International Journal of Science, Strategic Management and Technology
Volume **02** Issue **02** February-2026 | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

HR Metrics and their Role in the Improvement of the Organizational Performance

Dr. Shweta Patel[1], Anisha Kumari Singh[2]

[1]Amity Business School, Amity University Chhattisgarh

[2] Amity Business School, Amity University Chhattisgarh

Corresponding Email : anishaasha08@gmail.com

https://doi.org/10.55041/ijsmt.v2i2.055

Cite this Article: Singh, A. K. (2026). HR Metrics and their Role in the Improvement of the Organizational Performance. International Journal of Science, Strategic Management and Technology, *Volume 10*(01). https://doi.org/10.55041/ijsmt.v2i2.055

Abstract :

This study explores the strategic role of HR metrics in talent management, focusing on their impact on employee engagement, training effectiveness, and organizational performance. It highlights how aligning HR metrics with business objectives enhances decision-making in recruitment, retention, and workforce planning. The research demonstrates the value of data in assessing engagement, measuring training outcomes, and predicting performance through key indicators like turnover and cost-per-hire. Ultimately, it underscores the importance of HR analytics in fostering a data-driven, high-performance organizational culture.

Keywords

HR Metrics , Talent Management , Employee engagement ,training and development , organizational performance .

INTRODUCTION :

Human Resource (HR) metrics are vital for organizations aiming to evaluate the effectiveness of their human capital strategies and drive continuous improvement. These metrics provide quantitative insights into various HR functions, enabling leaders to make informed, data-driven decisions. HR metrics can be broadly categorized into several focus areas: recruitment and hiring, employee performance, engagement and satisfaction, retention and turnover, compensation and benefits, training and development, workforce productivity, diversity, equity and inclusion (DEI), and HR operational efficiency.Each category serves a unique purpose — for example, recruitment metrics such as time-to-fill and quality of hire assess the efficiency of hiring processes, while employee engagement metrics like the Employee Net Promoter Score (eNPS) and absenteeism rate gauge workplace morale. Retention and turnover metrics help identify risk factors leading to employee departures, and compensation metrics ensure competitive and fair reward systems. Training and development metrics, along with productivity indicators, highlight how well the organization is nurturing talent and optimizing workforce output. Finally, DEI and HR process metrics ensure that inclusivity, fairness, and operational excellence are embedded within the HR function.

By systematically tracking and analyzing these metrics, organizations can enhance employee satisfaction, improve retention, optimize performance, and align HR initiatives with broader business goals. Leveraging HR metrics effectively not only strengthens organizational culture but also builds a more agile, engaged, and high-performing workforce, ultimately driving long-term success.

OBJECTIVES :-

1. To explore the use of hr metrics in talent management strategies.

2. To investigate the role of hr metrics in employee engagement and its impact on overall organizational performance.

3. To explore the use of hr metrics in evaluating and enhancing training and development program .

4. To investigate the relationship between hr metrics in organisational performance.

RESEARCH HYPOTHESIS :-

H1: The effective use of HR metrics positively influences the efficiency and success of talent management strategies.

H2: HR metrics that track employee engagement levels are positively correlated with improved organizational performance.

H3: Organizations that utilize HR metrics to evaluate training and development programs experience higher employee performance and skill development.

H4: There is a significant positive relationship between the use of HR metrics and overall organizational performance.

CONCEPTUAL FRAMEWORK

Independent Variable:

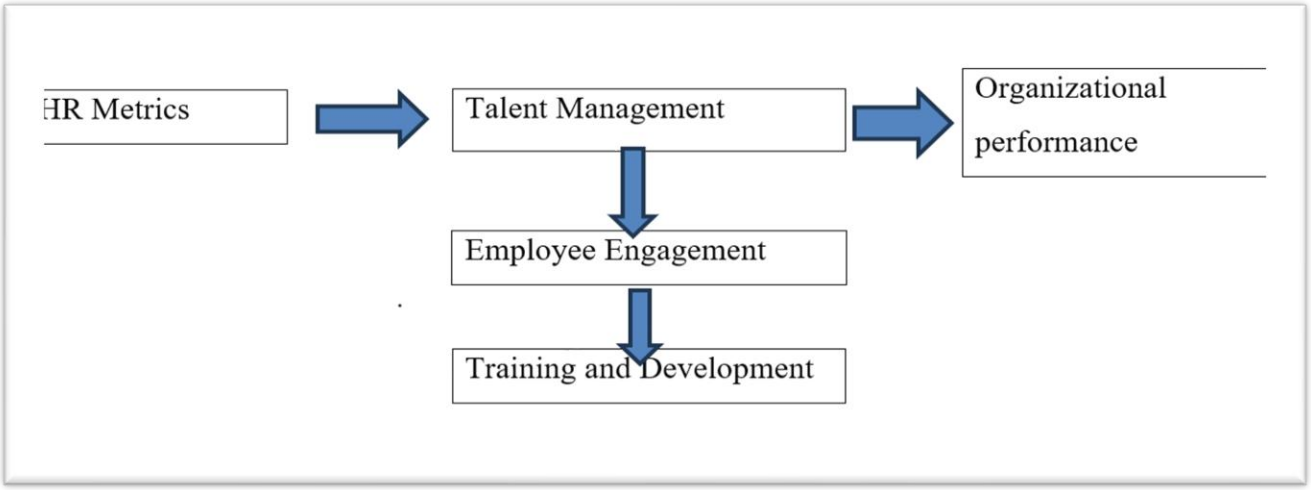
- **Use of HR Metrics** (in Talent Management, Employee Engagement, Training & Development)

Mediating Variables:

- **Talent Management Strategies Efficiency**
- **Employee Engagement Levels**
- **Effectiveness of Training & Development Programs**

Dependent Variable:

- **Organizational Performance**



LITERATURE REVIEW:-

Prior research emphasizes the growing importance of metrics, and systems thinking in human resource management and organizational performance. Lawler, Levenson, and Boudreau (2004) found that while HR functions often measure efficiency, they lack effectiveness data crucial for becoming strategic partners. Dulebohn and Johnson (2013) highlighted the need for frameworks guiding the use of HR analytics across operational, managerial, and strategic levels. Gomes, Yasin,

and Lisboa (2004) discussed the evolution of manufacturing performance measures in response to competitive pressures, whereas Boon, Den Hartog, and Lepak (2019) noted challenges in conceptual clarity regarding HR systems and their synergistic effects.Gopal and Thakkar (2012) identified gaps in supply chain performance measurement systems, stressing the need for more research on integration, benchmarking, and socio-environmental relevance. Schneider et al. (2018) demonstrated that workforce engagement significantly predicts future organizational financial and customer outcomes. Gunasekaran et al. (2015) reviewed outsourcing performance metrics, providing a taxonomy across pre-, during-, and post-outsourcing stages.Podsakoff et al. (2009) meta-analyzed the positive effects of organizational citizenship behaviors (OCBs) on both individual and organizational outcomes. Rasmussen and Ulrich advocated for a shift from HR-centric analytics to integrated, business-driven HR analytics. Ayanponle et al. (2024) discussed future HR strategies shaped by technology, hybrid work models, and human-centric approaches. Shabbir and Gardezi (2020) highlighted that big data analytics enhance organizational performance in SMEs, with knowledge management practices acting as a partial mediator.Collectively, these studies underline the critical role of advanced measurement, analytics, and system-level thinking in improving HR effectiveness and broader organizational performance.

RESEARCH METHODOLOGY :-

This study employed a descriptive research design using both quantitative and qualitative methods to provide a comprehensive understanding of the topic. Primary data was collected through a structured questionnaire distributed among 100 respondents using non-probability, convenience sampling. Secondary data was also utilized, gathered from company records, books, journals, and online resources.The structured questionnaire included pre-defined, standardized questions to ensure consistency across responses. Data analysis was conducted using various tools to interpret findings and draw conclusions. focusing on data collection from different sectors of HR.

By combining both qualitative and quantitative approaches, the study achieved a balanced perspective, offering both statistical insights and contextual understanding.

DATA ANALYSIS AND INTERPRETATION :-

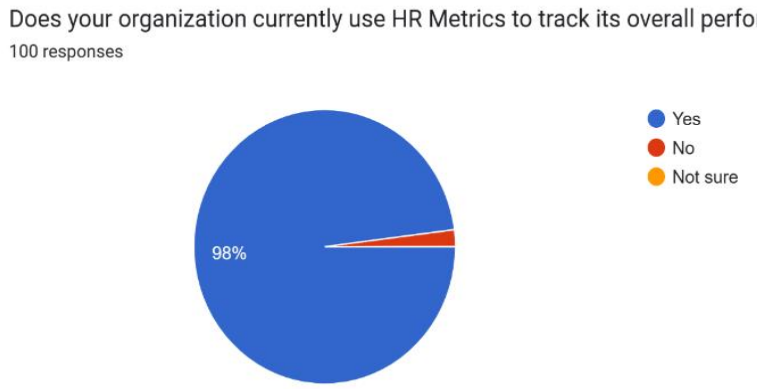
1. How familiar are you with HR metrics in your organization ?

International Journal of Science, Strategic Management and Technology
Volume **02** Issue **02** February-2026 | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

INTERPRETATION :-

As per the graph , the HR of different organization are very much familiar about HR metrics ,percentages show 95% , and some of them know little bit about it that is 5% .

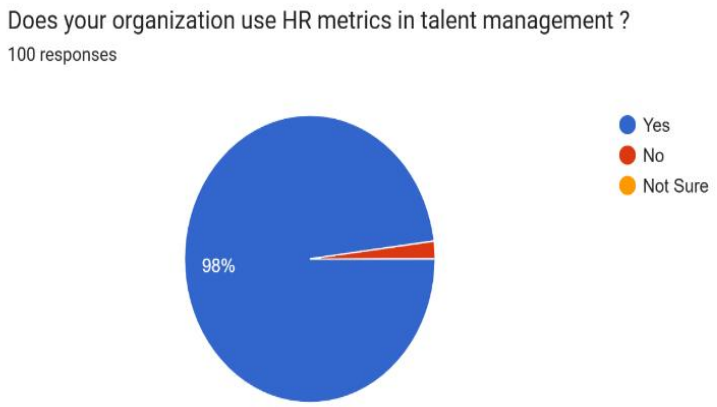
2. Does your organization currently use HR Metrics to track its overall performance?



INTERPRETATION :-

As per the graph ,95% HR of different organization use the HR metrics to track overall performance and 5% don't use HR Metrics to track overall performance .

3. Does your organization use HR metrics in talent management ?

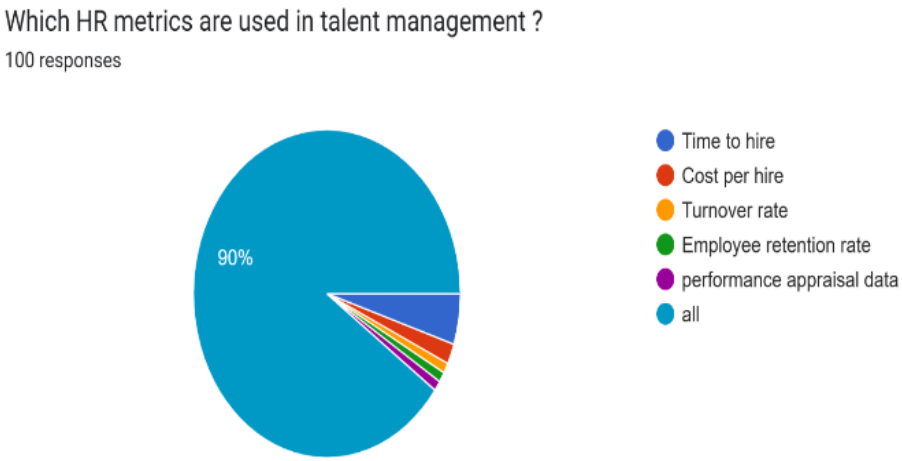


International Journal of Science, Strategic Management and Technology
Volume **02** Issue **02** February-2026 | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

INTERPRETATION :-

As per the graph ,95% HR of different organization use HR Metrics in Talent management and 5% don't use HR Metrics in talent management .

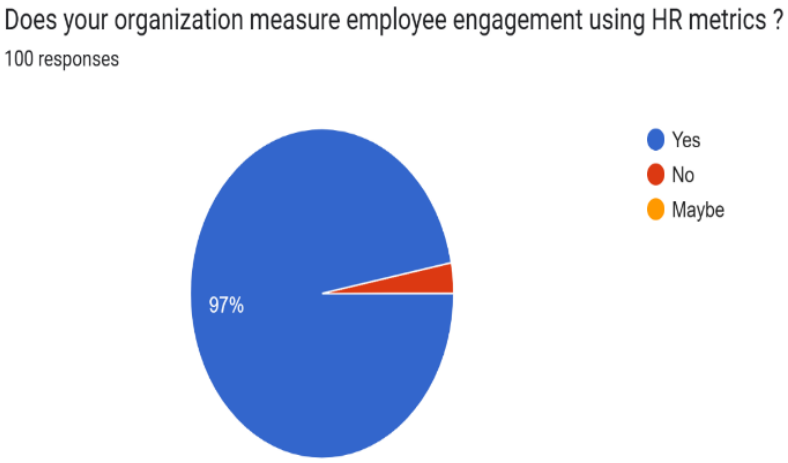
4. Which HR metrics are used in talent management ?



INTERPRETATION :-

As per the graph , HR of different organization uses all the metrics that used in talent management , percentage show 90% ,10% HR uses time to hire , 5% HR uses cost per hire , Nil HR uses employee retention rate , 5% HR uses performance appraisal data .

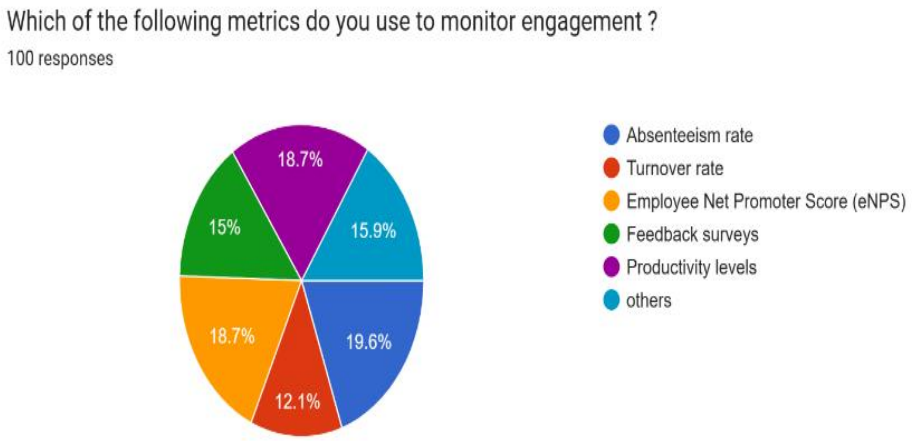
5. Does your organization measure employee engagement using HR metrics ?



INTERPRETATION :-

as per the graph , 97% HR of different organization says organization measure employee engagement using HR metrics , 3% says no about organization measure employee engagement using HR metrics .

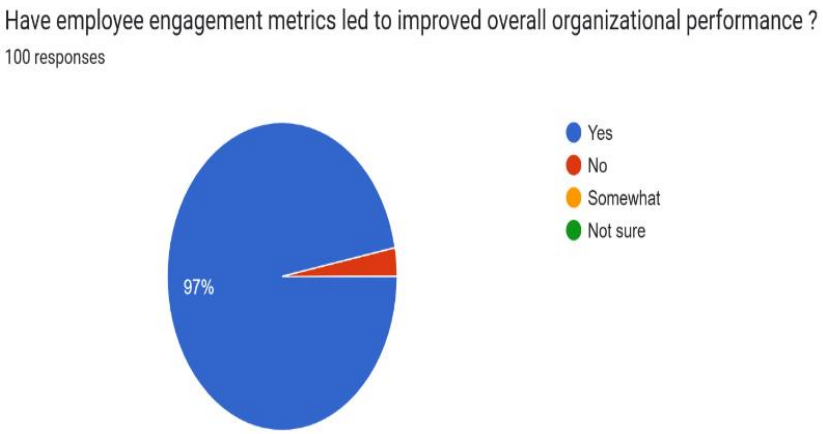
6. Which of the following metrics do you use to monitor engagement ?



INTERPRETATION :-

As per the graph , HR of different organization uses 19.6% of absenteeism rate to monitor engagement , 12.1 % uses turnover rate to monitor engagement , 18.7% uses employee net promoter score (eNPS) ,

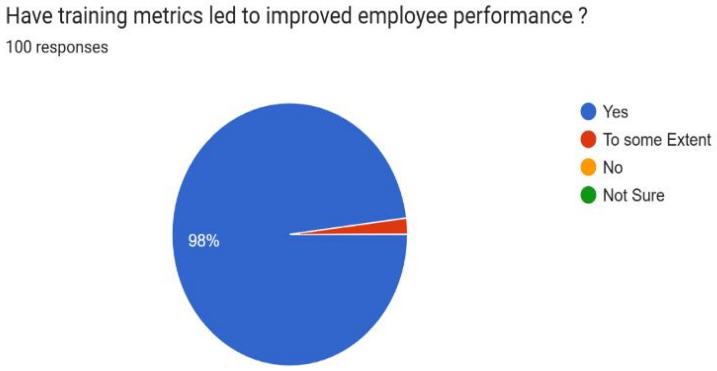
7. Have employee engagement metrics led to improved overall organizational performance ?



International Journal of Science, Strategic Management and Technology
Volume **02** Issue **02** February-2026 | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

INTERPRETATION :-

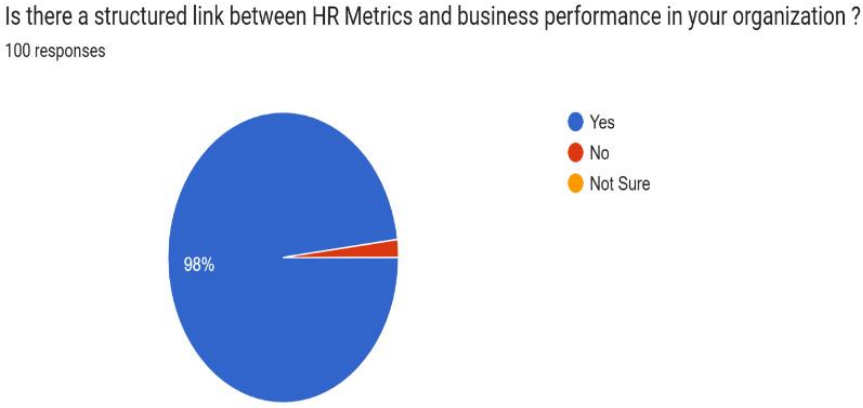
As per the graph , 97% HR says yes that employee engagement metrics led to improved overall organizational performance .Have training metrics led to improved employee performance



INTERPRETATION :-

As per the graph , 98% HR of different organization say yes that training metrics led to improved employee performance .

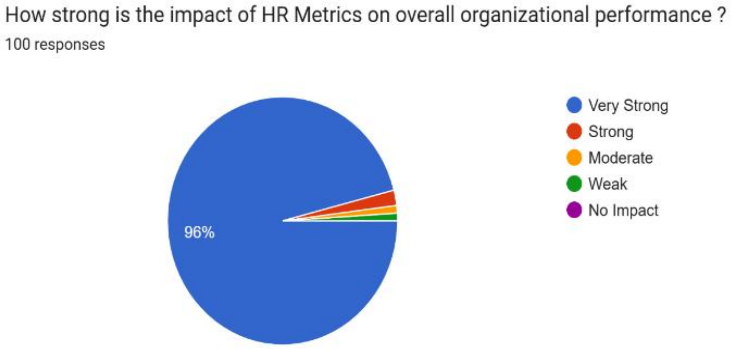
8. Is there a structured link between HR Metrics and business performance in your organization ?



INTERPRETATION :-

As per the graph , 98% of HR says yes that there a structured link between HR Metrics and business performance in your organization .

9. How strong is the impact of HR Metrics on overall organizational performance ?



INTERPRETATION :-

As per the graph , 96% HR of different organization says that it is very strong impact of HR Metrics on overall organizational performance ,2% says strong impact , 1% moderate , and 1% weak impact of HR Metrics on overall organizational performance .

CORRELATION ANALYSIS :-

	Age ?	role ?	years wo	size ?	Which in	How famil	familiar are	use hr met	use HR	Which HR	effectiv	at extent im	employee	rement dae	engage	rall imining	ebd develo	ployee pe	a struc	siness per	column	n organ	ender ?
Age ?	1.00																						
role ?	-0.13	1.00																					
years work	0.14	-0.04	1.00	2.00	3.00																		
size ?	0.01	0.00	0.05	1.05	2.05																		
Which ind	0.09	0.17	0.24	1.24	2.24																		
How familia	-0.10	-0.04	0.00	1.00	2.00	1.00	2.00	3.00	4.00														
use hr met	-0.10	-0.04	0.00	1.00	2.00	1.00	2.00	3.00	4.00														
use HR m	-0.10	-0.04	0.00	1.00	2.00	1.00	2.00	3.00	4.00														
Which HR	-0.02	-0.05	0.08	1.08	2.08	0.56	1.56	2.56	3.56														
effectivene	0.04	-0.13	0.23	1.23	2.23	0.30	1.30	2.30	3.30	1.00													
improved e	0.12	-0.06	0.09	1.09	2.09	0.60	1.60	2.60	3.60	0.13	1.00	2.00	3.00										
measure e	-0.17	-0.05	-0.06	0.94	1.94	0.39	1.39	2.39	3.39	0.08	-0.23	0.77	1.77										
you do to r	0.08	-0.07	0.17	1.17	2.17	0.05	1.05	2.05	3.05	0.21	0.14	1.14	2.14										
employee	0.20	0.00	0.05	1.05	2.05	0.04	1.04	2.04	3.04	0.08	0.10	1.10	2.10	1.00									
improving	0.09	0.09	0.03	1.03	2.03	0.03	1.03	2.03	3.03	0.15	0.36	1.36	2.36	0.10	1.00								
have emplo	-0.08	-0.05	0.07	1.07	2.07	0.39	1.39	2.39	3.39	0.37	-0.23	0.77	1.77	0.05	0.04	1.00							
evaluate tra	0.02	0.02	0.07	1.07	2.00	0.39	1.29	1.83	3.00	0.02	-0.20	0.77	0.53	0.05	0.04	1.00	1.00						
Which met	-0.03	0.10	0.10	1.10	2.10	-0.13	0.87	1.87	2.87	-0.16	0.13	1.13	2.13	0.05	0.10	-0.18	1.00	1.00					
Have traini	-0.10	-0.11	0.00	1.00	2.00	0.49	1.49	2.49	3.49	0.30	0.01	1.01	2.01	0.12	0.03	0.81	1.00	-0.13	1.00				
Is there a s	0.00	0.03	0.16	1.16	2.16	0.49	1.49	2.49	3.49	0.47	0.01	1.01	2.01	0.04	0.25	0.81	1.00	-0.13	0.49	1.00			
Which HR	-0.01	0.14	-0.07	0.93	1.93	0.05	1.05	2.05	3.05	-0.09	0.10	1.10	2.10	-0.03	0.11	-0.01	1.00	-0.12	0.01	0.05	1.00		
to what ext	0.08	0.03	-0.03	0.97	1.97	0.43	1.43	2.43	3.43	-0.06	0.68	1.68	2.68	0.03	0.48	-0.13	1.00	0.00	0.03	0.03	0.15	1.00	
impact of H	-0.15	-0.08	-0.06	0.94	1.94	0.35	1.35	2.35	3.35	0.39	-0.09	0.91	1.91	0.08	0.04	0.74	1.00	-0.18	0.91	0.35	-0.05	0.03	1.00
Gender ?	0.04	-0.05	0.05	1.05	2.05	0.02	1.02	2.02	3.02	0.22	-0.18	0.82	1.82	-0.02	-0.37	0.08	1.00	-0.04	0.02	0.02	-0.03	-0.29	0.06	1.00

ANALYSIS AND INTERPRETATION :-

The analysis explored relationships among demographic factors (e.g., age, role, gender) and HR practices (e.g., familiarity with and usage of HR metrics, employee engagement, training effectiveness). As expected, diagonal values were 1.00, indicating perfect self-correlation. Most correlations were weak to moderate (ranging from -0.2 to 0.4). Notable positive correlations were observed between HR metric familiarity, HR metric usage, and key HR outcomes such as engagement and training effectiveness. Slight negative correlations emerged between age and HR metric usage, suggesting older participants may engage less with HR metrics. Gender showed minimal impact. Overall, HR metric familiarity and usage appear central to HR effectiveness, with demographic influences being relatively minor.

REGRESSION ANALYSIS :-

	A	B	C	D	E	F	G	H	I
1	SUMMARY OUTPUT								
2									
3	*Regression Statistics*								
4	Multiple R	0.93494662							
5	R Square	0.874125183							
6	Adjusted R Square	0.867429714							
7	Standard Error	0.139392435							
8	Observations	100							
9									
10	ANOVA								
11		*df*	*SS*	*MS*	*F*	*ignificance F*			
12	Regression	5	12.6835564	2.536711	130.5547	1.03E-40			
13	Residual	94	1.8264436	0.01943					
14	Total	99	14.51						
15									
16		*Coefficients*	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
17	Intercept	-0.8264436	0.151004952	-5.47296	3.66E-07	-1.12627	-0.52662	-1.12627	-0.52662
18	Which HR metrics are used in talent management ?	0.068943677	0.026425579	2.608975	0.010566	0.016475	0.121412	0.016475	0.121412
19	Which of the following metrics do you e to monitor engagement ?	0.000880526	0.008217964	0.107147	0.914901	-0.01544	0.017197	-0.01544	0.017197
20	have employee engagement metrics lead to overall improvement	1.193839404	0.259002222	4.609379	1.27E-05	0.679584	1.708094	0.679584	1.708094
21	Have training metrics led to improved employee performance ?	1.720703185	0.226381338	7.600906	2.18E-11	1.271218	2.170189	1.271218	2.170189
22	Is there a structured link between HR Metrics and business performance in your organization ?	-1.14140946	0.206885332	-5.51711	3.03E-07	-1.55219	-0.73063	-1.55219	-0.73063

ANALYSIS AND INTERPRETATION :-

- Multiple R: 0.9349 — Indicates a strong correlation between the predictors and the outcome.
- R Square (R^2): 0.8741 — About 87.41% of the variation in the dependent variable is explained by the independent variables.
- Adjusted R Square: 0.8674 — Adjusted for the number of predictors; still very high, showing a good model fit.
- Standard Error: 0.1394 — Measures the average distance that the observed values fall from the regression line.
- Observations: 100 — Sample size used in the regression.

ANOVA Table

- F-statistic: 130.5547 — Indicates the model is statistically significant.
- Significance F (p-value): 1.03E-40 — Extremely low p-value, showing that the model as a whole is significant.

Findings & CONCLUSION :-

This study highlights the critical role of HR metrics in driving strategic HR decisions and improving organizational outcomes. Metrics such as time to hire, cost per hire, turnover rate, and retention rate are effectively used in talent management to enhance recruitment and retention strategies. In employee engagement, tools like eNPS and feedback surveys have guided successful engagement initiatives. Training effectiveness is assessed through attendance, assessment scores, ROI, and feedback, contributing to skill development and performance improvement. Overall, the findings confirm that HR metrics are essential for aligning HR practices with business goals, supporting informed decision-making, and enhancing organizational performance.

SUGGESTIONS:-

➢ Focus on Predictive Analytics , Explore how predictive HR analytics (e.g., forecasting employee turnover, identifying high-potential employees) can proactively improve business performance.

➢ Assess the Role of Technology in HR Metrics , Investigate how HR technologies (such as HRMS, HRIS, or AI-based analytics tools) are revolutionizing the collection, analysis, and application of HR metrics.

➢ Add a focus on employee experience (EX) metrics (e.g., employee satisfaction, work-life balance, career development opportunities) and how these relate to organizational performance.

➢ Include comparisons of HR metrics and their impact on performance across different sectors (e.g., healthcare, tech, retail).

REFERENCES :-

- Marler, J. H., & Boudreau, J. W. (2017). An evidence-based review of HR analytics. The International Journal of Human Resource Management, 28(1), 3–26.
- Lawler III, E. E., Levenson, A., & Boudreau, J. W. (2004). HR metrics and analytics–uses and impacts. Human Resource Planning Journal, 27(4), 27–35.
- Wang, G., Gunasekaran, A., Ngai, E. W. T., & Papadopoulos, T. (2016). Big data analytics in logistics and supply chain management: Certain investigations for research and applications. International Journal of Production Economics, 176, 98–110.
- Perifanis, N.-A., & Kitsios, F. (2023). Investigating the influence of artificial intelligence on business value in the digital era of strategy: A literature review. Information, 14(2), 85.
- Melville, N., Kraemer, K., & Gurbaxani, V. (2004). Information technology and organizational performance: An integrative model of IT business value. MIS Quarterly, 28(2), 283–322.
- Tarique, I., & Schuler, R. S. (2010). Global talent management: Literature review, integrative framework, and suggestions for further research. Journal of World Business, 45(2), 122–133.
- AlEssa, H. S., & Durugbo, C. M. (2022). Systematic review of innovative work behavior concepts and contributions. Management Review Quarterly, 72(4), 1171–1208.
- Järvinen, J., & Karjaluoto, H. (2015). The use of Web analytics for digital marketing performance measurement. Industrial Marketing Management, 50, 117–127.
- Abidi, H., De Leeuw, S., & Klumpp, M. (2014). Humanitarian supply chain performance management: A systematic literature review. Supply Chain Management: An International Journal, 19(5/6), 592–608.
- Akdere, M., & Egan, T. (2020). Transformational leadership and human resource development: Linking employee learning, job satisfaction, and organizational performance. Human Resource Development Quarterly,
- Kommera, H. K. R. (2015). The evolution of HCM tools: Enhancing employee engagement and productivity. NeuroQuantology, 13(1), 187–195.
- Albertini, E. (2013). Does environmental management improve financial performance? A meta-analytical review. Organization & Environment, 26(4), 431–457.
- Jayne, M. E. A., & Dipboye, R. L. (2004). Leveraging diversity to improve business performance: Research findings and recommendations for organizations. Human Resource Management, 43(4), 409–424.
- Donaldson, S. I., Lee, J. Y., & Donaldson, S. I. (2019). Evaluating positive psychology interventions at work: A systematic review and meta-analysis. International Journal of Applied Positive Psychology, 4(3), 113–134.
- Nielsen, K., Nielsen, M. B., Ogbonnaya, C., Känsälä, M., Saari, E., & Isaksson, K. (2017). Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis. Work & Stress, 31(2), 101–120.
- Shabbir, M. Q., & Gardezi, S. B. W. (2020). Application of big data analytics and organizational performance: The mediating role of knowledge management practices. Journal of Big Data, 7, 47.
- Ayanponle, L. O., Awonuga, K. F., Asuzu, O. F., Daraojimba, R. E., Elufioye, O. A., & Daraojimba, O. D. (2024). A review of innovative HR strategies in enhancing workforce efficiency in the US. International Journal of Science and Research Archive, 11(1), 817–827.
- Rasmussen, T., & Ulrich, D. (2015). Learning from practice: How HR analytics avoids being a management fad. Organizational Dynamics, 44(3), 236–242.
- Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual-and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. Journal of Applied Psychology, 94(1), 122–141.
- Gunasekaran, A., Irani, Z., Choy, K.-L., Filippi, L., & Papadopoulos, T. (2015). Performance measures and metrics in outsourcing decisions: A review for research and applications. International Journal of Production Economics, 161, 153–166.
- Schneider, B., Yost, A. B., Kropp, A., Kind, C., & Lam, H. (2018). Workforce engagement: What it is, what drives it, and why it matters for organizational performance. Journal of Organizational Behavior, 39(4), 462–480.
- Gopal, P. R. C., & Thakkar, J. (2012). A review on supply chain performance measures and metrics: 2000-2011.

International Journal of Productivity and Performance Management, 61(5), 518–547.

- Boon, C., Den Hartog, D. N., & Lepak, D. P. (2019). A systematic review of human resource management systems and their measurement. Journal of Management, 45(6), 2498–2537.
- Gomes, C. F., Yasin, M. M., & Lisboa, J. V. (2004). A literature review of manufacturing performance measures and measurement in an organizational context: A framework and direction for future research. Journal of Manufacturing Technology Management, 15(6), 511–530.
- Dulebohn, J. H., & Johnson, R. D. (2013). Human resource metrics and decision support: A classification framework. Human Resource Management Review, 23(1), 71–83.