Research Article

The Effect of Training, Workload, and Task Complexity on Productivity Through Incentives in Medical Support Services At Rsud Dr. Soetrasno Rembang

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Abstract.
Unsafe work behavior causes 85\% of workplace accidents. Improving employee skills through training is expected to reduce worker error rates. Despite the hospital's provision of beds for inpatient treatment with the expectation of generating financial income from patients, the Bed Occupancy Ratio (BOR) standard has not been met. This study aims to analyze the direct and indirect influence of training, workload, and task complexity on productivity through incentives in medical support services at RSUD dr. R. Soetrasno Rembang. This study employs an explanatory research approach. The total population comprises 145 employees in the medical support service of the hospital. The sampling method was purposive sampling, and the sample size of 105 employees was determined using the Issac Michael formula. Data were analyzed using SEM. The results of this study revealed a \textit{P-value} of <0.05, meaning that it had a positive and significant effect of training, workload, and task complexity on productivity through incentives. The training variable on work productivity showed a direct influence of 0.228 and an indirect influence of 0.133. Other results between workload on productivity showed a direct effect of 0.217 and an indirect influence of 0.138. The test results also indicated a direct influence of task complexity on productivity (0.171) and indirect influence of 0.070. In conclusion, this study suggests that training significantly influences productivity in medical support service at RSUD dr. R. Soetrasno Rembang, with a coefficient of 0.228 compared to other variables.

Keywords: training, workload, task complexity, incentives, productivity

1. Introduction

Hospitals are required to continually enhance their services to remain competitive and remain the community's preferred choice. (1). Employees are expected by their organization to possess a thorough understanding of their roles and responsibilities, ensuring tasks are completed accurately and efficiently, meeting the predetermined objectives. (2). Previous research has suggested that 85\% of accidents stem from unsafe work behavior. To mitigate worker errors, one effective approach is to enhance employee

How to cite this article: Hartiningsih*, Mamik Indaryani, Kertati Sumekar. (2024), "The Effect of Training, Workload, and Task Complexity on Productivity Through Incentives in Medical Support Services At Rsud Dr. Soetrasno Rembang" in \textit{1\textsuperscript{st} International Conference on Economic, Management, and Accounting}, KnE Social Sciences, pages 316–328. DOI 10.18502/kss.v9i17.16366
skills through education and training. (3). The workload faced by hospital employees differs significantly from that of employees in other sectors. In general, serving healthy individuals contrasts with caring for sick patients. (4). If most employees work according to company standards, it doesn’t matter. Conversely, if employees work below standard, the workload is excessive. Meanwhile, if employees work above the standard, it means that the estimated standard set is lower than the capacity of the employee himself (5). Excessive workload lead to physical, mental and emotional fatigue such as headaches, indigestion and irritability (6). Effective task management by hospital administration is crucial, striking a balance between task complexity and resource allocation, including knowledge enhancement, skill development, incentivization, staffing adequacy, and stress management. Failure to manage these factors may result in decreased motivation, increased fatigue, and reduced compliances among staff (7). Productivity is one of the most important indicators in assessing a person's performance and the role of human resources is needed because it is directly related to hospital customer satisfaction (8).

One prevalent issue in hospitals is the low level of efficiency of using beds, which significantly impacts hospital development (9). The Bed Occupancy Rate (BOR) serves as a key metric for gauging the actual productivity of hospital staff (10). At RSUD dr. R. Soetrasno Rembang, the efficiency of bed utilization was 52.63 in 2021 and increased to 60.52 in 2022. However, these values fall below the ideal range of 60-85%, as recommended by the Ministry of Health (MOH, 2005). In response to community feedback and recommendations in 2023, RSUD dr. R. Soetrasno, Rembang Regency, identified a significant number of complaints directed towards support services, totaling 35 complaints, surpassing those received by medical and nursing services, which totaled 14 complaints.

Services provided by the hospitals in the healthcare sector represent tangible forms of public service. Health, an investment for humans, is needed to face the era of globalization. A healthy population will not only support the success of development programs but also increase productivity and income level (11). Studies by Revelationningsih (2019) and Wachid (2020), have demonstrated that training significantly enhances employee productivity. Similarly, research conducted by Muna Putri and Frianto (2021) and (Hendrayani, 2021), indicates that workload significantly influences employee productivity. Moreover, findings from research by Noviana, Indriastuti and Purwanto (2020), highlighted the significant impact of task complexity on individual performance. Additionally, research by Lastriani, (2018) and Sedarmayanti et al., (2020), revealed the positive correlation between incentives and work productivity.
Several previous studies have identified numerous variables influencing employee's work productivity. Consequently, further research is warranted to explore the impact of training, workload, and task complexity on productivity through incentives. Such investigations aim to find the relationship between each variable and work productivity, thereby contributing to a deeper understanding of these dynamics.

2. Method

Hospitals are required to acquire and retain quality human resources, therefore the training activities provided to employees will motivate employees to work harder. Realizing employees as individuals with diverse behaviors and needs highlights the importance of providing incentives to enhance their workload management. (1).

This study adopts an explanatory research approach. The research data collection was carried out at the medical support services section of RSUD dr. R. Soetrasno, Rembang Regency in December 2023. The population in this study comprised 145 employees in medical support services at the hospital. The sampling method was purposive sampling, and the sample size was determined using the Issac Michael formula, obtained 105 employees.

Primary data for this study were gathered through questionnaires distributed to respondents encompassing 5 variables, each comprising five indicators resulting in 25 statements. The Likert scale was utilized in this study, comprising five levels of answer preferences - (1) Strongly disagree, 2) Disagree, 3) Simply agree, 4) Agree, 5) Strongly agree (14). Meanwhile, the secondary data were derived from records of medical support employees, incentive data, training statistics, and feedback from community complaints and suggestions. Training is defined as a series of systematic individual activities aimed at enhancing expertise and knowledge to achieve professional performance in respective fields (15). Training indicators consist of 1) Training objectives, 2) Material, 3) Methods used, 4) Participants’ qualification, 5) Trainers’ qualification (14). Workload refers to the tasks outlined in a job description that must be completed within specific deadlines (16). It is assessed based on several criteria: 1) Target to be achieved, 2) Working conditions, 3) Job standards, 4) Physical needs, 5) Mental needs (6). Task complexity denotes an individual’s perception of the difficulty of a task caused by the limited ability to carry out a task, memory constraints and problem-solving skills of the decision maker (17). Indicators measuring task complexity include: 1) Task difficulty, 2) Task structure, 3) The amount of irrelevant information, 4) Ambiguity level (18), 5) Employee's expertise (17). Incentives comprise various tools or techniques aimed at
fulfilling employees’ needs, ensuring job satisfaction and simultaneously achieving organizational objectives (19). Incentives are measured based on several indicators: 1) Length of work, 2) Need, 3) Seniority, 4) Fairness and worthiness, 5) Job evaluation (20). Productivity is defined as the efficiency of economic resources in achieving desired outcomes, often expressed as a comparison between sacrifices (Input) with income (Result) (21). Productivity indicators in this study encompass: 1) Work quality 2) Work quantity, 3) Timeliness, 4) Motivation, 5) Work discipline (15).

The research instrument utilizes the following tests: 1) Convergent Validity, this assesses the degree to which the measuring instrument accurately measures the intended variable, 2) Construct Reliability, this measures the internal consistency of the indicators within a formation variable, indicating how effectively each indicator represents a common formation variable. 3) Discriminant Validity, this evaluates the extent to which one construct differs from another (22). The data analysis used in this study was Structural Equation Model (SEM). It identifies the dimensions of construction and simultaneously measures the influence and relationship strength between the identified dimensions (23).

3. Results and Discussion

3.1. Result

This study involved 105 respondents, comprising all employees of the medical support services at RSUD dr. R. Soetrasno, Rembang Regency. The variables investigated in this study include training, workload, task complexity, incentives and work productivity. The majority of respondents, 67 (64%), were aged between 30-40 years. Based on respondents’ education level, most respondents, 79 (75%), held a D3 degree. In terms of work experience, most respondents, 59 (65%) had been employed for 6-15 years. The following is the output result of the Structural Equation Models (SEM) model fit and loading factor:

The model fit assessment indicates that there are 4 criteria showing good fit (CMIN/DF, RMSEA, TLI, CFI), 2 indicating Marginal Fit (GFI, NFI) and 3 indicating poor fit (chi-square, probability, AGFI). However, as the good fit criteria outnumber the poor fit criteria, it can be concluded that the research model is suitable for further testing. Confirmatory factor analysis results reveal that all question items pertaining to the variables of training, workload, task complexity, incentives, and productivity exhibit factor
loading values exceeding 0.5, indicating their validity. The smallest factor loading value, 0.709 corresponds to the task difficulty indicator within the task complexity variable.

The reliability values for the variables are as follows: training (X1) = 0.929, workload (X2) = 0.902, task complexity (X3) = 0.889, incentive (Y1) = 0.915, productivity (Y2) = 0.13. All variables exhibit construct reliability values exceeding 0.7, so all variables are reliable. Here are the results of the hypothesis test in this study:

Table 1 presents the results of hypothesis testing for the studied variable indicators. For the path from training to incentives, the calculated CR value or t value is 4.969 and the p value *** <0.001) is less than 0.05 which means H1 is accepted. It is concluded that the training variable (X1) has a significant positive effect on the incentive variable (Y1). The magnitude of this influence, as observed in the standard regression weighting table, is 0.375.

Similarly, for the path from workload to incentives, the calculated CR value or t value is 4.315 which and the p-value (<0.001) which is then 0.05. This signifies that H2 is accepted, indicating that the workload variable (X2) had a significant positive effect on the incentive variable (Y1). The magnitude of this influence, as depicted in the standard regression weighting table is 0.400.
The analysis revealed the path from task complexity to incentives, with the CR value or calculated t value of 2.660 and a p value of 0.008, which is less than 0.05. This indicates that H3 is accepted, suggesting that the Task Complexity variable (X3) has a significant positive effect on the Incentive variable (Y1). The magnitude of influence, as seen in the standard regression weighting table, is 0.207.

Furthermore, the analysis also showed the path from incentive to productivity, with a CR value or calculated t value of 4.703 and p value (<0.001) was smaller than 0.05. Consequently, H4 is accepted, indicating that the incentive variable (Y1) had a significant positive effect on the productivity variable (Y2). The magnitude of the influence as seen on the standard regression weighting table, is 0.382.

<table>
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<tr>
<th>Influence</th>
<th>Line</th>
<th>Guess</th>
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<th>p-Value</th>
<th>Information</th>
<th>Hypotesis</th>
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<td>Incentive Workload →</td>
<td>0.400</td>
<td>4.315</td>
<td>&lt;0.001</td>
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<td></td>
<td>The complexity of</td>
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<td>2.660</td>
<td>0.008</td>
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<td></td>
<td>Productivity Incentives → Productivity Training</td>
<td>0.382</td>
<td>4.703</td>
<td>&lt;0.001</td>
<td>Significant positive effect</td>
<td>H4 Accepted</td>
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<td></td>
<td>Productivity Workloads →</td>
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<td>3.284</td>
<td>&lt;0.001</td>
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<td>The Complexity of</td>
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<td>Indirect Effects</td>
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The analysis demonstrated the path from training to productivity, with a calculated CR value or t value is 3.284 and the p value of 0.001, which was less than 0.05. This indicates that H5 is accepted, suggesting that the training variable (X1) had a significant positive effect on the productivity variable (Y2). The magnitude of the influence as seen in the standard regression weighting table, is 0.228.

Similarly, the analysis revealed the path from workload to productivity, with a calculated CR value or t value of 2.605 and a p value of 0.009, which was smaller than 0.05. Hence, H6 was accepted, indicating that the workload variable (X2) had a significant positive effect on the productivity variable (Y2). The magnitude of the influence as seen on the standard regression weighting table, is 0.217.

The analysis indicated that path from task complexity to productivity, with a calculated CR value or t value of 2.569 which and the p value of 0.010, which was smaller than 0.05. Therefore, H3 is accepted, suggesting that the task complexity variable (X3) had a significant positive effect on the productivity variable (Y2). The magnitude of the influence as seen in the standard regression weighting table, is 0.171.

The Sobel test analysis was employed to determine the indirect effects of the training variable (X1), workload (X2), task complexity (X3) on the productivity variable (Y2) through the incentive variable (Y1) as the intervening variable. The calculation results of the Sobel test show that the calculated t value of 3.380 is greater than the table t value of 1.983. Thus, H8 is accepted, indicating that the training variable (X1) through incentives (Y1) significantly increases productivity (Y2). The value of the indirect path of influence is 0.133. Similarly, for the workload variable (X2), the calculated t value of 3.146 exceeds the table t value of 1.983. Consequently, H9 is accepted, signifying that the workload variable (X2) through incentives (Y1) significantly affects productivity (Y2). The value of the indirect path of influence is 0.138. Moreover, the Sobel test results showed that the calculated t value of 2.290 for the task complexity variable (X3) is greater than the table t value of 1.983. Thus, H10 is accepted, indicating that the task complexity variable (X2) through incentives (Y1) has a significant effect on productivity (Y2). The value of the Indirect path of influence is 0.070.

3.2. Discussion

3.2.1. The effect of training on incentives

The results of research conducted at medical support services at RSUD dr. R. Soetrasno, Rembang Regency indicates that the training variables exert a significant positive
influence on incentive variables. These findings align with Dedi Setiyono's research in 2022 which similarly concludes that job training variables positively and significantly impact the provision of incentives (24). The observed phenomenon can be attributed to the fact that well-trained employees tend to exhibit higher levels of morale (25). Every employee has different abilities and experiences, not all employees can adapt to organizational changes, and there are still employees who have not been able to give up negative habits or cultural influences. Consequently, this frequently leads to issues, particularly when it comes to the ineffective performance of tasks completion (26).

3.2.2. The effect of workload on incentives

This study confirms that workload variables have a significant positive influence on incentive variables. The results of this study are in line with Heriyani and Daud's research in 2022 which similarly demonstrates a significant and positive relationship between workload and incentives (27). Realizing the workforce as individuals with diverse behaviors and various needs requires intensive attention from the company (28). Providing appropriate and adequate incentives can enhance the employees' performance. It is undeniable that every employee is driven by specific motives such as fulfilling physical and security needs, social needs, and personal aspirations, when engaging in work for an organization (27).

3.2.3. The effect of task complexity on incentives

The research findings indicate that the task complexity variables wield a significant positive influence on incentive variables. These results are in line with research on the effect of the interaction between financial incentives and task complexity on performance. This research implies that financial incentives are not the main factor affecting employee performance within a company. The more complex a task is, the higher the effort, attention, consistency, and time it takes for a person to complete the task (29).

3.2.4. The effect of incentives on productivity

This study proves that incentive variables exert a significant positive influence on productivity variables. The results of this study align with research by Sedarmayanti, et al in 2020, which stated that incentive variables significantly impact employee performance. Incentives for employees hold a crucial position in enhancing performance, signifying
that effective incentive management correlates with improved employees’ performance (30).

### 3.2.5. Impact of Training on Productivity

This study confirms that training variables have a significant positive influence on productivity variables. These findings are consistent with Wahyuningsih’s research in 2019 and Wachid in 2020, both of which demonstrated that training variables have a significant effect on employee work productivity. This suggests that investing in training can lead to increased employees’ productivity (12), (13). However, research conducted by Siagian and Sudijiman in 2021 yielded different results, stating that training did not have a significant effect on productivity (25). Despite this disparity, it remains crucial for companies to prioritize their employees by enhancing their abilities, knowledge, and skills, especially in the face of rapid technological advancements. Therefore, providing training opportunities for employees is essential for boosting their work productivity (12).

### 3.2.6. How Workload Affects Productivity

This study confirms that workload variables have a significant positive influence on productivity variables. The results of this study are in line with research conducted by Muna Putri and Frianto in 2021 and Hendrayani in 2021, both of which stated that workload variables significantly affect employee work productivity (28), (31). Similarly, research conducted by Y.S.A and Haryani in 2018, indicated that workload variables simultaneously affect employee performance (4). On the other hand, the research conducted by Sanjani, Putri and Putra, in 2021 revealed that workload did not have a significant effect on employee work productivity (32). HR needs can be assessed by identifying how much of an organization’s output in a particular division is to be achieved. Then it is translated into the length of time (hours and days) employees need to achieve the output, allowing for the identification of whether work is proceeding as expected or falling below standards (33).

### 3.2.7. The effect of task complexity on productivity

This study confirms that the task complexity variable has a significant positive influence on productivity variables. The results of this study are in line with the research of Sunaryo, Hutama and Septiyani, in 2020, which stated that the complexity of work has
a significant effect on employee productivity variables. In contrast, research conducted by Mustikayani and Dwirdanra in 2018 suggested that the task complexity negatively affects the performance (34). The complexity of the task is an important factor for organizations to consider when evaluating individual performances, as it directly impacts the effectiveness and efficiency expected by the organization. When employees are assigned tasks with an appropriate level of complexity, they are more likely to perform effectively and are motivated to achieve optimal performance (29).

4. Conclusion

In conclusion, the study conducted in the medical support services at RSUD dr. R. Soetrasno Rembang indicates that the productivity variable, with a loading factor of 0.228, is primarily influenced by training compared to other variables. Notably, the task complexity variable, specifically the indicator of task difficulty, exhibited the smallest loading factor. Recommendations for hospitals based on these findings include prioritizing the organization of training programs for employees while ensuring that trainers meet qualification requirements. In addition, it is necessary to carry out health checks during both worker recruitment and periodic medical checks. Socialization efforts regarding standard operating procedures (SOPs) are also recommended to enhance work efficiency and effectiveness. Furthermore, hospitals should consider distributing incentives to employees based on the urgency of their basic living needs. It’s important to strike a balance between meeting these needs adequately and without excess. Quality assurance measures, such as maintaining disciplines in quality reporting and conducting regular monitoring and evaluation of job implementation, are also essential responsibilities for employees. By implementing these recommendations, hospitals can optimize employee performance and ultimately improve overall productivity in medical support services.

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