

Article

Leadership Styles and Talent Management Effectiveness: The Mediating Role of Employee Engagement and the Moderating Influence of Organizational Culture

Ekbal Saleh Ali Alhadidi ^{1,*} and Asieh Akhlaghi Mofrad ² 

¹ Business Management Department, Institute of Graduate Studies and Research, Girne American University, Kyrenia 99320, Cyprus

² The Accounting Department, Girne American University, Kyrenia 99320, Cyprus; asiehmofrad@gau.edu.tr

* Correspondence: ekbal.alsaleh@icloud.com

Abstract

The present study aims to examine the effect of transformational and transactional leadership styles on the effectiveness of talent management in the Jordanian Ministry of Health, where the mediating variable is employee engagement while the moderating variable is organizational culture. The current study fills an important void in the literature because few studies have integrated all these relationships within the public healthcare sector in a Middle East context. A cross-sectional quantitative study was performed using stratified random sampling over 154 departmental units within the Ministry of Health. A structured questionnaire was used to gather data from 379 healthcare professionals, which were then analyzed by applying Structural Equation Modeling (SmartPLS 4). The results show that transformative leadership ($\beta = 0.238$; $p = 0.043$) as well as transactional leadership are significant to the success of talent management. Leadership styles also positively affect employee engagement ($\beta = 0.66$; $p = 0.001$), and employee engagement in turn has a positive influence on the effectiveness of talent management ($\beta = 0.309$; $p = 0.001$). Organizational culture is shown to have a moderating effect ($\beta = 0.102$; $p = 0.012$), which strengthens the relationship between leadership and talent management. The findings underscore the need for culturally appropriate leadership development and engagement strategies in public healthcare systems. Based on the findings, policy-makers in the Ministry of Health might consider investing in leadership competency building and develop supportive organizational cultures as strategic approaches to strengthen talent management and organizational performance.

Keywords: leadership styles; talent management effectiveness; employee; organizational culture



Received: 23 May 2026

Revised: 15 June 2026

Accepted: 2 July 2026

Published: 22 July 2026

Copyright: © 2026 by the authors.

Licensee MDPI, Basel, Switzerland.

This article is an open access article distributed under the terms and conditions of the [Creative Commons Attribution \(CC BY\)](https://creativecommons.org/licenses/by/4.0/) license.

1. Introduction

This is a constant problem in Jordan's health sector, including the MOH, which involves insufficient staffing, high employee turnover and disaffection among staff members. As the country's largest single provider of health services, its structure still accounts for around a third of the nation's health workforce [1], and the MOH is suffering considerable difficulties in talent management, recruitment, development and retention strategies. Rapid population growth, significant refugee migration, and rising service needs all impose significant strain on healthcare personnel [1] and add to these challenges. Recent research

indicates that there are continued issues with retention and morale, with MOH nurses and midwives reporting moderate job satisfaction and work engagement [2].

The problem of human resource becomes more prominent when talking about the issue of inefficient talent management in the MOH in the context of the workforce conundrum. Talent management includes the entire set of processes that an organization uses to attract, develop, retain and maximize the use of human resources to meet strategic goals [3]. Within the healthcare sector, particularly in public health institutions, effective talent management is crucial for maintaining continuity of care, mitigating burnout, and improving organizational resilience. The empirical evidence suggests that leadership styles in hospitals in Jordan may negatively impact talent management as nurse managers tend to use transactional and passive leadership styles [4]. Empirical studies have revealed positive relationships between transformational and authentic leadership with employee engagement and job satisfaction and negative relationships between these same leadership styles and turnover intentions, and that job satisfaction mediates between these leadership styles and employee engagement [5]. In spite of all these evidences, transformational leadership practice is still not used to its full potential in Jordanian public healthcare institutions, and formal leadership development programs are still limited in their extent and implementation [6].

The process of employee engagement has emerged as a key intervening variable between leadership and organizational results. Vigor, dedication and absorption in work [7] will be higher if the employees feel their leaders are supporting and inspiring them. In Jordanian healthcare, however, engagement levels are still at a moderate level, which may be attributed to the lack of empowerment and limited recognition of staff performance contributions [8].

Moreover, organizational culture has an important moderating influence on the influence of leadership on employee behavior and performance. A positive and supportive culture with a focus on teamwork, recognition, and shared values can facilitate the effectiveness of transformational leadership, while a rigid hierarchical structure can impede it [9,10]. Research in hospitals in Jordan has shown that an unhealthy organizational culture has a negative impact on service delivery, staff retention, and well-being of the employees [8,11]. Furthermore, the organization culture of the Ministry of Health has been described as bureaucratic and very centralized, which may affect leaders' capacity to be motivational and engage employees effectively [12].

Even though the interrelationship between leadership, engagement and talent management has been recognized, there is still a lack of empirical studies investigating the three variables together in the unique field of the Jordanian MOH and its public healthcare system among developing economies. Most of the studies to date have focused on one or two of these constructs individually or in pairs, as well as on mechanisms that might explain the complex relations between these constructs and the context-dependent effects that may occur. Further, research has mainly seen 'leadership style' as a single, whole entity, without investigating the distinct nature of its effects on any given leadership dimension, such as the different mechanisms by which transactional and transformational leadership influences practices of talent management and employee engagement. This theoretical dimension would be especially relevant in the healthcare environment of the Middle East and developing countries where organizational and cultural aspects could be significantly different from those in developed countries in the West.

2. Literature Review

Leadership styles that have an emphasis on transformational and transactional leadership focus on how organizations recognize, develop and retain their high-potential em-

employees [13]. Support provided by effective leadership with strategic vision and resources can be sustained to implement talent management practices in a sustainable manner [14]. Transformational leadership has a positive impact on creativity and intrinsic motivation, which increases the outcome of talent retention and development [15]. Whereas transactional methods are focused on short-term business engagements, which can disrupt the realization of distinctive human capital. Transformational leadership has been seen to have a positive impact on staff turnover, meaning that if it is well applied, it results in higher staff retention rates and institutions are able to keep their best resources [16]. Employees' alignment with organizational performance goals increases leadership competencies, which affects employee performance outcomes [16].

Based on the above, the following hypotheses can be drawn:

H1. *TL positively influences the effectiveness of talent management.*

H1a. *There is a positive relationship between transactional leadership and effectiveness of talent management.*

H2. *Leadership styles (transformational and transactional) positively impact employee engagement.*

The positive relation between employee engagement and talent management effectiveness is highlighted.

Employee engagement is when staff are motivated, engaged, and contributing to their organization's success [17]. Talent management is the process of attracting, developing and retaining high-potential employees [3]. Employee attachment is strengthened through organizational support, and employee engagement is shaped by talent management practices and organizational culture [10]. This suggests that there is a positive relationship between employee engagement and talent management [18]. According to Achmada & Soetjipto [19], talent management indirectly affects employee performance through employee retention. Pandita and Ray [20] also argue that alignment of talent management with employee engagement yields better retention outcomes.

H3. *Employee engagement positively impacts Talent Management Effectiveness.*

Employee engagement is a critical component of the leadership/talent management effectiveness relationship [21]. Engagement is supported by visionary leaders through the use of suitable rewards and motivational measures, leading to the reduction in turnover rate and growth in commitment [22]. Additionally, organizational culture serves as a moderating agent in the transformational leadership and creative performance link [23]. Furthermore, there is a significant impact among organizational culture and interaction between talent management and innovation [24]. Learning-oriented cultures enhance responsiveness to leadership styles and employee development [25]. However, rigid organizational cultures can undermine the effectiveness of leader and talent management practices.

Abdullahi et al. [26] discovered that talent management practices like succession planning, promotion and performance appraisal had a significant effect on employee performance, which is mediated by employee engagement. Ali et al. [27] explained that there is a strong relationship between leadership and talent development, and that the effect of transactional leadership on talent engagement is direct and indirect through talent development.

The above suggests the following hypotheses:

H4. *Organizational Culture moderates the relationship between Leadership Styles and Talent Management Effectiveness.*

H5. *Leadership Style significantly influences Employee Engagement which in turn significantly influences Talent Management Effectiveness.*

This study aims to discuss the effect of leadership and types of leadership on the effectiveness of talent management practices in the Jordanian Ministry of Health. The results reveal that leadership impacts not only directly but also indirectly via employee engagement as an important mediator during talent management.

3. Methodology

In line with this approach, this study was designed using a quantitative approach. A structured questionnaire was created for the systematic and standardized collection of data from the study sample. The direct and indirect relationships between variables will be tested by appropriate statistical methods, which will make them more reliable and will increase the possibility of verifying and reusing the results in the future. The positivist philosophy adopted in this study results in a high level of objectivity and scientificity, and provides quantitative measurable and verifiable evidence as a basis for the results. This increases its validity in comprehending the nature of leadership styles and talent management in an organizational environment that is impacted by organizational culture and employee engagement.

3.1. Data Collection

The main empirical data that was gathered in this research was obtained through the use of a well-designed structured questionnaire which was designed in such a manner that it would operationalize the research objectives. There were discrete portions of the tool that captured the sociodemographics of the participants, the current leadership styles, the practices of talent management in the organization, the functioning of the employee engagement as a mediating construct, and the functioning of the organizational culture as a moderating construct. The survey was sent online to the staff and top executives of various departmental units in the Jordanian Ministry of Health, thus a representative cross-sectional sample was ensured. Responses received via the participants were the main data processed in the form of analytical techniques. Data analyses were also conducted using the complex software package of Structural Equation Modeling (SEM) called SmartPLS 4 to provide an analysis of the interrelations between the variables of study. This methodological approach enabled direct, indirect, and moderating mechanisms to be assessed, which originate from the leadership styles and effectiveness of the talent management processes explicitly considering the mediating role of the employee engagement and moderating role of organizational culture.

3.2. Study Instrument

This study adopted the use of a structured questionnaire because it was appropriate to the nature of the research objectives due to its ability in measuring the relationship between the variables. The questionnaire was structured into two major axes, with clearly documented sources of measurements:

Demographic Data (8 items): Gender, age, years of experience, job title, workplace, educational level, marital status.

Main Study Axes (79 items total):

- Leadership Styles (20 items): Adapted from the Multifactor Leadership Questionnaire (MLQ-5X) that measures transformational dimensions (idealized influence, inspirational motivation, intellectual stimulation, individualized consideration) and transactional dimensions (contingent reward, management-by-exception). The reliability in the present study is satisfactory for the MLQ-5X ($\alpha = 0.84\text{--}0.91$), which is internationally applied.
- Talent Management Effectiveness (18 items): Adapted from Abdullahi et al. [26] and Ekhsan et al. [18], which have been proven to be reliable in organizations ($\alpha = 0.82\text{--}0.89$).
- From the Utrecht Work Engagement Scale (UWES-17), which is composed of three dimensions—vigor, dedication and absorption; Employee Engagement (15 items). The UWES is extensively validated in 20+ countries and health fields ($\alpha = 0.85\text{--}0.93$).
- Organizational Culture (16 items) adapted from the Organizational Culture Profile (OCP), which measures innovation, teamwork, development and collaboration ($\alpha = 0.79\text{--}0.86$).

All the items used a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The full questionnaire was then professionally forward- and backward-translated by bilingual experts to guarantee that there is semantic equivalence and cultural appropriateness within the Jordanian healthcare context. Furthermore, a pilot study involving 45 healthcare professionals was carried out to determine the clarity, readability and cultural appropriateness of the scale, and four items were altered to increase the readability of the items.

Demographic Data: Gender, Age, Years of Experience, Job Title, Workplace, Level of Education, Marital Status. These questions aim to describe the characteristics of the sample and analyze variables according to their personal and professional characteristics.

Main Study Axes: These items were aimed at measuring four main variables, which were leadership styles, effectiveness of talent management, employee engagement, and organizational culture. The items were adapted from previous reliable studies based on the five-point Likert scale (1 = strongly disagree, 5 = strongly agree), which ensures the accuracy of the measurement, and it can be analyzed statistically. The participants' agreement or disagreement was measured on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree), with the intermediate points indicating varying levels of agreement. The length was determined as 1.3 as per the equation $(5-1/3)$. Average scores were determined to be at low, medium and high levels, following this calculation: low level: 1.00–2.33; medium level: 2.34–3.67; high level: 3.68–5.00.

3.3. Study Population and Sample

The study population comprised all 3847 permanent and contract staff and leaders in 154 departmental units in the Jordanian Ministry of Health. Stratified random sampling was used to ensure representation across the following: (1) professional categories (clinical staff—nurses, physicians, and allied health professionals; administrative staff; senior management), (2) organizational levels (frontline staff, supervisors, middle managers, senior leaders), and (3) institution types (teaching hospitals, secondary hospitals, primary health centers). The participants were randomly selected by systematic random sampling from Ministry HR rosters, using calculated sampling intervals within each stratum. Employees of at least 6 months tenure were included in the sampling frame. Based on power analysis ($\alpha = 0.05$, power = 0.80) for SEM analyses, a sample of 400 was estimated to detect medium effect size. The questionnaires were sent out on the internet and had a 2-week deadline for completion, with reminders set up to go automatically. The non-response bias was evaluated by comparing the early responses with the late responses, by means of *t*-test

($p > 0.05$). The final analytical sample comprised 379 respondents (94.75% response rate), which was sufficient for the proposed analyses and exceeded the recommended number.

4. Result

Descriptive Analysis of the Demographic Data

Table 1 presents the demographic details of the study sample ($N = 379$) of the Jordanian Ministry of Health. There were 201 men (53) and 178 women (47). The majority of the participants were between 35 and 45 years (136, 35.9), and the next group were between 25 and 35 years (112, 29.6%). The number of employees with over 10 years of experience was the highest (121, 31.9%). The highest occupational group was nurses (147, 38.8%), followed by administrative employees (102, 26.9%) and doctors (94, 24.8%). Most respondents were mostly employed in hospitals (213, 56.2%). The majority had a bachelor's degree (207, 54.6), and most of them were married (246, 64.9%).

Table 1. Demographic characteristics of the study sample ($N = 379$).

		Frequency	Percentage
Gender	Male	201	53
	Female	178	47
Age Group	25–35 years	112	29.6
	35–45 years	136	35.9
	45–55 years	94	24.8
	55+ years	37	9.7
Years of Experience	Less than 3 years	61	16.1
	3–5 years	88	23.2
	6–9 years	109	28.8
	More than 10 years	121	31.9
Job Title	Doctor	94	24.8
	Nurse	147	38.8
	Administrative Employee	102	26.9
	Others	36	9.5
Place of Work	Hospital	213	56.2
	Clinic	61	16.1
	Health Directorates	73	19.3
	Ministry of Health	32	8.4
Level of Education	Diploma	69	18.2
	Bachelor	207	54.6
	Master	78	20.6
	Doctorate	25	6.6
Marital Status	Married	246	64.9
	Widowed	21	5.5
	Divorced	34	9
	Single	78	20.6
	Total	379	100

Descriptive Analysis of the Study variable

Table 2 shows mean value, standard deviation and relative importance of the variables being examined. The leadership styles recorded the greatest mean score ($M = 3.94$, $SD = 0.62$), which means that the leadership behaviors were of moderate prevalence in the respondent. It was followed by employee engagement of 3.79 ($SD = 0.64$), which referred again to a moderate level of engagement. Talent management produced a mean of 3.62 ($SD = 0.56$), which means that there is moderate adoption of talent-management practices, but the organizational culture had the least mean ($M = 3.55$, $SD = 0.66$), again indicating a moderate position. When combined, there seems to have been a moderate level of perception of all variables by the participants of the study.

Table 2. The mean, standard deviation, order and importance of organizational culture.

Items	Mean	SD	Importance
Leadership styles	3.94	0.62	medium
Talent Management	3.62	0.56	medium
Organizational Culture	3.55	0.66	medium
Employee Engagement	3.79	0.64	medium

Internal Consistency for Reliability

The internal consistency reliability is evaluated by the coefficients, which reflect the extent to which the items of a scale reflect a concept [28]. Cronbach's alpha and composite reliability are the most common reliability studies. Cronbach's alpha was not used in this study because of the concern as to how to ensure a high internal consistency of the modified scales by using composite reliability. This is consistent with the notion of Götz et al. [29], suggesting that it offers a better measure of reliability. The effects of each item on a composite score are not ignored as is the case with Cronbach's alpha, which assumes equal contribution of all items to a construct. The acceptable value of composite reliability ranges from 0.60 to 0.90 [30]. Generally, a Cronbach's alpha of at least 0.7 is considered acceptable [31].

Hair et al. [32] defines convergent validity as being the correlation of the indicators of a latent construct that are able to measure the intended construct. In general, it is measured by average variance extracted (AVE) that measures the average variance explained by indicators of a construct. If the AVE is >0.5 , it is often necessary to confirm convergent validity [33].

As can be seen in Table 3, all of the constructs had AVE values greater than 0.5, so this study meets the convergent validity criterion. The internal consistency of the constructs of the study is satisfactory, with composite reliability coefficients all above the accepted limit of 0.70 as shown in Table 3 and Figure 1.

As indicated by Hair et al. [32], the assessment of internal consistency reliability is conducted using the composite reliability coefficient, which should meet a minimum threshold of 0.70. The values presented in Table 3 demonstrate that the composite reliability coefficients for the constructs in this study are satisfactory, as all of them exceed the acceptable level of 0.70.

Table 3. Assessment of the measurement model.

Construct	Outer Loadings	Cronbach's Alpha > 0.7	Composite Reliability > 0.6	Average Variance Extracted (AVE) > 0.5
Organizational Culture		0.824	0.936	0.597
Culture1	0.74			
Culture2	0.765			
Culture3	0.774			
Culture4	0.836			
Culture5	0.857			
Culture6	0.818			
Culture7	0.839			
Employee Engagement		0.837	0.947	0.641
Engagement1	0.783			
Engagement10	0.777			
Engagement2	0.728			
Engagement3	0.789			
Engagement4	0.804			
Engagement5	0.852			
Engagement6	0.821			
Engagement7	0.843			
Engagement8	0.778			
Engagement9	0.821			
Leadership styles		0.809	0.928	0.649
Leadership1	0.675			
Leadership10	0.76			
Leadership2	0.8			
Leadership3	0.659			
Leadership4	0.813			
Leadership5	0.766			
Leadership6	0.851			
Leadership7	0.836			
Leadership8	0.799			
Talent Management		0.87	0.901	0.572
Talent1	0.801			
Talent2	0.881			
Talent3	0.814			
Talent4	0.768			
Talent5	0.783			
Talent6	0.77			
Talent7	0.71			

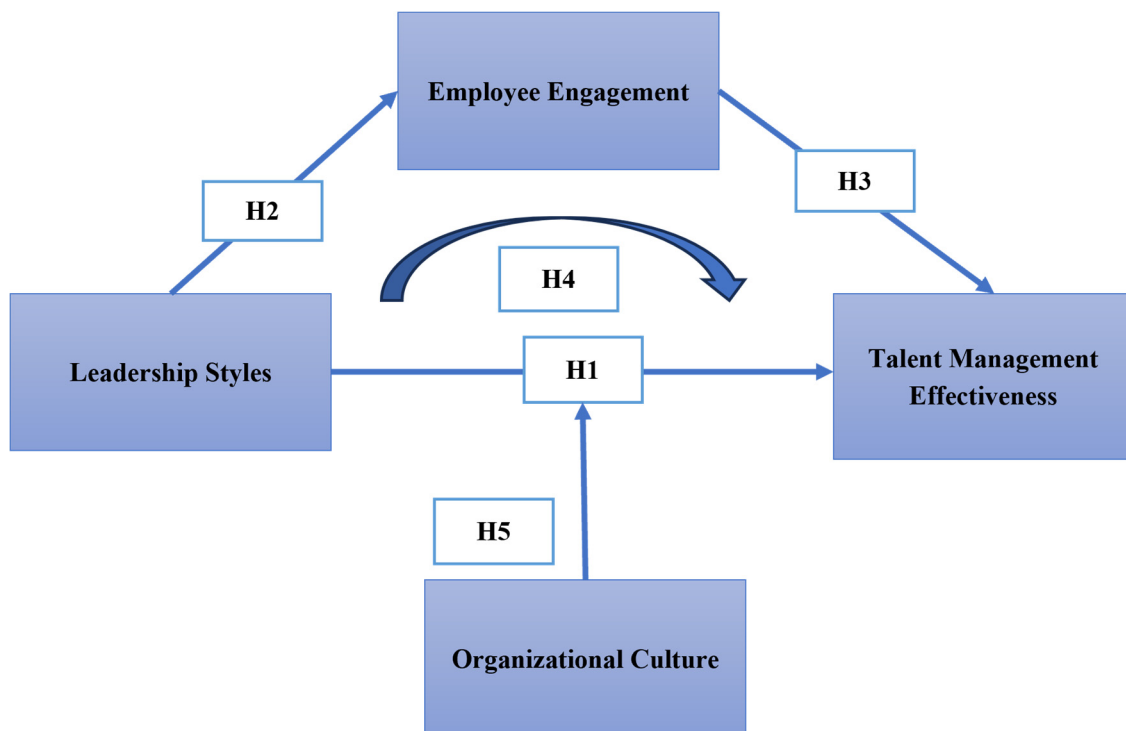


Figure 1. Research model.

Variable Correlation Using the Fornell–Larcker Criterion

Table 4 represents the results of variables correlation using Fornell–Larcker approach to assess the discriminant validity of the measurement model.

Table 4. Variable correlation-root square of AVE.

	Culture	Engagement	Leadership Style	Talent
Culture	0.805			
Engagement	0.596	0.801		
Leadership Style	0.845	0.66	0.773	
Talent	0.784	0.708	0.769	0.757

Fornell and Bookstein [34] stated that discriminant validity is determined by using the correlation method, in which it exists if the square root of the average variance extracted (AVE) for a variable is greater than the correlation coefficients between that variable and any other variable. This means that the value should be higher than the off-diagonal elements in the correlation matrix. In this study, this criterion was confirmed by the correlation matrix, thus indicating the discriminant validity of the measurements used.

Hypotheses Testing (Path Coefficient)

This section discussed the findings of the path coefficient used to test research hypotheses. The finding of direct effect hypotheses (H_1 , H_2 , H_3 , H_4 , and H_5), presented in Table 5.

According to the results in Table 5 and as illustrated in Figure 2, the empirical support of all hypotheses was obtained in the direct and indirect direction. Leadership style had significant positive direct effects on talent management effectiveness (H_1 : $\beta = 0.238$; $t = 2.31$; $p = 0.043$) and employee engagement (H_2 : $\beta = 0.66$; $t = 9.323$; $p = 0.001$). The leadership contribution to variance in employee engagement is quite large, where around

43.5% of that variance is due to leadership. This resulted in a positive effect of employee engagement on talent management effectiveness (H3: $\beta = 0.309$; $t = 3.429$; $p = 0.001$). Both direct effects were significant for organizational culture: the direct effect on talent management ($\beta = 0.405$; $t = 3.142$; $p = 0.002$) was the strongest, and the direct effect on the leadership→talent management relationship was significant (H4: $\beta = 0.102$; $t = 2.509$; $p = 0.012$). The relationship between leadership and talent management was mediated by employee engagement, with the indirect effect explaining 46.2% of the total effect of leadership on talent management ($\beta = 0.204$; $t = 3.353$, $p = 0.001$). The overall effects of leadership style on talent management were significant ($\beta = 0.442$; $t = 3.481$; $p = 0.001$). The results confirm the impact of leadership on talent management, both directly via organizational pathways and indirectly via psychological engagement mechanisms, and show the effect of organizational culture to be significant amplifying factors.

Table 5. Structural model assessment.

Hypo.	Direct Effect	β	Mean	SD	T Statistics	p Values *
Direct effect						
H1	Leadership Style -> Talent	0.238	0.239	0.103	2.31	0.043
H2	Leadership Style -> Engagement	0.66	0.664	0.071	9.323	0.00
H3	Engagement -> Talent	0.309	0.305	0.09	3.429	0.001
H4	Culture x Leadership Style -> Talent	0.102	0.097	0.041	2.509	0.012
	Culture -> Talent	0.405	0.408	0.129	3.142	0.002
Indirect Effect						
H5	Leadership Style -> Engagement -> Talent	0.204	0.201	0.061	3.353	0.001
Total Effect						
	Leadership Style -> Talent	0.442	0.441	0.127	3.481	0.001

* Sig. at ($\alpha \leq 0.05$).

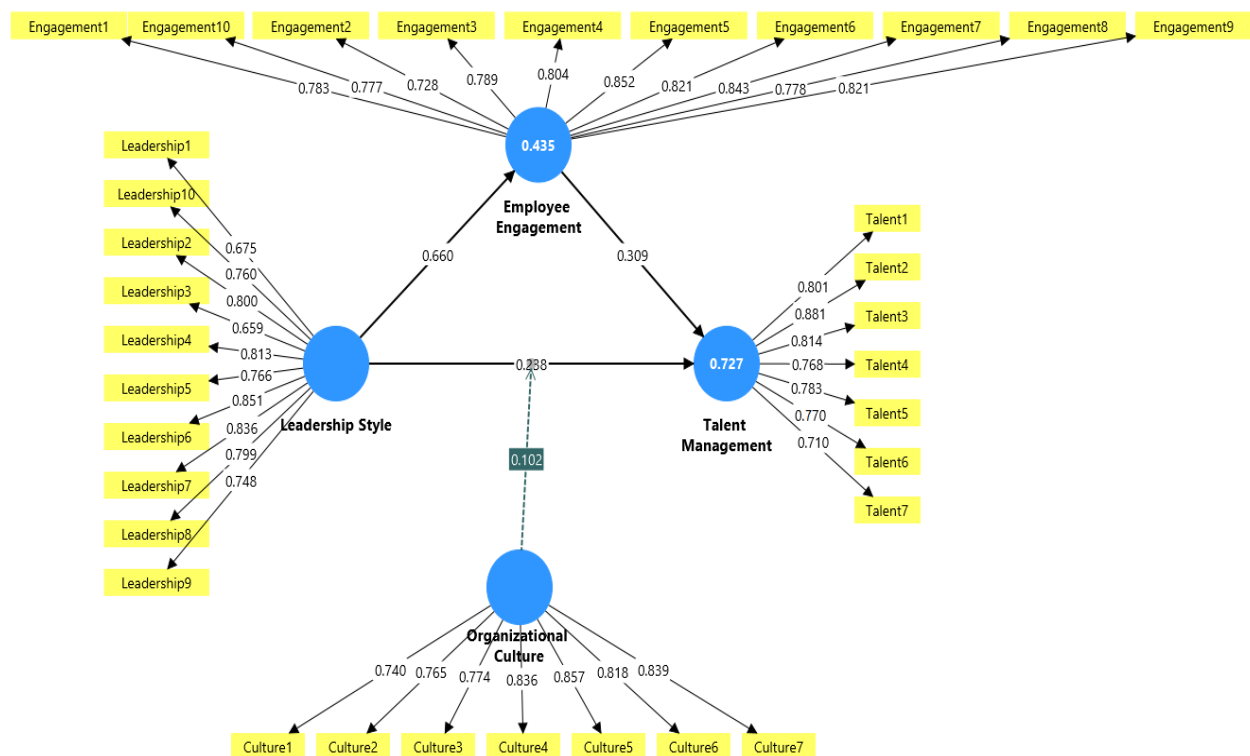


Figure 2. A structural model explaining the main correlations between the research variables.

Coefficient of Determination (R-square) Value

Calculating effect size (R-square) is performed when the changes between two variables in the correlation exist. In this study, a smart-PLS algorithm function is used to obtain the values R-square as indicated in Table 6.

Table 6. R-square of the endogenous latent variables.

	R-Square	R-Square Adjusted
Engagement	0.435	0.429
Talent	0.727	0.715

In Table 6, the coefficient of determination (R^2) was performed to determine the size of the effect and the share of variables in the endogenous variables that the predictors explain. The results of the smart-PLS algorithm revealed that the R^2 of employee engagement was 0.435 (adjusted $R^2 = 0.429$) which indicates that 0.435 or 43.5 percent of the variance in employee engagement was accounted by the leadership style. On the same lines, R^2 value of 0.727 (adjusted $R^2 = 0.715$) was discovered to have talent management, meaning that about 72.7 percent of the variations in talent management could be explained by leadership style, employee engagement and organizational culture as presented in Figure 2. The values of these parameters show that there is a significant explanatory power of the structural model of the relationships analyzed.

5. Discussion

The empirical data presented in Table 5 shows that leadership style and talent management are significantly and positively correlated (H1). This result aligns with the previous studies of Khan [13] and Abdullahi et al. [26], which found that leadership practices significantly affect the organizational ability to recruit, develop and retain high-potential employees. Within the Jordanian MOH context, however, the moderate effect size ($\beta = 0.238$) is worth a discussion. The MOH is governed centrally, has a limited budget, and has a uniform set of human resource policies, which limits the discretion of leaders. However, the magnitude of the direct effect suggests that leadership behaviors, supportiveness and focus on development have meaningful effects on the perceived and experienced levels of talent management practices, even in this context. The implication for public sector interventions in leadership development is that the interventions should be related to behaviours that can take place within current constraints.

The direct effect of leadership style on employee engagement is quite strong ($\beta = 0.66$; $p < 0.001$). This effect is explained by social exchange theory and self-determination theory, which sheds light on the psychological mechanisms that explain the impact of leadership on organizational outcomes. Transformational leaders who provide vision, individual consideration and intellectual stimulation address employees' psychological needs for autonomy, competence and relatedness, which improves intrinsic motivation and engagement. In Jordan's healthcare environment, where clinical employees often experience a sense of undervalued and disempowered situations, leaders who focus on meaningful work, recognition and development opportunities can make a significant difference to boosting engagement even when there are structural limitations. In contexts where external recognition and voice is limited, the engagement effect is strong ($\beta = 0.66$), highlighting the importance of engagement mechanisms in such settings.

The results indicated a significant positive relationship between engagement and perception of talent management ($\beta = 0.309$; $p < 0.001$), which reflects that those who are engaged perceive that they are being better managed in the organization. This is a two-way

street: engaged workers are involved in development, are available to mentor others, and are dedicated to staying. In the MOH context, where the nursing staff turnover is relatively high (12–15% annually), engagement becomes one of the significant leverage points that can increase the effectiveness of the nursing staff management process.

The direct effect of organizational culture was the highest ($\beta = 0.405$; $p = 0.002$), which is better than direct effect of leadership. The discovery implies that organizational culture, including shared values, norms, recognition systems and collaborative structures, are just as if not more important than individual leadership behaviors. Institutional theory approaches argue that organizational culture is an informal institution that creates “norms and behavior” that influence the implementation of formal talent management policies. The authors argue that restrictive cultural norms can even hinder the efforts of good leaders in the context of MOH, which is described as being bureaucratic, hierarchical, and risk-avoidant. The culture moderation effect ($\beta = 0.102$; $p = 0.012$) suggests that the effectiveness of leadership depends on the context of the culture. Transformational leadership is perceived as legitimate in cultures that emphasize participation and openness and boosts effectiveness. In other cultures, however, with a hierarchical structure and a greater focus on compliance, similar behaviors may have a negative impact.

The analysis found that about 46% of the overall impact of leadership happened through employee engagement (mediation: $\beta = 0.204$), while 54% happened through direct pathways, indicating dual mechanisms of leadership influence. In this mediation, the psychological engagement states and the behavioral manifestations of an organization’s impact on leadership are highlighted. Engagement should be made explicit in leadership development and leadership assessment should include measures of engagement.

These findings, when placed in the context of the integration of the contingency theory, institutional theory, and organizational complexity theory, prove that the effectiveness of talent management is not just from one variable, but from a combination of integrated and mutually reinforcing organizational systems. Leadership, engagement and culture are interwoven mechanisms that have outcomes. Talent management has to be supported by the simultaneous development of the three systems and not by piecemeal approaches. Last but not least, the results show that good leadership plays a crucial role in achieving talent management effectiveness, thus highlighting the need to examine leadership as an integral part of leadership improvement in organizations. The findings highlight the importance of creating a positive and conducive work atmosphere with a supportive and interactive management style, which promotes employees’ commitment. The evidence shows that employee engagement contributes positively to the effectiveness of talent management (H3), in line with the previous research conducted by Achmada & Soetjipto [19], which emphasized the importance of employee engagement as one of the factors that affect the performance and employees’ retention. Employees and talent management strategies have a reciprocal influence on each other, with one reinforcing the other.

It has also been found that the organizational culture plays a moderating role between leadership style and the effectiveness of managing talents (H4). These results are aligned with Mahajan [24], who highlighted the need for shared values and systems to improve the effectiveness of leadership and talent management strategies. One that promotes a learning-oriented organizational culture fosters employees’ initiative and responsibility, while rigid cultures may inhibit positive behaviors.

The results also show that leadership style affects talent management, although employee engagement (H5) acts as an intermediary process. This is also corroborated by Pandita & Ray [20], who emphasized the need to integrate talent management initiatives with employee engagement initiatives to enhance talent retention outcomes. The correla-

tion implies that organizational culture and employee engagement serve as crucial support mechanisms, improving the effectiveness of organizational leadership.

These results indicate that leadership style is not a standalone element of talent management, but an element of a wider talent management system that includes employee engagement and organizational culture [3,6] when viewed in the context of what has been previously published. These interrelationships underscore the need for additional research to gain a better understanding of how the behaviors of a leader function in other organizational settings.

Last but not least, the results show that good leadership makes a significant contribution to the successful implementation of talent management strategies, highlighting the need to investigate leadership behaviors as one of the key factors in improving organizational performance [6,26].

6. Conclusions

The findings from this research showed that the leadership style, employee engagement and organizational culture are interdependent and mutually reinforcing, and that they contribute to the effectiveness of talent management in the Jordanian Ministry of Health. It is found from the empirical results that leadership styles (transformational and transactional) have a significant influence on the effectiveness of talent management directly ($\beta = 0.238$), and indirectly through the variable of employee engagement ($\beta = 0.204$), which amounts to 46% of the total influence of leadership on the effectiveness of talent management. Leadership investments have a cascading psychological and behavioral impact that is significantly related to employee engagement ($\beta = 0.66$). Organizational culture has a significantly strong direct influence on talent management ($\beta = 0.405$), which is more than all other direct influences while also moderating leadership effectiveness ($\beta = 0.102$). Together these three variables explain 72.7% of the variance in the effectiveness of talent management within an organization in the healthcare field and thus have a strong explanatory power in the determination of the level of performance of an organization in the healthcare sector.

Practical implications for MOH leadership and Human Resource Development:

Transformational Leadership Development (High Priority): Formal leadership development programs should focus on transformational aspects such as individualized consideration, inspirational motivation, and intellectual stimulation. Specific skills that will support employee engagement through the practice of listening and engaging with employees, recognizing employee accomplishments, coaching employees in career development, and communicating the career pathway to employees should be taught as part of the program. Lecture formats should be supplemented with behavior change methods (coaching, peer learning, on-the-job practice).

Organizational Culture Change Initiative (Priority: Highest): Culture has a strong direct impact on talent management ($\beta = 0.405$), which means that culture change should also be given the same or a higher priority than leadership change. A diagnostic culture assessment must be undertaken, with subsequent actions to: (a) create a culture of psychological safety for reporting of errors; (b) develop a culture of open and honest communication with regular leadership visibility; (c) develop a culture of recognition and celebration of contributions; (d) foster a culture of interprofessional working through cross-functional teams; (e) foster a learning culture through protected training time.

Comprehensive employee engagement programs:

1. Employee Engagement and Well-Being Programs (Priority: High): Implement comprehensive engagement programs such as: (a) bi-annual employee engagement surveys with transparency and sharing of results; (b) burnout prevention programs in response to

the high prevalence of clinical burnout (45%+); (c) career development and advancement opportunities; (d) work–life balance initiatives; (e) mentoring and peer support programs; (f) clinical supervision for high stress specialties.

2. Talent Management Practice Improvement (Priority: High): Clearly define talent management practices to support leadership and culture efforts by: (a) developmental performance appraisal focused on coaching; (b) succession planning with career visibility; (c) transparent and merit-based compensation and advancement; (d) training based on leadership priorities and individual development plans.

3. Governance and Policy Reform (Priority: Medium-term): Mitigate the constraints of policy on leadership flexibility by: (a) reviewing and reforming policies that constrain leadership; (b) decentralize appropriate decision-making authority to departmental levels; (c) establish interprofessional governance to facilitate staff voice; (d) design learning systems and performance dashboards to support evidence-based management. Additionally, regular employee engagement surveys should be conducted to help to clarify the influence of employee engagement on talent management. The data that has been acquired needs to be used to build specific metrics that can be used to supplement the interaction of employees. There also needs to be consensus on policy from leadership and the human resources section of the Ministry to enhance the effectiveness of programs and initiatives implemented.

Finally, the scope of the study could be expanded to other fields within the Ministry of Health or other government agencies to broaden the findings on the link between leadership and talent management in a cross-section of professions. Implementation of these recommendations could have a significant improvement impact on the overall performance of the unit in the Jordanian Ministry of Health and encourage a culture of excellence and innovation in the working environment.

Author Contributions: Conceptualization, E.S.A.A. and A.A.M.; methodology, E.S.A.A.; software, E.S.A.A.; validation, E.S.A.A. and A.A.M.; formal analysis, E.S.A.A.; investigation, E.S.A.A.; resources, E.S.A.A.; data curation, E.S.A.A.; writing—original draft preparation, E.S.A.A.; writing—review and editing, A.A.M.; visualization, E.S.A.A.; supervision, A.A.M.; project administration, A.A.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding. The APC was not funded by any institution or sponsor.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Social Sciences Ethics Committee of Girne American University (protocol code: 2024-25/050 and date of approval: 7 July 2025).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on reasonable request from the corresponding author. No publicly archived datasets were used or generated during this study due to privacy and research ethics considerations.

Acknowledgments: The authors would like to acknowledge the academic support provided by Girne American University. During the preparation of this manuscript, no AI tools were used for data generation or analysis beyond language refinement and editing assistance. The authors take full responsibility for the content of this publication.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. World Health Organization (WHO). Jordan: Health System Review 2022. Available online: <https://apps.who.int/iris/handle/10665/364422> (accessed on 23 May 2026).
2. AbuAlRub, R.F.; El-Jardali, F.; Jamal, D.; Al-Rub, N.A. Exploring the relationships between work environment, job satisfaction, and intent to stay among Jordanian nurses. *J. Nurs. Manag.* **2016**, *28*, 324–332. [CrossRef] [PubMed]
3. Collings, D.G.; Mellahi, K.; Cascio, W.F. Global talent management and performance in multinational enterprises: A multilevel perspective. *J. Manag.* **2019**, *45*, 540–566. [CrossRef]
4. Al-Rjoub, S.; Alsharawneh, A.; Alhawajreh, M.J.; Othman, E.H. Exploring the impact of transformational and transactional style of leadership on nursing care performance and patient outcomes. *J. Healthc. Leadersh.* **2024**, *16*, 557–568. [CrossRef] [PubMed]
5. Svetic Ciscic, R.; Ghadirian, F.; Atashzadeh-Shoorideh, F.; Miethlich, B.; Gacina, S. Insights into the role of emotional intelligence in nursing leadership. *Cent. Eur. J. Nurs. Midwifery* **2025**, *16*, 2127–2144. [CrossRef]
6. Al-Kasasbeh, O. Exploring the Nexus between Leadership Styles, Employee Engagement, and Organizational Performance a Multidimensional Review. *Hist. J. Hist. Soc. Sci.* **2024**, *3*, 154–168. [CrossRef]
7. Schaufeli, W.B.; Salanova, M.; González-Romá, V.; Bakker, A.B. The measurement of engagement and burnout: A confirmatory factor analytic approach. *J. Happiness Stud.* **2002**, *3*, 71–92. [CrossRef]
8. Sulaiman, A.M.; Alfuqaha, O.A.; Shaath, T.A.; Alkurdi, R.I.; Almomani, R.B. Relationships between core self-evaluation, leader empowering behavior, and job security among Jordan University Hospital nurses. *PLoS ONE* **2021**, *16*, e0260064. [CrossRef] [PubMed]
9. Schein, E.H.; Schein, P.A. *Organizational Culture and Leadership*; Wiley: Hoboken, NJ, USA, 2017.
10. Zohar, D.; Hofmann, D.A. Organizational culture and climate. In *Oxford Handbook of Organizational Psychology*; Oxford University Press: Oxford, UK, 2012.
11. Rayan, A.; Al-Jaafreh, I.; Bageas, M.H.; Alhalaiqa, F.; Al-Ghabeesh, S.; Alyami, H. Influence of organizational culture on nursing perception of quality of healthcare services and intent to stay among nurses employed in public hospitals: A cross-sectional study. *Appl. Nurs. Res.* **2025**, *87*, 152042. [CrossRef] [PubMed]
12. United Nations Development Programme (UNDP). Jordan Human Development Report 2020. Available online: <https://www.undp.org/jordan/publications> (accessed on 23 May 2026).
13. Khan, M. Integrating leadership styles with high-performance work systems: Pathways to organizational excellence. *Organ. J. Econ. Manag. Financ.* **2024**, *3*, 31–44. [CrossRef]
14. Kafetzopoulos, D.; Gotzamani, K. The effect of talent management and leadership styles on firms' sustainable performance. *Eur. Bus. Rev.* **2022**, *34*, 837–857. [CrossRef]
15. Yamin, M. Examining the role of transformational leadership and entrepreneurial orientation on employee retention with moderating role of competitive advantage. *Manag. Sci. Lett.* **2020**, *10*, 313–326. [CrossRef]
16. Krishna, C.; Upadhyay, R.K.; Ansari, K.R.; Babu, V. Transformational leadership and employee retention. *Int. J. Learn. Intellect. Cap.* **2022**, *19*, 135–153. [CrossRef]
17. Alhammadi, E.M. The impact of talent management practices on employee performance: Leadership competencies as a mediator. *Int. J. Prof. Bus. Rev.* **2023**, *8*, 2. [CrossRef]
18. Ekhsan, M.; Parashakti, R.D.; Perkasa, D.H. The impact of talent management on employee performance mediated by employee engagement. *East Asian J. Multidiscip. Res.* **2023**, *2*, 1821–1834. [CrossRef]
19. Achmada, F.D.; Soetjipto, B.E. The effect of talent management on employee engagement and employee retention in improving employee performance. *Lit. Int. Sci. J. Soc. Educ. Humanit.* **2022**, *1*, 80–94. [CrossRef]
20. Pandita, D.; Ray, S. Talent management and employee engagement—a meta-analysis. *Ind. Commer. Train.* **2018**, *50*, 185–199. [CrossRef]
21. Sadeli, J. The influence of leadership, talent management, organizational culture and organizational support on employee engagement. *Int. Res. J. Bus. Stud.* **2012**, *5*, 30–50. [CrossRef]
22. Golden, J.H., III; Shriner, M. Examining relationships between transformational leadership and employee creative performance: The moderator effects of organizational culture. *J. Creat. Behav.* **2019**, *53*, 363–376.
23. Qureshi, M.H.; Imran, M. The moderating role of organizational Culture on the relationship between talent Management and creativity & innovativeness in the context of public-sector Universities KP, Pakistan. *City Univ. Res. J.* **2023**, *13*, 238–256. [CrossRef]
24. Mahajan, A. Relationship of talent management with organizational culture. *Indian J. Ind. Relat.* **2019**, *54*, 471–481.
25. Stanley, A.S. The Impact of Leadership Styles on Organizational Culture: A Study on How Different Leadership Styles Shape Collaboration, Innovation, and Employee Engagement. Ph.D. Thesis, Selinus University, London, UK, 2024.
26. Abdullahi, M.S.; Raman, K.; Solarin, S.A. Talent management practices on employee performance among academic staff of Malaysian private universities: Employee engagement as a mediator. *J. Appl. Res. High. Educ.* **2022**, *14*, 135–158.
27. Ali, M.; Ullah, M.S.; Haque, A. Effect of transactional and transformational leadership on talent engagement: Mediating role of talent development. *Glob. Bus. Organ. Excell.* **2023**, *42*, 120–137. [CrossRef]

28. Sun, L.; Aryee, S.; Law, K.S. High-performance human resource practices, citizenship behavior, and organizational performance: A relational perspective. *Acad. Manag. J.* **2007**, *50*, 558–577. [[CrossRef](#)]
29. Götz, O.; Liehr-Gobbers, K.; Krafft, M. Evaluation of structural equation models using the partial least squares (PLS) approach. In *Handbook of Partial Least Squares: Concepts, Methods and Applications*; Springer: Berlin/Heidelberg, Germany, 2009; pp. 691–711.
30. Hair, J.F., Jr.; Matthews, L.M.; Matthews, R.L.; Sarstedt, M. PLS-SEM or CB-SEM: Updated guidelines on which method to use. *Int. J. Multivar. Data Anal.* **2017**, *1*, 107–123. [[CrossRef](#)]
31. Sekaran, U.; Bougie, R. *Research Methods for Business: A Skill-Building Approach*; Wiley: Hoboken, NJ, USA, 2016.
32. Hair, J.F.; Ringle, C.M.; Sarstedt, M. PLS-SEM: Indeed a silver bullet. *J. Mark. Theory Pract.* **2011**, *19*, 139–152. [[CrossRef](#)]
33. Barclay, M.J.; Smith, C.W. The maturity structure of corporate debt. *J. Financ.* **1995**, *50*, 609–631. [[CrossRef](#)]
34. Fornell, C.; Bookstein, F.L. Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *J. Mark. Res.* **1982**, *19*, 440–452. [[CrossRef](#)]

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.