



## The Impact of Dimensions of Talent Management on Innovation: An Empirical Study of Pakistan's Pharmaceutical Companies.

Muhammad Aiyaz Sharif<sup>i</sup>, Dr. Muhammad Azam<sup>ii</sup>

i) *Faculty of Engineering and Management Sciences, ZUFESTM, Ziauddin University, Karachi, Pakistan*

ii) *Assistant Professor & Director Post Graduate Programs ZUFESTM, Ziauddin University, Karachi, Pakistan*

### ARTICLE INFO ABSTRACT

#### Keywords:

*Pharmaceutical Industry, innovation, competence training, identifying critical positions, development, reward management organizational support.*

#### Objective:

The increasing demand for organizations to maintain a competitive advantage in a dynamic global market has brought talent management (TM) and innovation to the forefront of strategic discussion. In the pharmaceutical sector, talent management practices are predominantly vigorous due to the industry's competitive nature and the requirement for sustainable competitive advantages. Additionally, in low- and middle-income countries like Pakistan, there might be unique challenges and opportunities for executing talent management practices meritoriously. This research study aims to deliver practical takeaways for all stakeholders of Pakistan's pharmaceutical industry, including policymakers, regulatory bodies, the human resources department, and the industry's leadership, to successfully address this persistent problem.

#### Method:

A quantitative Cross-sectional research design was performed. Participants for this study were pharmaceutical staff who were associated with the pharmaceutical sector within Pakistan. The data collection tool was a survey questionnaire, data was analyzed using PLS-SEM. We performed a regression analysis to analyze the data.

#### Results:

The results reveal a significant positive association between Talent Management dimensions and innovative work behavior. Moreover, the Employee Development dimension of Talent Management exhibited the highest predictive strength regarding organizational innovation.

#### Conclusion:

The findings confirm that a robust and strategic approach to overseeing talent, encompassing elements like performance evaluation, career development chances, and pay for performance systems, is a chief precursor to both incremental and radical innovation capabilities.

Corresponding Author: Dr. Muhammad Azam, Email: [m.azam@zu.edu.pk](mailto:m.azam@zu.edu.pk)

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## **1. Introduction**

Talent management (TM) plays a crucial role in fostering innovation within Pakistan's pharmaceutical companies. The premeditated enactment of talent management practices, such as classifying key positions, competency skills training, and remuneration management, significantly improves innovation by furnishing employees with the essential skills and motivation to breed and implement innovative ideas. This association is reinforced by empirical studies that spotted the progressive impact of talent management on the overall performance of the organization and innovation competencies.

Talent management practices, together with fascinating, evolving, and retaining good-quality employees, are vital for augmenting innovation within an organization. These bring into line employees' determinations with organizational goals, thus nurturing a culture of innovation (Chandra & Chatterjee, 2024). In the pharmaceutical sector, talent management practices are predominantly vigorous due to the industry's competitive nature and the requirement for sustainable competitive advantages (Abbasi et al., 2013).

Past literature suggest that talent management pointedly and positively touches innovation in the pharmaceutical sector. Training and development strategies, with monetary benefits and incentives like bonuses, are acclaimed to retain high-performing employees and encourage innovative thinking (Alzuod, 2024).

An innovative environment within organizations additionally improves the impact of talent management on innovation, as it heartens employees to share ideas and collaborate effectively (Waheed et al., 2024). Talent management practices not only lift innovative thinking but also expand whole organizational performance by snowballing employee commitment, skill improvement, and motivation (Chandra & Chatterjee, 2024).

Notwithstanding the acknowledged significance of Talent Management (TM) in promoting innovation, pharmaceutical enterprises in Pakistan exhibit a deficiency in empirical data regarding the extent to which particular dimensions of TM influence innovation results. This deficiency constrains the capacity of industry executives to formulate efficacious TM strategies that are essential for sustaining competitive advantage.

This research addressed the empirical gap in the literature by exploring the relationship between the key dimensions of TM and innovation, providing valuable insights for scholars and professionals seeking to enhance organizational effectiveness through a strategic focus on talent management.

## **2. Literature Review**

Talent Management (TM) and innovation are closely intertwined, with the former playing a critical role in fostering the latter. Effective TM strategies enable employees to develop the skills, knowledge, and abilities needed to implement innovative ideas successfully. This connection is particularly vital for organizations seeking a sustained competitive advantage in the marketplace. A talented workforce is considered a key source of innovation and a competitive tool for organizations.



### **2.1.1. Key Dimensions of Talent Management**

According to a framework by Jayaraman et al. (2018), TM can be understood through four key dimensions: identifying critical positions, competence training, career development, and reward management. The process begins with talent acquisition, career development, and reward management.

### **2.1.2. Talent Acquisition.**

Talent acquisition ensures that the right talent is matched with key vacancies to maximize organizational performance. Talent management practices, together with fascinating, evolving, and retaining good-quality employees, are vital for augmenting innovation within an organization. These bring into line employees' determinations with organizational goals, thus nurturing a culture of innovation (Chandra & Chatterjee, 2024). In the pharmaceutical sector, talent management practices are predominantly vigorous due to the industry's competitive nature and the requirement for sustainable competitive advantages (Abbasi et al., 2013).

### **2.1.3. Career development**

Career development is subsequent, determined by an employee's competency level and designed to build their capabilities through training and career growth opportunities. The final dimension, younger employees or generation Z are more susceptible towards innovative thinking. Further, the employees who have recently entered in the professional working may be more inclined towards searching for diverse professional career paths, continuously trying to pursue new challenges in their professional work, so they may become less part of an innovative culture. (Kamau et al., 2021).

Employees in lower and middle-level positions may not participate in the process of innovative thinking due to restricted career growth and advancement opportunities, lower levels of job satisfaction, and possibly lower compensation. These reasons can lead to feelings of stagnation in current jobs and a lack of recognition in the organization, decreasing the chances of employees seeking innovative thinking (Kartika & Purba, 2018).

Dunmade, (2023), highlighted that high employee creative thinking is not only associated with the immediate and tangible expenditures associated with the overall process, and post-hiring trainings and expertise development expenses, but employee turnover disrupts overall operations of the organization as a whole, high employee turnover drains organizational knowledge, and it can critically impact employee morale, employee productivity, and overall organizational output. The loss of a skilled workforce destroys the organizational creative skills, job expertise, and institutional knowledge, which ultimately slows down the process of innovation, pulls down the growth, and generates a negative cycle of creativity (A. N. Khan et al., 2021).

Tailored knowledge and skills enhancement strategies, like informal trainings of employees, are an effective tool for enhancing organizational stability; in that way, it significantly enhance innovation (Suman, 2024).



Furthermore, succession planning and mentorship practices implementation can meaningfully increase employee engagement towards innovation, predominantly in knowledge-intensive generations. Succession planning strategies have revealed a stronger influence compared to mentorship alone (Elugbaju et al., 2024).

#### **2.1.4. Reward management**

Reward management involves both intrinsic and extrinsic rewards. Intrinsic rewards include things like a sense of self-esteem and a supportive work environment, while extrinsic rewards encompass competitive salaries, bonuses, and social benefits.

Talent management practices not only lift innovative thinking but also expand whole organizational performance by snowballing employee commitment, skill improvement, and motivation (Chandra & Chatterjee, 2024).

The pharmaceutical sector in Pakistan aided from talent management by attaining strategic goals and preserving a competitive advantage through motivating employees via different means like monetary benefits (Abbasi et al., 2013).

Even though talent management is a dominant driver of innovative culture, it is indispensable to reflect the wider organizational climate and external elements that might affect its usefulness. For example, encouragement an innovative culture can augment the benefits of talent management, while economic and social structures in low- and middle-income countries like Pakistan might present unique challenges and opportunities for executing talent management practices meritoriously (Waheed et al., 2024).

Ongoing training for employees and skills development programs are important for improving employee skills and job innovation levels, these strategies are important for contributing to the overall organizational innovative thinking culture (Iqbal et al., 2024).

The authors highlighted the importance of synchronizing talent management practices with innovation strategies to foster an innovative work environment for employees (Amushila & Bussin, 2021).

#### **2.1.5. The Role of Innovation in the Context of Talent Management**

Innovation is a crucial asset for any firm; past literature suggest that talent management pointedly and positively touches innovation in the pharmaceutical sector. Training and development strategies, with monetary benefits and incentives like bonuses, are acclaimed to retain high-performing employees and encourage innovative thinking (Alzuod, n.d.).

An innovative environment within organizations additionally improves the impact of talent management on innovation, as it heartens employees to share ideas and collaborate effectually (Waheed et al., 2024). Recognizing and rewarding employee contributions, giving greater opportunities for professional development, and making clear pathways for career growth are important for retaining top talent (Wulur & Mandagi, 2023).



A positive and supportive work environment for employees, marked by factors such as open communication with employees, collaborative teamwork, and a healthy work-life balance, significantly enhances job satisfaction and ultimately enhances an innovative thinking culture within the organization (Paudel et al., 2024).

Nurturing a supportive organizational culture that values employee well-being, provides them with adequate resources, and encourages open communication is dominant for innovative thinking (Aboobaker & K.A., 2024).

Talent management (TM) plays a crucial role in fostering innovation within Pakistan's pharmaceutical companies. The premeditated enactment of talent management practices, such as classifying key positions, competency skills training, and remuneration management, significantly improves innovation by furnishing employees with the essential skills and motivation to breed and implement innovative ideas. This association is reinforced by empirical studies that spotted the progressive impact of talent management on the overall performance of the organization and innovation competencies.

Strong human resources practices and strategies positively impact employee engagement level with the job and organizational commitment, which is important for increasing employee intentions towards innovative thinking (Saraswati et al., 2024). Employee performance is greatly influenced with human resources practices its directly correlate with improvement in employee performance (Saraswati et al., 2024).

#### **2.1.4. Organizational Support and Innovation**

Regular employee performance evaluations help the organization to recognize the areas for improvement and motivate employees, which ultimately results in higher employee productivity and employee satisfaction (Ghedabna et al., 2024) . While this strategy is beneficial, but on the other hand, challenges such as limited organizational resource allocation for the human resource department and changing regulations may hamper their effectiveness. Organizations must adapt to these challenges to sustain a competitive advantage.

Human Capital Theory postulates that persons' knowledge, skills, and abilities are valued assets, or "capital," that contribute to their economic value and productivity. Human capital theory proposes that spending on an individual's education, training, and development can upsurge their productivity and, consequently, the organization's overall value. From this viewpoint, organizations that strategically invest in their employees' capabilities will see a return on that investment through enhanced performance and output (Gary Becker, 1964).

The existing literature clearly demonstrates a significant, positive relationship between talent management (TM) and innovation. Research has established that key TM dimensions, such as competence training, career development, and reward management, are instrumental in fostering innovation within an organization. While some studies have explored this relationship in various contexts, particularly in the pharmaceutical industry in places like Jordan, a notable empirical gap remains. The generalizability of these findings to other geographical and cultural contexts, especially in a dynamic market like Pakistan, is not yet confirmed. Therefore, this study aims to address this

deficiency by replicating and extending the framework of existing research to empirically investigate the impact of TM on innovation, specifically within the Pakistani pharmaceutical industry. This research will provide valuable, context-specific insights to both academics and industry professionals, informing the development of more effective TM strategies that can sustain competitive advantage in this region.

## 2.2 Conceptual Framework

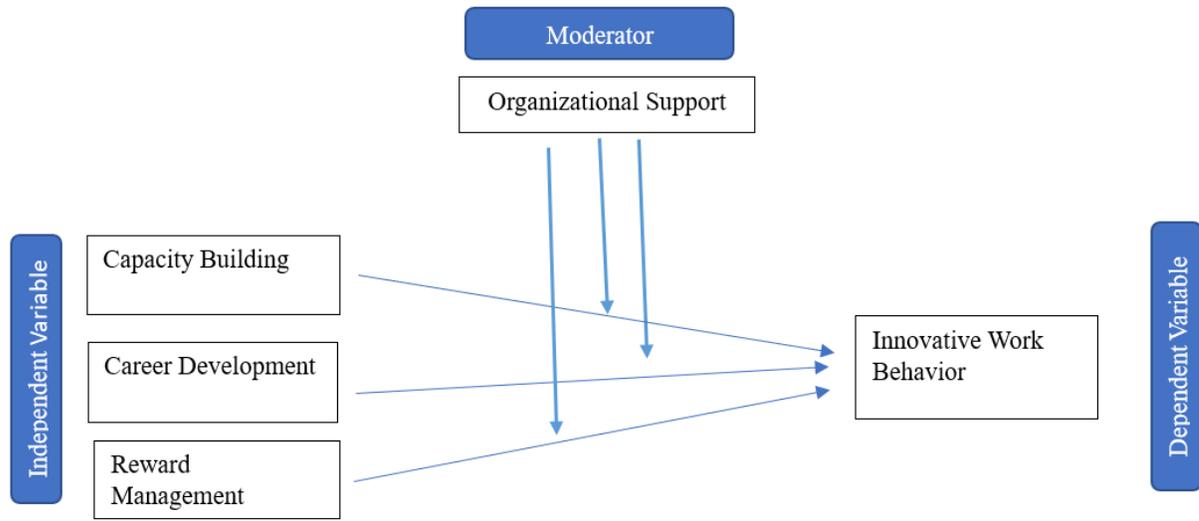


Figure 1 (Framework)

The core dimensions of talent management, such as competence training, career development, and reward management, are all direct investments in an organization's human capital. Human capital theory argues that these dimensions empower employees to obtain the essential skills and knowledge to devise innovative ideas. By improving employees' skills and knowledge, businesses shape a more capable and productive employee who is better equipped to foster innovation. Thus, according to Human Capital Theory, the strategic management of a company's talent leads to a more innovative and productive organization.

Organizational support influences innovation through cognitive, affective, and resource pathways that enable idea generation and implementation, which transmit support into innovative work behavior and performance (Atif et al., 2019).

## 3. Methodology

Quantitative Cross-sectional research design was performed (Cavaleri et al., 2018) as a cross-sectional research approach is suggested for such type of research studies because it is observational in its nature and recognized as descriptive research because these scientific researchers are not for causal relationships. Another reason for using cross-section is its cost-effective and efficient. In these



research studies, the researcher only records the information which are present in a particular population, but the researcher does not manipulate variables, since we have tested existing theory, so we have used post-positivism philosophy.

The participants for this study will be from different departments of pharmaceutical companies like sales and marketing staff who are associated with the pharmaceutical sector within Pakistan.

The Data Collection Tool will be a survey questionnaire that was adopted from similar past scientific research studies (Mazhar et al., 2021), with slight modifications in item statements. The survey questionnaire covered the following items: (a) Career Development, (b) Reward management, and (c) Capacity Building, which are the factors influencing innovation or innovative thinking. The population for this research study was the pharmaceutical professionals involved in marketing, sales, procurement and sales force effectiveness department. Having their role and expertise in the pharmaceutical sector, insights are critical for addressing the research objectives. A random sampling technique was used, and we have collected data from 273 pharmaceutical professionals (Krejcie and Morgan's, 1970) through a survey questionnaire, based on the sample calculator proposed by Cochran, W. G. (1977) our target sample size was 377 pharmaceutical professionals, we have distributed questionnaire to 400 participants out of which 273 participants responded due to time constraints. The sampling framework consisted of pharmaceutical professionals involved in marketing, sales, procurement, and the sales force effectiveness department. Having their role and expertise in the pharmaceutical sector, their insights are critical for addressing the research objectives. The total population is approximately 800,000+ based on the current numbers of registered pharmaceutical companies, which are 850+, and on average, every company has at least 1000 employees in the sales and marketing department. (Anonymous, [personal communication],2025).

We have used both descriptive and inferential statistical methods for analysis. In descriptive analysis, we analyzed mean, standard deviation, frequency, and percentage. In inferential analysis, we have performed a reliability check and validity testing to observe relationships between variables and test the study hypotheses.

#### 4. Results

**Table 1. Respondent Profile**

Characteristic		Frequency	%
Gender	Women	17	7%
	Men	256	93%
Age	Less than 26	44	16%
	Between 26-34	156	58%
	Above 35	71	26%
Last Education	Bachelor's degree	185	68%
	Master's Degree	80	29%
	Other	8	3%
Work Experience (years)	Less than 1	13	4%
	Between 1 – 5	5	2%
	Between 5 – 10	174	64%
	Above 7	81	30%



In the above data, males' gender is dominating; the only reason behind this is the dynamics of the Pakistan pharmaceutical industry, as in this profession, females are discouraged when we talk about the pharmaceutical industry. The majority of the respondents were bachelor's degree holders since it is the basic criteria of the drug regulatory authority and the Pakistan pharma manufacturer association for qualifying for a job in this industry.

**Table 2. Descriptive statistics**

<b>Descriptive Statistics</b>							
	N	Mean	Minimum	Maximum	Std. Deviation	kurtosis	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Capacity Building	273	4.195	1	5	0.680	3.738	-1.595
Career Development	273	4.114	1	5	0.704	4.028	-1.421
Innovative Work Behavior	273	3.890	1	5	0.848	0.907	-0.746
Organizational Support	273	4.132	1	5	0.570	4.476	-1.532
Reward Management	273	4.074	1	5	0.712	4.188	-1.518

The sample size was 273 participants. Capacity Building has a mean value of 4.195 and a standard deviation (SD) of 0.680, reflecting a high level of agreement with consistency among responses. Likewise, Career Development with having a mean value of 4.114 and with an SD of 0.704, suggesting a comparable spread of opinion. Innovative Work Behavior has the lowest mean of 3.890 with the highest SD of 0.848, suggesting a moderately high average agreement with the greatest degree of variation in responses. In contrast, Organizational Support showed the highest mean value of 4.132 (SD = 0.712), representing a strong agreement and low inconsistency among the participants. Finally, Reward Management showed a mean value of 4.074 with an SD of 0.570, suggesting strong agreement with the highest consensus among participants

The skewness values for Capacity Building (-1.595), Career Development (-1.421), Organizational Support (-1.532), and Reward Management (-1.518) were all negatively skewed, suggesting that responses were skewed toward the higher end of the scale, showing strong agreement. On the other hand, Innovative Work Behavior (skewness = -0.746) also exhibited a negative skew but with less intensity, suggesting a moderately higher concentration of responses toward the agreement side. The high magnitude for the kurtosis values suggest that responses were more clustered around the mean, showing consistency within participant perceptions.



#### 4.1. Measurement Model

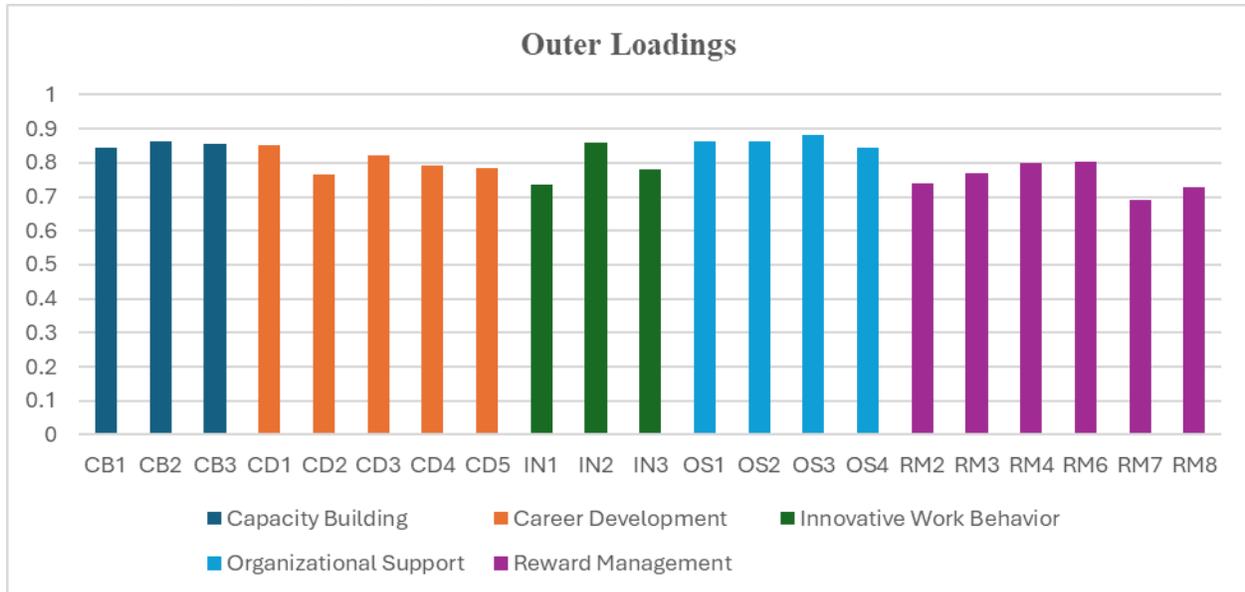


Figure 2 Graphic Outer Loading

Table 3. Reliability and Convergent Validity

Construct	Outer Loading	Alpha	Rho_A	CRc	AVE
Capacity Building		0.818	0.831	0.891	0.732
Career Development		0.863	0.871	0.901	0.646
Innovative Work Behavior		0.703	0.708	0.835	0.629
Organizational Support		0.886	0.887	0.921	0.746
Reward Management		0.870	0.879	0.902	0.605

Since cut off value for outer loading is 0.708, some of our items were not loaded on construct so we have removed RM1, RM2, RM9, RM10, RM11 step by step starting from lowest VIF items following increasing one to check either VIF improves or not but unfortunately there were no significant improvements in five items of reward management so finally we have removed these items because these items continuously shown low loadings, which shows that these items did not strongly relate to the reward management construct.

Cronbach's Alpha, Rho\_A, and CRc were also checked in order to check the inter-item consistency. To confirm the reliability, its benchmark value is 0.7; all values were above the benchmark, confirming reliability. Further, the Rho\_A and CRc values were above 0.70, which showed acceptable reliability and robust inter-item consistency.



Average Variance Extracted (AVE) indicates the convergent validity of the construct. A value of 0.50 or above is considered desirable, which shows that indicators of the construct are highly correlated or not; all AVE values were above the benchmark, showing that indicators of the constructs were highly correlated.

**Table 4. Discriminant validity measurement with HTMT**

	<b>Innovation</b>
Career Development <-> Capacity Building	0.849
Innovative Work Behavior <-> Capacity Building	0.672
Innovative Work Behavior <-> Career Development	0.622
Organizational Support <-> Capacity Building	0.619
Organizational Support <-> Career Development	0.662
Organizational Support <-> Innovative Work Behavior	0.451
Reward Management <-> Capacity Building	0.767
Reward Management <-> Career Development	0.793
Reward Management <-> Innovative Work Behavior	0.589
Reward Management <-> Organizational Support	0.855

Discriminant validity was performed to confirm whether the items of the constructs are distinct from each other or not. Its cut-off values are below 0.90 (or more conservatively, below 0.85).

All HTMT values are below the threshold value, which suggests that constructs appear to be dissimilar from each other.

**Table 5. Outer Model VIF (Variance Inflation Factor)**

<b>Outer Model VIF</b>	<b>VIF</b>
CB1	1.913
CB2	1.666
CB3	1.968
CD1	2.371
CD2	1.785
CD3	2.165
CD4	1.862
CD5	1.848
IN1	1.265
IN2	1.676
IN3	1.468
OS1	2.324
OS2	2.347
OS3	2.576
OS4	2.079
RM2	2.428
RM3	2.438
RM4	2.292
RM6	1.743
RM7	2.074
RM8	1.970

VIF is used to check the multicollinearity of latent variables, if its value is less than 2 means surely no multicollinearity, if its value is between 3 to 5 it shows slight chances of multicollinearity,



and a VIF value between 5 to 10 shows more chances of multicollinearity and if its value is above 10 its means surely multicollinearity exist so in this case check AVE.

In our data, all values are less than 3, showing that surely there is no multicollinearity in the outer model.

**Table 6. Inner VIF**

	<b>Inner VIF</b>
Capacity Building	2.396
Career Development	2.611
Organizational Support	2.356
Reward Management	3.549

It also assesses multicollinearity. The above table shows VIF of capacity building, career development, and organizational support values are below 3, which is an indicator that there is surely no multicollinearity only reward management has a VIF of slightly above 3 showing slight chances of multicollinearity.

#### **4.2. Structural model**

**Table 7. Model Fitness (Adjusted r2)**

	<b>Adj. r2</b>
Innovative Work Behavior	0.297

We usually perform model fitness in order to check the percentage of variance in the dependent variable, if its value is 25% means weak fit which means there is no parsimony i.e. model is not comprehensive so we need to add more variables to improve parsimony if it's between 25% to 50% means moderately fit and if it's between 50% to 75% its means strong or substantial fit and value above 75% means absolute fit.

In our data, the value of Adjusted R2 is 0.297, which means the model explains 29.7% of the variance in innovative work behavior, i.e., a moderate level of explanatory power. R2 explains that although capacity building, career development, reward management, and organizational support demonstrate innovative work behavior, other variables not mentioned in the conceptual framework may also play a vital role, which is consistent with past research on innovative work behavior.



**Table 8. F2**

<b>Effects Size</b>	<b>Innovative Work Behavior</b>
Capacity Building	0.052
Career Development	0.019
<b>Innovative Work Behavior</b>	
Organizational Support	0.001
Reward Management	0.011
Organizational Support x	
Capacity Building	0.002
Organizational Support x Career	
Development	0.005
Organizational Support x Reward	
Management	0.010

F2 is a measure of effect size in the total path. It explains the relative effect of each predictor variable on the dependent variable. [ $f2 = 0.02$  (small effect)], [ $f2 = 0.15$  (medium effect)], [ $f2 = 0.35$  (large effect)],

The F2 value of organizational support and reward management shows a weaker effect in the total model, which means the model is not theoretically well-connected. Capacity building showed a positive effect with a small effect size, highlighting that it has a meaningful role in improving innovative work behavior. This aligns with past studies highlighting that employee skills development fosters innovative work behavior. Similarly, the relationship between career development and innovative work behavior is positive, with a very small effect size suggests its limited practical impact, indicating that Career development alone is not sufficient to foster innovation without complementary factors. Similarly, the small effect size of reward management on innovation showed that it may not strongly affect innovative work behavior; this finding is in contrast with some past literature and may reflect cultural or contextual differences. On the other hand, hypothesis 4 (H4), hypothesis 5 (H5), and hypothesis 6 (H6) obtain limited empirical support. This showed that capacity building has a relatively strongest practical contribution, although still a modest contribution towards innovative work behavior, suggesting exploring additional factors in future research.

**Table 9. Goodness Model (Model Fit)**  
**SRMR (Standardized Root Mean Square Residual)**

	<b>Sample mean (M)</b>
Saturated model	0.070
Estimated model	0.070



A lower SRMR indicates a better fit. A value of 0.08 or less is generally considered a good fit; in our data the badness of fit is under control, which means variables are well connected.

The SRMR value is 0.070, which shows a good fit.

**Table 10. Hypothesis Testing**

**4.3. Hypotheses Assessment Summary:**

	<b>Hypotheses Statement</b>	<b>T</b>	<b>P</b>	<b>Results</b>
<b>H1</b>	There is a positive impact of capacity building on innovation.	3.740	0.000	Supported.
<b>H2</b>	There is a positive impact of career development on innovative work behavior.	1.958	0.025	Supported.
<b>H3</b>	There is a positive impact of reward management on innovative work behavior.	1.528	0.063	Not Supported.
<b>H4</b>	There is a significant positive relationship between capacity building and innovation with significant moderating role of organizational support.	0.831	0.203	Not Supported.
<b>H5</b>	There is a significant positive relationship between career development and innovation with significant moderating role of organizational support.	1.135	0.128	Not Supported.
<b>H6</b>	There is a significant positive relationship between reward management and innovation with significant moderating role of organizational support.	1.411	0.079	Not Supported.

**4.4. Discussions**

We have investigated the impact of various Talent Management dimensions on innovative work behavior within the highly competitive pharmaceutical sector of Pakistan, specifically we have included dimensions like Performance Management, Employee Development, and Reward Management. The results reveal substantial empirical evidence validating that tactically planned talent management processes are vital enablers of innovative work behavior.

The initial outcome from the study reveals a significant positive association between Talent Management dimensions and innovative work behavior; these results are consistent with the past literature stressing human capital as the principal and distinctive driver of sustainable competitive advantage, predominantly in the knowledge-intensive sector. Innovation in the pharmaceutical sector, either in term of product development or process optimization, primarily depends on the knowledge, skills, and motivation of employees. The results from the current study confirmed the swing from the traditional personnel administration to strategic talent management within the Pakistani pharmaceutical sector.



Additionally, the Employee Development dimension of Talent Management exhibited the highest predictive strength regarding organizational innovation. These results suggest that capacity building of employees in terms of continuous training, career planning, and such initiatives that help in upskilling of pharmaceutical personnel in Pakistan will definitely derive the maximum significant results from targeted investment in this dimension. Innovation is the ability to develop on current knowledge, and well-structured capacity building programs directly enable personnel with the resourceful skills required to recognize market gaps, challenge current operations, ongoing activities, standard procedures, established methods, and current workflows, and integrate new technologies.

On the contrary, the influence of Reward Management on innovative work behavior, even though significant, was relatively less pronounced than that of capacity building and career development. This unanticipated nuance reveals that while equitable and market-aligned pay is essential for talent management and retention, it may not be the key catalyst for cultivating the true culture of innovation. The results infer that the pharmaceutical sector must create the equilibrium of transactional rewards with intrinsic motivators and recognition systems that reward innovative behavior and the willingness to learn from failure, rather than just successful outcomes.

### **Management Practices vs. Innovation**

The descriptive statistics results disclose a critical contrast between the judgements of organizational practices and the notion of the strategic outcome variable, Innovative work behavior. Precisely, the dimension of Reward Management showed the highest agreement among participants ( $SD = 0.570$ ), demonstrating a widespread and uniform agreement that the company's reward system is effective and fair. On the other hand, the lowest mean value was for Innovative work behavior, 3.890, which also exhibited the largest variation in opinion ( $SD = 0.848$ ). This inconsistency advocates a potential disconnect: while the foundational HR practices, like market competitive pay and the fair rewards system, are deep-rooted and certainly viewed, they are not universally perceived as contributing to foremost innovative output, such as being a "first mover advantage" or producing "innovative products or services." This contrasts a significant concentration for the study's inferential analysis, instigating an enquiry into which dimensions of talent management are the most active drivers for rising the general perception and performance of innovation in the Pakistani pharmaceutical sector.

Similarly, based on past literature, the significance of reward management in nurturing innovation is increasingly questioned, as evidence from past studies proposes that rewards may not universally help in improving creativity within the work environment. Past literature suggests that the association between reward management and innovative work behavior is much more complex and depends on multiple variables (Etemadi et al., n.d.). Sanders et al. (2018), highlighted that performance-based reward management did not significantly correlate with innovative work behavior.

### **Alignment with Strategic Human Resource Management (SHRM)**

The high mean values for the core talent management dimensions like capacity building, which was 4.195, and for career development, it was 4.114, and for organizational support, it was 4.132, strongly show that the pharmaceutical sector in the sample are aggressively engaging in



Strategic Human Resource Management (SHRM). These high scores confirmed that the pharmaceutical company's commitment to observing talent not only as an expense but as a strategic asset. The encouraging observation of Capacity Building, in actuality, is parallel with the contemporary literature arguing that a continuous competitive edge in knowledge-intensive industries like the pharmaceutical sector depends heavily on a company's continuous investment in rising complete skills, knowledge, and judgement of employees (Schuler & Jackson, 2007).

## **5. Conclusions**

Results from this study strongly pinpointed and quantified the notable outcome of Talent Management dimensions on innovative work behavior within the pharmaceutical sector of Pakistan. The findings confirm that a robust and strategic approach to overseeing talent, encompassing elements like performance evaluation, career development chances, and pay for performance systems, is a chief precursor to both incremental and radical innovation capabilities. Most significantly, the results isolate capacity building and career development as the most powerful and effective instrument available for think tanks striving for innovative output of the company. The differential impacts observed across the TM dimensions offer a superior understanding, signifying that Talent Management investments should be strategically weighted towards developmental activities to achieve the highest return on innovation capability.

### **5.1 Practical Implications:**

Pharmaceutical companies operating in Pakistan should focus on fortifying their talent management practices by emphasizing employee development strategies. This may encompass providing need-based continuous training and cross-functional alliances to improve innovative work behavior.

Furthermore, the human resource strategists should think beyond only compensation-based reward systems for employees. Incentive strategies should acknowledge and motivate innovation, risk taking, and learning from failures, in that way nurturing a supportive environment for discontinuous innovation.

### **5.2 Limitations:**

This research study is more specific to the pharmaceutical staff of Pakistan and may not be generalizable to other sectors and regions. This research work relies on the *ceteris paribus* assumption, which means that we have kept other factors constant, which limits us from fully capture the impact of uncontrolled organizational variables. Chances for common method variance since data is collected at a single point of time using a single method, which may impact the accuracy of the relationship between variables. We have used only a quantitative method; the absence of mixed methods confines the depth of understanding and limits triangulation.

### **5.3 Future Research:**

There is a need to conduct a longitudinal research design to confirm the relationships between Talent Management interventions and subsequent changes in innovation metrics over time. Since mediators were not tested in the present study, future work can be done to check the mediating mechanisms, such as the role of knowledge sharing culture or psychological empowerment, to get an



improved understanding of the phenomenon of how Talent Management translates into innovation outcomes.



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