

**EFFECTIVENESS OF PERFORMANCE METRICS, TRAINING AND DEVELOPMENT IN HEALTHCARE ORGANIZATION****Selvapriya SR**

II MBA, School of Management Studies, Sathyabama Institute of Science and Technology (Deemed to be University), Chennai, Tamil Nadu, India.

**Dr. Shetty Deepa Thangam Geeta**

Assistant Professor, School of Management Studies, Sathyabama Institute of Science and Technology (Deemed to be University), Chennai, Tamil Nadu, India.

---

**ABSTRACT**

The present study investigates the effectiveness of performance metrics, training, and development in healthcare organizations, focusing on their impact on employee performance. Based on data collected from a sample of 132 healthcare employees, the research explores four key areas: the relationship between performance metrics and employee effectiveness, the role of training and development programs in enhancing performance, the comparison of employee performance before and after training using a paired t-test, and the influence of the number of training sessions attended on job performance. A combination of correlation analysis, percentage analysis, and paired t-tests was used for data analysis. The results reveal a significant positive correlation between structured performance metrics and employee effectiveness. Percentage analysis indicates that training and development programs contribute notably to improved employee outcomes. The paired t-test confirms a statistically significant improvement in employee performance following training. Furthermore, a positive association was found between the number of training sessions attended and the degree of performance enhancement. These findings emphasize the critical role of performance measurement and continuous professional development in strengthening employee effectiveness in the healthcare sector.

**Keywords:**

Performance metrics, Training and development, healthcare, training session, employee effectiveness.

---

**INTRODUCTION**

In today's dynamic healthcare environment, the effectiveness of an organization is closely tied to the performance of its employees. With increasing demands for quality care, operational efficiency, and patient satisfaction, healthcare organizations are under constant pressure to optimize workforce performance. One of the key strategies to achieve this is through the implementation of robust performance metrics and structured training and development programs. Performance metrics serve as measurable indicators that help assess individual and organizational outcomes, guiding employee efforts toward achieving strategic goals. Simultaneously, training and development initiatives are essential for equipping employees with the knowledge, skills, and competencies required to meet evolving healthcare challenges.

The significance of these components is even more pronounced in healthcare settings, where employee performance directly influences patient care outcomes. Despite their importance, there is often limited empirical evaluation of how performance metrics and training programs jointly impact employee effectiveness in healthcare. This study aims to fill that gap by systematically analyzing the relationship between performance metrics and employee effectiveness, evaluating the role of training in improving performance, and measuring performance variations before and after training interventions.

Using a sample size of 132 healthcare professionals, the study applies correlation analysis to understand the link between performance metrics and employee effectiveness, percentage analysis to assess the role and impact of training, and a paired t-test to compare employee performance before and after training sessions. Additionally, the study examines the effect of the number of training sessions attended on changes in job performance. By exploring these dimensions, the research seeks to provide valuable insights into optimizing workforce strategies in healthcare organizations.

# IJETRM

## International Journal of Engineering Technology Research & Management

Published By:

<https://www.ijetrm.com/>

### OBJECTIVES

- To determine the relationship between performance metrics and employee effectiveness in healthcare organization .
- To understand the role of training and development programs in improving the performance of healthcare employees.
- To compare employee performance before and after training and development programs using paired T-test .
- Impact of the number of training sessions attended on changes in job performance.

### REVIEW OF LITERATURE

**Cifalino, A. & Baraldi, S. (2009)**, Training programs and performance measurement: Evidence from healthcare organisations: This study explores the integration of training programs within performance measurement frameworks in healthcare settings. It emphasizes the relevance of evaluating training programs using a Strategic Performance Management (SPM) framework based on the Balanced Scorecard, aiming to enhance organizational effectiveness.

**Zaadoud, B., Chbab, Y., & Chaouch, A.(2021)** ,The Performance Measurement Frameworks in Healthcare: Scopus Study : This study investigates various performance measurement frameworks utilized in healthcare organizations. It provides insights into the development and application of these frameworks, aiming to enhance the quality and efficiency of healthcare services.

**Giovanelli, L., Rotondo, F., & Fadda.(2024)**, Management Training Programs in Healthcare: Effectiveness Factors, Challenges and Outcomes : This study explores the factors influencing the effectiveness of management training programs in healthcare settings. It identifies key challenges and outcomes associated with such programs, emphasizing the importance of tailored training to improve healthcare management practices.

**Carlos Jefferson de Melo Santos, Ava Santana Barbosa, and Ângelo Márcio Oliveira Sant'Anna. (2025)** Performance Measurement Systems in Primary Health Care: This systematic review analyzes various performance measurement systems implemented in primary healthcare. It categorizes performance measures into nine major areas and discusses the contextual applications and challenges of these systems across different regions.

### RESEARCH METHODOLOGY

The sample size is 132

#### DATA ANALYSIS AND INTERPRETATION

Category (questions)	Options	percentage
Age	18-24	16.7%
	25-34	21.2%
	35-44	29.5%
	45-55	18.9%
	Above 55	13.7%
Gender	Male	40%
	Female	60%
Education qualification	High school	8.4%
	Associate degree	15.3%
	Bachelore's degree	36.6%
	Master's degree	26.7%
	Doctorate	13%
Job role	Nurse	22%
	Doctor	16.7%
	Adminstration staff	24.2%
	Support staff	19.7%
	Others	17.4%
Work experience	Less than 1 year	13.6%

**iJETRM****International Journal of Engineering Technology Research & Management**

Published By:

<https://www.ijetrm.com/>

	1-3 years	18.9%
	3-5 years	31.1%
	5-10 years	15.2%
	More than 10 years	21.2%
Performance is regularly assessed	Strongly disagree	11.36%
	Disagree	20.45%
	Nutral	26.51%
	Agree	18.93%
	Strongly agree	22.72%
Performance metrics accurately reflect employee's job effectiveness	Strong disagree	20.45%
	Disagree	22.72%
	Nutral	16.67%
	Agree	17.42%
	Strongly agree	22.72%
Performance metrics influence how employee's approach to their work	Strongly disagree	12.1%
	Disagree	15.9%
	Nutral	19.7%
	Agree	25.8%
	Strongly agree	26.5%
Performance evaluation system helps the employee's to improve overall job effectiveness	Strongly disagree	26%
	Disagree	13.7%
	Nutral	18.3%
	Agree	17.6%
	Strongly agree	24.4%
Employee's in the healthcare are well known about performance evaluation criteria	Strongly disagree	19.7%
	Disagree	12.9%
	Nutral	15.9%
	Agree	21.2%
	Strongl agree	30.3%
Training program improved job performance	Strongly disagree	18.9%
	Disagree	16.7%
	Nutral	18.2%
	Agree	21.2%
	Strongly agree	25%
Training and development program relevant to job responsibilities	Strongly disagree	18.2%
	Disagree	22.7%
	Nutral	16.7%
	Agree	15.2%
	Strongly agree	27.3%
Knowledge gained from T&D program positively impacted job	Strongly disagree	22.7%

**ijETRM****International Journal of Engineering Technology Research & Management**

Published By:

<https://www.ijetrm.com/>

performance		
	Disagree	18.2%
	Nutral	13.6%
	Agree	18.9%
	Strongly agree	26.5%
T&D programs lead to measurable improvement in job performance	Strongly disagree	20.5%
	Disagree	21.2%
	Nutral	17.4%
	Agree	13.6%
	Strongly agree	27.3%
T&D improves patients satisfaction and quality care	Strongly disagree	22.7%
	Disagree	17.4%
	Nutral	18.2%
	Agree	15.2%
	Strongly agree	26.5%
Employee performance improved by attending training programs	Strongly disagree	15.9%
	Disagree	15.2%
	Nutral	18.9%
	Agree	25%
	Strongly agree	25%
Confident level before training	Strongly disagree	42%
	Disagree	12.5%
	Nutral	17.9%
	Agree	13.2%
	Strongly agree	14.3%
Confident level after training	Strongly disagree	9.1%
	Disagree	15.2%
	Nutral	18.2%
	Agree	21.2%
	Strongly agree	36.3%
T&D program helps to reduce error	Strongly disagree	23.5%
	Disagree	16.7%
	Nutral	13.6%
	Agree	14.4%
	Strongly agree	31.8%
Preformance improvement directly related to T&D program	Strongly disagree	20.5%
	Disagree	9.8%
	Nutral	18.2%
	Agree	21.2%
	Strongly agree	30.3%
Organization values the skill gained from the T&D program	Strongly disagree	27.5%
	Disagree	14.5%
	Nutral	13.7%
	Agree	28.3%

	Strongly agree	16%
More training session attended more performance improvement	Strongly disagree	13%
	Disagree	16.8%
	Nutral	16%
	Agree	16.8%
	Atrongly agree	37.4%
Attending multiple training enhance better performance	Strongl disagree	30.3%
	Disagree	17.4%
	Nutral	17.4%
	Agree	17.4%
	Strongly agree	17.4%
Noticed significant improvement after attending more than one training	Strongly disagree	13.6%
	Disagree	16.7%
	Nutral	20.5%
	Agree	18.9%
	Strongly agree	30.3%
Attending additional impact postively in job performance	Strongly disagree	21.2%
	Disagree	12.1%
	Nutral	14.4%
	Agree	23.5%
	Strongly agree	28.8%
Frequent training oppourtunity lead to better performance	Strongly disagree	19.9%
	Disgree	18%
	Nutral	20.5%
	Agree	18.9%
	Strongly agree	22.7%

**CORRELATION ANALYSIS:**

- **Null Hypothesis ( $H_0$ ):** There is no significant correlation between performance metrics and performance evaluation.
- **Alternative Hypothesis ( $H_1$ ):** There is a significant correlation between performance metrics and performance evaluation.

**Correlations**

		PERFORMANCE METRICS	PERFORMANCE EVALUATION
PERFORMANCE METRICS	Pearson Correlation	1	.216*
	Sig. (2-tailed)		.013
	N	132	132
PERFORMANCE EVALUATION	Pearson Correlation	.216*	1
	Sig. (2-tailed)	.013	
	N	132	132

\*. Correlation is significant at the 0.05 level (2-tailed).

*Fig no 1: there is relationship between performance metrics and employee effectiveness in healthcare organization***INTERPRETATION:**

$r=0.216$   $p$  value is 0.013 which less than 0.05, Since there is statistically significant positive relationship between Performance Metrics and Performance Evaluation.

**PARIED T-TEST ANALYSIS:**

•**Null Hypothesis ( $H_0$ ):** There is no significant difference in employee performance before and after training (mean difference = 0).

•**Alternative Hypothesis ( $H_1$ ):** There is a significant difference in employee performance before and after training (mean difference  $\neq 0$ ).

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	beforetraining	3.80	132	1.443	.126
	aftertraining	2.97	132	1.319	.115

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	beforetraining & aftertraining	132	.081	.356

**Paired Samples Test**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Interval of the				
					Lower	Upper			
Pair 1	beforetraining - aftertraining	0.833	1.875	0.163	0.511	1.156	5.107	131	0.000

*Fig No 2: comparing confident before and after training***INTERPRETATION:**

The paired sample t-test revealed a statistically significant difference in employee performance before and after training,  $t(131) = 5.107$ ,  $p < 0.001$ . The mean difference of 0.833 with a 95% confidence interval ranging from 0.511 to 1.156 indicates that training had a significant impact on improving employee performance. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted

**SUGGESTIONS****ENHANCES THE USE OF PERFORMANCE METRICS**

Organizations should implement more structured and data-driven performance evaluation methods to strengthen the relationship between performance metrics and employee effectiveness. Regular feedback and goal -setting should be incorporated into performance assessments.

**STRENGTHEN TRAINING AND DEVELOPMENT PROGRAMS:**

Since training and goal-setting should be incorporated into performance, healthcare organizations should increase the frequency and quality of training program. Training should focus on both technical skills and soft skills such as communication and patient care.

**OPTIMIZE TRAINING STRATEGIES**

# iJETRM

## International Journal of Engineering Technology Research & Management

Published By:

<https://www.ijetrm.com/>

Personalized training plans should be developed based on employee needs to ensure targeted improvement. The effectiveness of training should be regularly assessed, and employee feedback should be incorporated to refine training programs.

### ENCOURAGE CONTINUOUS LEARNING

A structure training schedule should be introduced to encourage employees to attend more sessions, as more training leads to better performance. Incentives such as certifications, career growth opportunities, and recognition can be introduced to motivate employees to participate in training programs.

### CONCLUSION

This study highlights the significant role of performance metrics, training, and development in enhancing employee effectiveness in healthcare organizations. The findings indicate that while performance metrics have a positive correlation with employee effectiveness, training and development have a stronger impact on performance improvement. Training programs contribute significantly to better patient satisfaction and employee efficiency, and employees who attend more training sessions show measurable improvements in performance.

To maximize the effectiveness of these initiatives, healthcare organizations should focus on improving their performance evaluation systems, refining training content, and fostering a culture of continuous learning. By implementing these recommendations, healthcare organizations can enhance workforce performance, leading to better patient care and overall organizational success.

### REFERENCES

- **"Performance Management, Metric Quality, and Trust: Survey Evidence from Healthcare Organizations"**  
*Journal of Accounting and Public Policy*, 2024.  
This study examines the impact of performance management practices and the quality of metrics on trust and performance within healthcare organizations.  
<https://www.sciencedirect.com/science/article/pii/S0890838924002919>
- **"Training Needs Assessment: Tool Utilization and Global Impact"**  
*BMC Medical Education*, 2021.  
This research discusses the utilization of the Hennessy-Hicks Training Needs Analysis questionnaire and its global impact on professional development in healthcare.  
<https://bmcmmeduc.biomedcentral.com/articles/10.1186/s12909-021-02748-y>
- **"Implementing Learning into Practice from Continuous Professional Development Activities: A Scoping Review of Health Professionals' Views and Experiences"**  
*BMC Medical Education*, 2024.  
This scoping review collates health professionals' perspectives on applying learning from continuous professional development activities into practice.  
<https://bmcmmeduc.biomedcentral.com/articles/10.1186/s12909-024-06016-7>
- **"Leaders Development Program by 360 Degree Feedback: Reflection on Head Nurses' Leadership Practices"**  
*BMC Nursing*, 2024.  
This study evaluates the effect of a leadership development program utilizing 360-degree feedback on head nurses' leadership practices.  
<https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-024-02395-w>
- **"Interventions to Improve Team Effectiveness Within Health Care: A Systematic Review of the Past Decade"**  
*Human Resources for Health*, 2019.  
This systematic review analyzes interventions aimed at enhancing team effectiveness in healthcare

settings over the past decade.

<https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-019-0411-3>

- **"High-Performance Work Systems in the Healthcare Industry: A Systematic Literature Review"**  
*Padamata Karthik, Vangapandu Rama Devi, 2023.*  
This systematic review examines the implementation of high-performance work systems in healthcare, analyzing their impact on employee performance and patient care outcomes.  
<https://journals.sagepub.com/doi/10.1177/0258042X231168005>
- **"Performance Measurement Systems in the Health and Care Sector: Are Targets and Monitoring Additional Demands or Resources for Employees?"**  
*International Journal of Operations & Production Management, 2023.*  
This study investigates whether performance measurement systems in healthcare act as additional demands or resources for employees, exploring their effects on job satisfaction and organizational commitment.  
<https://www.emerald.com/insight/content/doi/10.1108/ijopm-12-2022-0763/full/html>
- **"Re-designing Performance Management for Healthcare – The Performance Empowerment, Advancement and Career Excellence (PEACE) System"**  
*International Journal of Productivity and Performance Management, 2023.*  
This article presents the development of the PEACE system, aimed at redesigning performance management for allied health professionals to enhance work-life balance and job satisfaction.  
<https://www.emerald.com/insight/content/doi/10.1108/IJPPM-12-2022-0610/full/html>
- **"Hospital Performance Evaluation Indicators: A Scoping Review"**  
*BMC Health Services Research, 2024.*  
This scoping review identifies and categorizes various performance evaluation indicators used in hospitals, providing a comprehensive framework for assessing hospital performance.  
<https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-024-10940-1>
- **"Management Training Programs in Healthcare: Effectiveness Factors, Challenges and Outcomes"**  
*BMC Health Services Research, 2024.*  
This study explores factors influencing the effectiveness of management training programs in healthcare, discussing associated challenges and outcomes.  
<https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-024-11229-z>