aspect of authentic leadership is self-awareness - the ability of leaders to understand their strengths, weaknesses, and values. Self-aware leaders are cognizant of their impact on others and actively seek feedback to continuously improve their leadership effectiveness (Thomas, 2021). Authentic leaders create an inclusive and supportive work environment where everyone's contributions are valued by acknowledging their limitations and soliciting input from employees. This openness to feedback promotes a culture of learning and development and enabling employees to enhance their skills and competencies over time (Alzghoul et al., 2018).

Following hypothesis is developed on the bases of above discussion:

H₁: Authentic Leadership has a significant and positive relationship with employee productivity

3.2. Inclusive Leadership and Employee Productivity

Employee productivity is important for work organizations and many other factors impact the employee productivity. Because of these factors many researchers found that inclusive leadership is important for employee productivity. Inclusive leadership also decides the performance of innovation employee's team (Alzghoul et al., 2018) . Inclusive leadership style has derived from the tolerance, support and openness. Inclusive leaders encourage the employees to practice positive behavior at the level of workplace business by the concept of organizational support. By acknowledging and promoting suggestions of team an inclusive leadership indirectly influences the employee productivity (Guo et al., 2022).

Inclusive Leadership style is significantly concerned with the innovative ability of the employees. A leader with the employees can show creative ideas more appropriately as an innovative attitude. Moreover, leaders with the transformational leadership style endure more successful in exciting employees to innovate by incorporating intellect and inspiration (Kozioł-Nadolna, 2020). Employee productivity of employees increases when they are having more engagement at higher positions because the employee's consider that leaders are acknowledging their work performance (Park et al., 2022). The support and the encouragement of a leaders impact on the relationship of inclusive leadership and employee's productivity. All employee's give more productivity when they realize that their leader is encouraging them (Arifin et al., 2019). Inclusive leadership shows the positive behaviors of a leader that encourage team members by maintaining their uniqueness within the group and develop the feel of belonging to team members (Randel et al., 2018). Therefore, inclusive leaders more positively identify employees and tolerate their letdowns that develop a sense of encouragement and support for employees resulting in additional innovative ideas. Inclusive leaders appreciate the diverse perspectives when addressing challenges or making decisions (Randel et al., 2018).

Following hypothesis is developed on the bases of above discussion

H₂: Inclusive leadership has a significant and positive relationship with employee productivity

3.3. Knowledge Sharing and Employee Productivity

Knowledge sharing (KS) paly important role for enhancing the performance not only of the workers individually or group but it also create the firm relationship among the worker and management (Ahmad & Karim, 2019). Practice of sharing or experience and knowledge among the workers increase their working performance and reduce the chances of mistakes. Therefore, on the base of knowledge gain from experienced employee, help the individuals to perform their work task efficiently (Al-Kurdi et al., 2018). Further, knowledge sharing help the worker to stay at the job and participate in the decision making which increase the help to enhance the productivity and work satisfaction (Almulhim, 2020). Once side knowledge sharing is effective for worker productivity on the other side, it helpful of the organization to reduce costs of training and uncertainty risk (Saffar & Obeidat, 2020). Moreover, The practice of collaboration among the employee by sharing knowledge organizations effectively utilize resource and get excellence in overall performance as well as productivity of organization (Al-Kurdi et al., 2018; Nokkala et al., 2022).

So, following hypothesis is developed which explains that

H₃: Knowledge Sharing has a significant and positive relationship with Employee productivity

3.4. Knowledge sharing as a Moderator between Authentic Leadership and Employee productivity

The moderator effect of knowledge sharing on authentic leadership and employee productivity shows a unique significance due to the nature of the work and the complicated challenges faced by professionals in the health sector (Islam et al., 2024). Authentic leadership in healthcare is considered by a genuine obligation to patient care. Authentic leadership fosters trust and respect among staff team members. This leadership style makes an environment where the employees feel enabled to provide the best possible care to patients (Zeb et al., 2020).

Knowledge sharing has significance role by promoting collaboration, continuous learning, and innovation within healthcare teams in moderating this relationship. The knowledge sharing and expertise is necessary for delivering top-quality care and successful patient outcomes in a field where evidence-based performs or rapid progresses are vital (Jamshed & Majeed, 2019). Authentic leaders who arrange knowledge sharing provide the distribution of best practices, new research results and clinical insights along all the team members or leading to improve capabilities and performance (Jamshed & Majeed, 2019). Additionally, knowledge sharing inspires interdisciplinary team collaboration, permitting healthcare professionals from different specialties to work together more excellently to address difficult patient needs. This collaborative approach leads a culture of teamwork and joint respect, which is necessary for providing coordinated and patient-centered care (Cleary et al., 2019).

Knowledge sharing emphasizes the employee engagement and job satisfaction in the healthcare sector. When healthcare professionals feel having access to the information and resources they need (Kucharska & Bedford, 2019). Employees' are more likely to be involved in their work and inspired to constantly improve their abilities and productivity. Knowledge sharing has increased engagement explains into better patient care. It has reduced turnover rates and improved organizational outcomes (Abdelwhab Ali et al., 2019). Knowledge sharing provides as an important moderator that increases the positive impact of authentic leadership on employee productivity in the healthcare sector (Zeb et al., 2020). Knowledge sharing enables healthcare professionals to deliver exceptional care, adapt to evolving challenges and drive continuous improvement in patient outcomes by raising a culture of teamwork, learning and employee engagement (Alshura et al., 2023).

Following hypothesis is developed on the bases of above discussion

H₃: Knowledge sharing moderate the relationship between Authentic Leadership and Employee productivity

3.5. Knowledge Sharing as a Moderator between inclusive Leadership and Employee Productivity

The role of inclusive leadership and the impact of KM on employee productivity cannot be overstated in the healthcare sector. Inclusive leadership has defined by sincerity and respect for diversity makes an environment where all employees' feel respected and empowered to use their perspectives and abilities (Rawat et al., 2021). This leadership approach is mostly critical in healthcare settings, where different teams cooperate to address composite patient needs and navigate complex challenges (Bobruk et al., 2023).

In the healthcare sector knowledge sharing plays an important role as moderator in the connection between inclusive leadership and employee productivity. When leaders facilitate knowledge sharing, they raise a cooperative culture that inspires the exchange of ideas, best practices and original solutions among all the healthcare professionals (Islam et al., 2024). Knowledge sharing promotes continuous learning and professional development in the inclusive leadership. Healthcare specialists have encouraged allocation their knowledge, insights, and learning with their team members, important to enhanced capabilities, skills and performance (Roberson & Perry, 2022). This learning culture permits healthcare teams to stay efficient on the latest research, technologies and best practices or ensuring that they deliver high-quality, evidence-based care to their patients (Henry et al., 2019).

Inclusive leadership collective with knowledge sharing supports employee engagement and job satisfaction in the healthcare sector (Lee et al., 2021). When employees feel involved, respected and supported employees are more likely to be engaged in their work, motivated to perform at their best and committed to the organization's mission and values (Van Tuin et al., 2021). This heightened engagement translates into improved patient care, reduced turnover rates, and enhanced organizational performance. Knowledge sharing moderates the relationship between inclusive leadership and employee productivity in the healthcare sector by fostering collaboration, continuous learning, and employee engagement (Rodriguez, 2018). By creating an inclusive environment where knowledge is freely shared and valued, healthcare organizations can empower their teams to deliver exceptional care, adapt to changing environments, and drive continuous improvement in patient outcomes (Cardiff et al., 2020).

Following hypothesis is developed on the bases of above discussion

H₃: Knowledge sharing moderate the relationship between Inclusive Leadership and Employee productivity

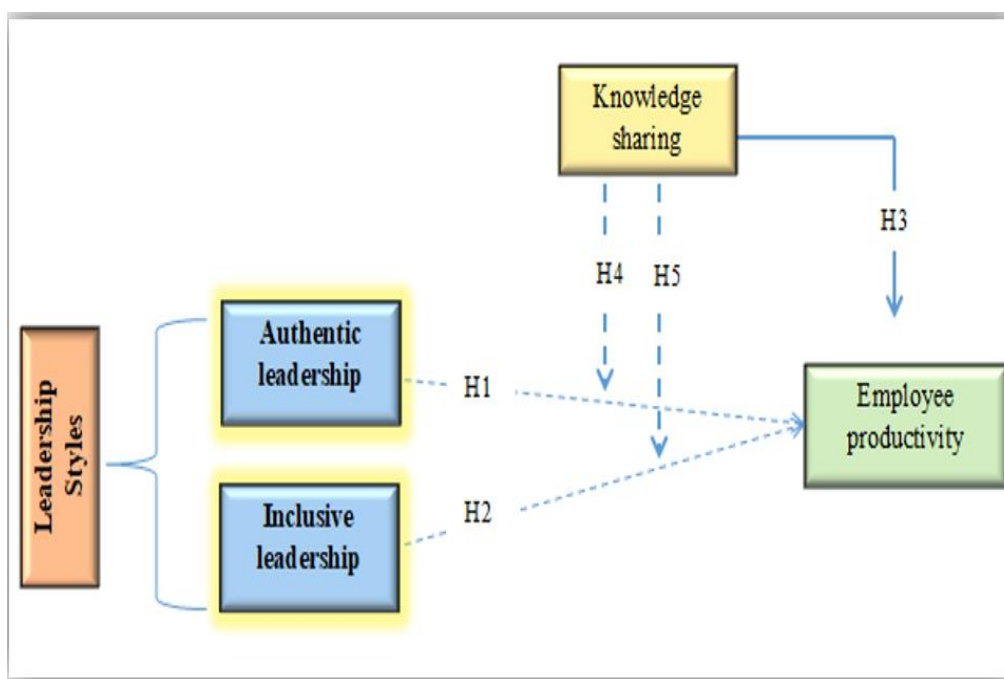


Figure 1.
Research framework.

Figure 1 is developed on the link of variables. This figure explain the conceptual framework of study, which elaborates that authentic leadership and inclusive leadership are independent variables, employee performance is dependent variable, whole knowledge sharing is moderator between authentic leadership and employee performance as well as inclusive leadership and employee performance

4. Methodology

4.1. Sample Size and Data Collection Process

This study is cross-sectional in its nature and data is collected with well-designed questionnaire. The questionnaire was based previous studies. Data is collected from three hospitals of Hail health cluster, these hospitals as well as the participants are also are randomly selected. The participants are health professionals. Data is collected form Hail General Hospital, King Salman Specialist Hospital, King Khalid Hospital. Before the distribution of questionnaires and formal data collection, questionnaire was verified from 2 professors in this field with deep knowledge in the field of research issues. Permission was taken from administration department of hospital and aware them about the aim of current study. During this visit, connects were taken from administration department. Questionnaire was converted in Google doc and distributed by electronic source from January 2024 to February 2024. There were 400 questionnaires distributed and 253 valid questionnaires were used for analysis. So, the response rate was 63. 25%. Table 1 depicts characteristics of respondents. This table explains that there 77% are male and 23% are female participants. There are 18 % have 25-30 years of age, 56% have 30- 35, 20% have 40 and more age. Regarding the experience 38% has 1 to 5 years of experience, 40% have 6-9, 19% has 10-14 and 3 % has 14+ years. Among the participant, there were 30% doctors, 20% were nurses and 50 % were medical staff.

Table 1.
Profile of respondents.

Variable	Category	Percentage
Gender	Male	77 %
	Female	23 %
	Total	100 %
Age (in years)	25-30	18 %
	30-35	56 %
	35-40	20 %
	40 +	6 %
Experience	Total	100 %
	1-5	38 %
	6-9	40 %
	10-14	19 %
	14+	3 %
	Total	100 %
Job position	Doctors	30 %
	Nurses	20 %
	Medical staff	50

4.2. Measurement of Variables

In this study two leadership styles are selected as independent variables, authentic leadership is measured with eight items from study by (Bai et al., 2022), further there are six measurement items for inclusive leadership are selected from study by (Nguyen et al., 2019). In this study knowledge sharing is use as moderating variable, there are three items selected from a study by (Kun 2022). The mostly importantly, the dependent variable of this study is productivity of the employee in the health-cluster. There are five measurement items are selected from a study by (Hanaysha 2016) for this variable.

4.3. Data Analysis

The data for this study is analysis with smart PLS, by developing PLS-SEM equation. There are two main approaches are used for the results, first measurement modeling. In measurement modeling the value of Cronbach's Alpha, composite reliabilities, discriminant validity, average variance extracted AVE are visualized. Further, for the path-coefficients and hypothesis testing structural model is evaluated. The PLS-SEM approach is known best of the social science with different sample size (Hair Jr et al., 2017)

5. Results

5.1. Measurement Model

In this study the measurement model, through the evaluation of factor loading inter-item reliability was found by maintain the threshold level which is 0.70 (Hair Jr et al., 2017). Further this model found the convergent validity with the help of AVE (average, variance extracted). Further this study analyzed the internal consistency reliability by investigating the composite reliability (CR) and the values were found greater than threshold level 0.70 (Fornell & Larcker, 1981). The results are presented below.

Table 2.
Measurement model.

Variable	Code	Factor loading	CA	CR	AVE
Authentic leadership	AL 1	0.771	0.871	0.971	0.631
	AL2	0.821			
	AL3	0.784			
	AL4	0.823			
	AL5	0.755			
	AL6	0.660			
	AL7	0.769			
	AL8	0.882			
Inclusive leadership	IL1	0.838	0.809	0.801	0.65
	IL2	0.764			
	IL3	0.819			
	IL4	0.702			
	IL5	0.847			
	IL6	0.802			
Knowledge sharing	KS1	0.788	0.972	0.712	0.675
	KS2	0.843			
	KS3	0.835			
Employee productivity	EP1	0.781	0.812	0.610	0.650
	EP2	0.883			
	EP3	0.804			
	EP4	0.811			
	EP5	0.857			

5.2. Heterotrait-Monotrait (HTMT)

Current study has checked the Heterotrait-Monotrait ratio (HTMT) to verify the multi-collinearity. According to Henseler et al., (2014) the threshold level for the variable's value is 0.9. Consequently, the result of discriminant validity expose that all the value in the Table 5 are below the 0.9 and there is no any factor of Multi-collinearity.

Table 5.
Heterotrait-Monotrait ratio (HTMT).

	AL	IL	KS	EP
AL				
IL	0.332			
KS	0.451	0.325		
EP	0.637	0.435	0.453	

Note: AL (Authentic knowledge), IL (Inclusive leadership), KS (Knowledge sharing), EP (Employee productivity).

5.2. Structural Model

The structural mode explains the hypothesis testing, in the following table it is explained that H1 which elaborated the AL has positive and significant relation with employee productivity has accepted, $\beta = 0.483$ and p value is less than threshold level. Further, H2 hypothesis is accepted with explains the IL has positive relationship with EP the values are 0.252 and p values are less than threshold level. The knowledge sharing also has positive direct relation with EP, this hypothesis H3 is also accepted on the base of p value. In this study H4, H5 explains the moderating role knowledge sharing between AL and

EP, and AL and EP. These both hypotheses are accepted on the base of P-values. The decision for the entire hypothesis is supported.

Table 6.
Summary of hypothesis testing.

Hypothesis	Relationship	Beta	Std- error	T-value	P-value	Decision
H1	AL -> EP	0.483	0.023	24.853	0.000	Supported
H2	IL -> EP	0.252	0.033	13.943	0.000	Supported
H3	KS -> EP	0.342	0.042	4.541	0.000	Supported
H4	KS*AL-> EP	0.254	0.052	2.415	0.001	Supported
H5	KI*IL-> EP	0.072	0.081	3.012	0.003	supported

Further following diagrams elaborates the moderating impact of the KS. The figures 2 and 3 explain positive impact of KS as moderator on AL and EP as well as IL and EP.

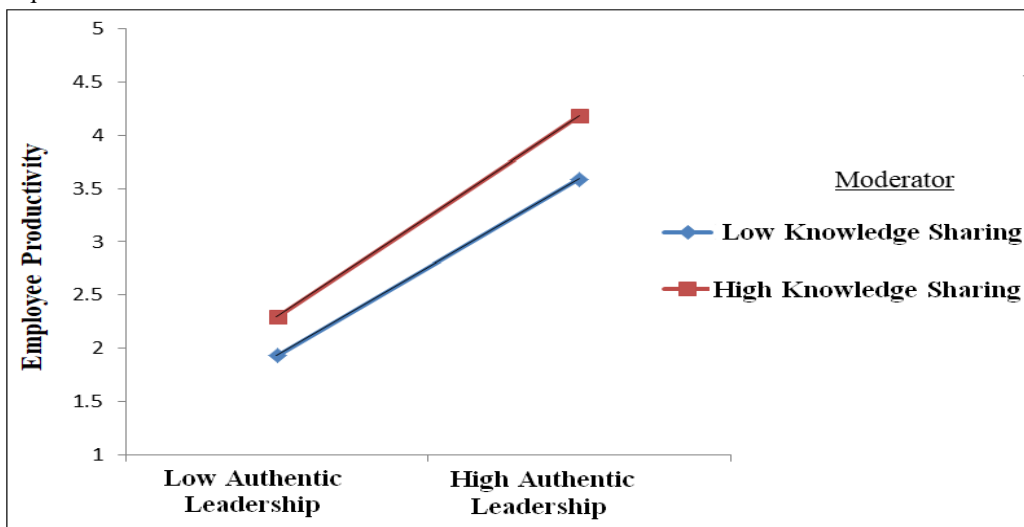


Figure 2.
Knowledge sharing has positive and significant relationship between authentic leadership and employee productivity.

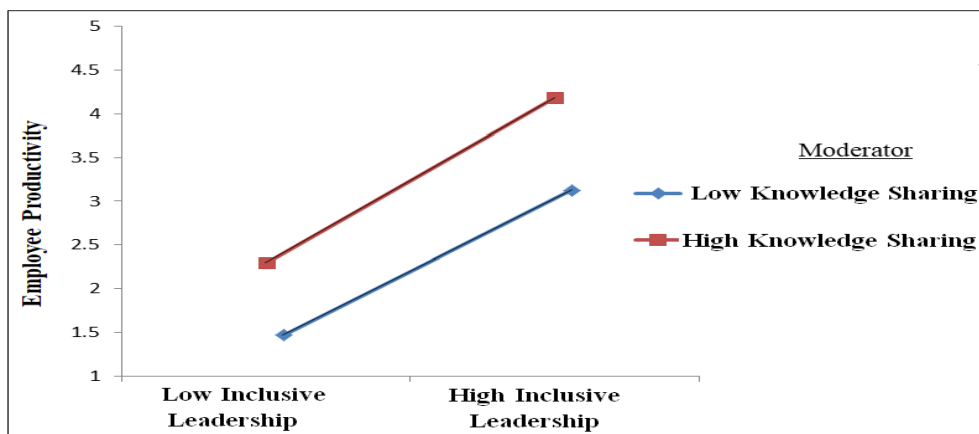


Figure 3.
Knowledge sharing has positive and significant relationship between inclusive leadership and employee productivity.

6. Discussion

This study has established link of authentic leadership and inclusive leadership with employee productivity in the context of Hail health cluster. Knowledge sharing is a moderator variable, which moderates the link between authentic leadership, inclusive leadership and employee productivity.

After the analysis, this research has accepted hypothesis H1, which explains that authentic leadership has a significant and positive relationship with employee productivity because it provides an atmosphere of trust and care. Moreover, authentic leaders are more ethical, which inspire workers to feel valued. This self-respect and the trust of workers can lead a high level of motivation and production, as workers are more expected to be loyal to their task and associated with the healthcare sector's goal. Authentic leadership also gives consistent communication and decreases insecurity, also helps workers to focus on their given work. This result is supporting by (Umeh, 2022; Wang et al., 2021; Zeb et al., 2020).

Secondly, hypothesis H2 is also accepted which show that inclusive leadership has a significant and positive relationship with employee productivity because it provides a culture of acceptance and honor, where all workers feel appreciated and understood. Inclusive leaders find out viewpoints or inspire open discussion, which bring about innovative solutions and good policy making. This sense of integration higher worker's self-confidence, as employees feels their donations are predictable or valued. Furthermore, inclusive leadership encourages chances for production and growth, confirming that all workers have the capitals and provision which they require to complete their task. This result is aligned with (Akingbola & Phaethayanan, 2021; Ding & Liu, 2022; Óskarsdóttir et al., 2020; Shore et al., 2018).

Furthermore, hypothesis H3 is related to the link between employee productivity and knowledge sharing because knowledge sharing improves the expertise of all team workers. When all the workers share their knowledge, they get the access to the higher range of insights and best practices, which can be helpful for all the workers to accomplish their task. This joint approach not only decreases termination and avoid reinvention of all the solutions. This approach also increases the ability of decision- making and productive process. Moreover knowledge sharing promotes the culture of continuous learning and encouraging all workers to be valued and stay engaged to accomplish their task. Healthcare sectors improve their workflows and increased overall productivity. This result is related to (Al-Jaroodi et al., 2020; Lam et al., 2021; Shujahat et al., 2019).

This study also accepted hypothesis H4, which is showing that knowledge sharing moderates the relationship between authentic leadership and employee productivity. Knowledge sharing moderates the link between authentic leadership and employee productivity by improving the positive influence of authentic leadership by team learning. Authentic leadership creates an atmosphere of sincerity and also inspiring all workers to share their visions and capabilities. This culture of knowledge sharing matches authentic leadership style by fostering workers with the capital and skill they need to accomplish their working activities. When workers share their knowledge, they can gain more ideas and solutions that increase their working productivity. Moreover, knowledge sharing emphasizes the morals of authentic leadership. The combined influence of authentic leadership and knowledge sharing boosts the level of motivation and overall productivity of healthcare sector. This result is supported by (Alzghoul et al., 2018; Hussain, 2024; Ribeiro, Duarte, et al., 2018).

Hypothesis H5, also related to knowledge sharing moderate the relationship between Inclusive leadership and employee productivity by amplifying the benefits of inclusive leadership by improving combined problem-solving. Inclusive leaders establish an atmosphere where all workers are encouraged sharing their ideas, which encourages a culture of self-respect. Moreover, when all the knowledge is shared within this structure, it permits for more proficiency. This atmosphere not only supports in tackling with tasks but also increases continuous learning. As workers share their knowledge, their productivity increases. Knowledge sharing works as facilitator that shows positive effect of inclusive leadership, on employee productivity, it increases the level of performance and productivity of healthcare sector. This result is also related to (Alshammari & Ali, 2024; Gupta et al., 2022)

6.1. Theoretical Implication

This study has theoretical foundation which can be great contribution in literature related to field of leadership and knowledge management. This study has selected two styles of leadership such as authentic leadership and inclusive leadership to make the link with employee productivity in Health cluster of Hail city, Saudi Arabia. Further, this study has make the association of knowledge sharing with employee productivity and elaborate that its very essential to share the experience and knowledge to other worker for attaining best productivity from the employee. Furthermore, knowledge sharing moderate the relationship between authentic leadership and employee productivity as well as inclusive leadership and employee productivity in the context of Hail health cluster. This study not only support the literature related to healthcare sector but also has deep theoretical foundation for the other sectors, such as manufacturing sector, service sector etc.

6.2 Practical Implication

This study practically gives great foundation the different sectors. Although, this study is conducted on the healthcare sector but it also helps the administration body of other sectors. This study found that leaders are mean source to encourage and empowerment of the employee. They built sense of collaboration, team work and creativity by supporting their employee. As this study has used two leadership styles, therefore, authentic leadership style fosters the trust creative environment, knowledge sharing and transparency in the organization. In this environment employee have high level of confidence with enhance productivity of employees. This collaboration or leaders by knowledge sharing encourage the long term success of overall organization. Further, inclusive leadership styles enhance the morale of employee and trained them for decision making in critical situations. In current study positive moderating role of knowledge sharing between inclusive leadership styles and employee productivity provide worthy perception to administration of different manufacturing and service sector for developing an environment within the organizations to enhance the employee productivity by strong leadership skill and knowledge sharing.

7. Limitation and suggestions

Current study offers valuable insights but also presents several limitations. One notable limitation is the reliance on cross-sectional data, which restricts the ability to draw causal inferences about the relationships between leadership styles, knowledge sharing, and employee productivity. Additionally, the study focus on a single health cluster in Saudi Arabia limits the generalizability of the findings to other regions or sectors. The cultural context and specific organizational practices unique to the Hail Health Cluster may also influence the results, making it challenging to apply the conclusions universally. Future studies should consider longitudinal designs to better capture the causal dynamics over time and expand the scope to include multiple health clusters or diverse industries to enhance generalizability. Moreover, incorporating qualitative methods could provide deeper insights into the mechanisms through which leadership styles and knowledge sharing interact to influence productivity. Future studies could further enrich the understanding of these complex relationships by exploring other potential moderating or mediating variables, such as organizational culture or employee engagement.

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Appendix

Table 2.

Measurement items of inclusive leadership

Variable	Items	Source
Inclusive leadership	<ol style="list-style-type: none"> 1. My manager is attentive to new opportunities to improve work processes 2. My manager is open to discuss the desired goals and new ways to achieve them 3. My manager is available for professional questions I would like to consult with him/her 4. My manager is ready to listen to my requests 5. My manager encourages me to access him/her on emerging issues 6. My manager is accessible for discussing emerging problems 	(Nguyen et al., 2019)

Table 3.
Measurement items of authentic leadership.

Variable	Items	Source
Authentic leadership	<ol style="list-style-type: none"> 1. Seeks feedback to improve interactions with others 2. Accurately describes how others view his or her capabilities. 3. Says exactly what he or she means 4. Is willing to admit mistakes when they are made 5. Demonstrates beliefs that are consistent with actions 6. Makes decisions based on his/her core beliefs. 7. Solicits views that challenge his or her deeply held positions 8. Listens carefully to different points of view before coming to conclusions 	(Bai et al., 2022)

Table 3.
Measurement items of knowledge sharing Continue.....

Variable	Items	Source
Knowledge sharing	<ol style="list-style-type: none"> 1. We share information and knowledge necessary for the tasks. 2. We exchange knowledge between employees in order to achieve our goals with little time and effort. 3. We promote sharing of information and knowledge between team members 	(Kun, 2022)

Table 4.
Measurement items of employee productivity.

Variable	Items	Source
Employee productivity	<ol style="list-style-type: none"> 1. I do large amount of work every day 2. I accomplish tasks quickly and efficiently. 3. I have a high standard of task accomplishment. 4. My work outcomes are of high quality. 5. I always beat our team targets. 	(Hanaysha, 2016)