

ANALYSIS OF HEALTH WORKERS' PERFORMANCE THROUGH THE DEVELOPMENT OF HUMAN RESOURCES IN PUBLIC HEALTH SERVICE IN INDONESIA AND TIMOR LESTE

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ABSTRACT

Introduction: To achieve an ideal and satisfactory level of health for the community, it is very important to provide high-quality services provided by health professionals. Therefore, health workers are expected to show high performance. Based on the 2023 Indonesian Health Profile, 11.5% of community health centers have a shortage of health workers, namely doctors. Timor Leste does not yet have higher education in nursing, so the number of nurses needed is still insufficient. **Aims:** to analyze the influence of health worker performance on human resource development in the Indonesian and Timor Leste Public Health Services. **Methods:** A study was conducted involving 43 health professionals. The tool used was a survey conducted through Google Forms. This study used chi-square to investigate the correlation between the two variables and logistic regression to identify the parameters most strongly associated with the performance of health workers. **Result:** The research findings show that in bivariate analysis, training and work motivation have an impact on the performance of health workers. However, in multivariate analysis, training emerged as the most significant component, with a p-value of 0.021, an odds ratio of 7.173, and a 95% confidence interval of 1.338-8.458. **Conclusion:** The performance of health workers is largely influenced by their level of training. Health workers with superior training showed 7,173 times more effective performance compared to health workers with poor training. Carrying out regular and continuous training, tailored to the health needs of workers, so that they can master their field of work.

Keywords: Performance, Health Workers, Human Resources

INTRODUCTION

Law of the Republic of Indonesia Number 36 of 2014 concerning Health Workers emphasizes the importance of the role of health workers in improving the quality of health services to the community. The goal is to empower the community to be more aware, diligent, and able to live healthily, which will ultimately achieve the highest level of health. This investment is made to create human resources that are socially and economically useful and contribute to the welfare of society as a whole, as stated in the Preamble to the 1945 Constitution of the Republic of Indonesia.

(Law Number 36 of 2014 Concerning Health Workers).

Community Health Centers, or Puskesmas, are health care facilities that prioritize public health initiatives and provide primary health care services. These institutions strongly emphasize disease promotion and prevention to improve the overall health of the community they serve. (Regulation of the Minister of Health Number 43 of 2019 concerning Community Health Centers).

There are several interrelated health development issues in Indonesia, including disparities in health status, the burden of diseases that affect physical and mental

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health, inadequate health service performance, community behavior that does not prioritize cleanliness and healthy lifestyles, lack of quality, equity, and affordability of health services, and shortages of health workers. And uneven distribution, low health status of the poor. Among several of these problems, to achieve quality health services, we must improve the low performance of health services and develop health human resources in terms of number, type, quality, and distribution (Adisasmoto, 2010).

Timor Leste is still very minimal in supporting health in the region. The human resource development strategy is still weak in relation to the planning process for human resource development through training plans which are not based on institutional development, priority needs, and health workforce gaps faced by the Ministry of Health (Pratiwi, 2022).

Every organization or company needs resources to achieve its goals. Resources are the sources of energy, potential, and strength that are essential to generate power, facilitate movement, empower activities, and drive action. Resources can be classified into various categories, including natural resources, financial resources, human resources, scientific resources, and technical resources. Human resources hold the most relevance among all other factors. The presence and empowerment of human resources are very important to achieve health development, because the provision of high-quality and affordable services to all segments of society cannot be achieved without the readiness of human resources. Human resource readiness can be achieved through effective human resource planning, which involves management taking necessary steps to ensure that the organization has the right workforce available to fill the right positions and roles at the right time. This is essential to achieve the set goals and objectives. (Siagian, 2012).

Efforts to develop health human resources are one of the pillars in the

implementation of health development reform, which is expected to be accelerated and more synergistic between the center and regions through efforts to distribute, equalize and retain the distribution of health workers so that the goals and targets of medium and long term health development can be achieved. One of the efforts made to plan for the fullest number, quality and distribution of health human resources, especially in remote, disadvantaged, border and island areas, is to improve the quality of health human resource planning (Satrianegara, 2012).

Health human resources are closely related to every aspect of a health organization and provide communication and collaboration. To meet the goals and objectives of the organization, skilled and capable human resources are needed to identify and solve problems so that they can find solutions to each problem. This is the main responsibility and function of the organization. Improper human resource management can jeopardize the successful implementation of policies, plans, programs, and activity procedures. (Sutrisno, 2011).

Organizations must address human resource challenges to thrive in the era of globalization. The function of human resources is critical in all aspects of organizational operations. Despite having adequate facilities, infrastructure, and financial resources, the absence of reliable human resources will hinder the successful completion of organizational functions. This shows that human resources are a major factor that must be considered, along with their various requirements. Human resources will be the main determinant of the success of implementing organizational actions. Organizations face an increasing need to acquire, develop, and retain high-quality human resources due to the ever-evolving nature of the environment. (Sari, 2012).

An organization is a vehicle for individuals to engage in collective efforts with the aim of achieving common goals. In

this particular activity environment, it is essential that each individual or employee has a high level of competence to effectively perform assigned tasks, exercise their authority, and fulfill their responsibilities in accordance with their assigned roles. (Satrianegara, 2012)

Human resource development is the efficient utilization of an institution's human resources to ensure that they can operate at their best to collectively achieve goals that are in line with the organization's vision and mission. (Rubandiyah, 2019).

The performance of employees in government organizations often fails to meet public expectations. They often make mistakes that should not happen, such as frequently being absent from work and not fully adhering to working hour limits. This will have a negative impact on the organization because work often fails to be completed within the specified time frame, resulting in significant time mismanagement. They think that working in the government does not require maximum work, because the salary has been determined and allowances have been given. Apart from that, there is still the phenomenon of employees not working during working hours or using working time to do other things outside of work. This causes employee performance to decline because their attention is divided by extraneous tasks that are not related to their responsibilities as public servants. To prevent these employees from fully committing to the organization (Hasibuan, 2011).

Ngoresan Community Health Center is a first level service unit located in Jebres District, Surakarta City, with a population in 2022 of 148,804 people, which is the second highest district with the largest population in Surakarta. Ngoresan Community Health Center will have a total of 11,246 patient visits in 2022, so with the large number of patient visits, Ngoresan Community Health Center requires quite a lot of health workers because the workload

is very high (Central Java Provincial Health Office, 2023).

Based on a preliminary survey, the Ngoresan Community Health Center experienced several obstacles related to health human resources, such as queues piling up because many people were still confused and needed direction from health workers, while health workers experienced crowds in the registration administration section. This also happens in the medical records section; there are problems in maintaining and storing medical record documents, because medical records officers also handle work in the registration administration section (Surakarta District Health Office, 2022).

Health facilities in Timor Leste are still very minimal to support health in this area. There is only one central general hospital located in the city of Dili which functions as the main referral hospital of all existing health centers, the rest are regional hospitals which handle 1 to 2 districts, and community health centers which handle several villages at once. The average travel time to the nearest health center is 70 minutes. Until now, there is not a single specialized hospital in Timor Leste. Hospitals in Timor Leste are not yet able to handle major disease cases, so many are still referred to Indonesia. Apart from the problem of a shortage of competent specialist doctors, Timor Leste also has a poor hospital management (Pereira et al., 2012).

To achieve optimal and satisfactory health status for patients through health efforts, it is necessary to provide good service provided by employees; therefore, high performance is required from employees. Human resource management is a crucial factor that has a significant impact on achieving organizational goals, including improving employee performance. One of the crucial service indicators for patients as customers is the provision of acceptable services, especially in terms of registration and waiting time. Over time, patient expectations for fast

service tend to increase in accordance with advances in technology and health information that can be accessed by consumers of health services. The value of time in society is becoming more expensive as people feel an increase in their economic efforts. Therefore, researchers conducted a study to analyze the improvement of the performance of health professionals in Indonesia and Timor Leste through human resource development.

METHODS

This study uses an observational analytical design with cross-sectional methodology. This study aims to test the correlation between the dependent variable, namely the performance of health workers, and independent factors, namely training, education, and work motivation. (Murti, 2018). The population of this study was health workers working at the Ngoresan Surakarta Health Center and the Dili Health Center, Timor Leste. The sampling strategy used was proportional stratified random sampling. The sample size was determined using the Slovin method, so that a sample size of 43 health workers was obtained from the Ngoresan Surakarta Health Center, Indonesia, and the Dili Health Center, Timor Leste. The research instrument used in this study was a survey conducted via Google Forms. Instrument validity test using the Pearson product moment test with results (r table = 0.361) for performance variables ($r=0.391$), training ($r=0.393$), and motivation ($r=0.593$). The validity test of the instrument used the Cronbach's alpha test ($>0,60$) with a result of 0.617. Data were analyzed using SPSS 22 software and the chi-square bivariate test. In addition to analyzing education, training, and work motivation factors, this study also analyzed the characteristics of health workers, including age, education, and gender. The attributes of each variable are described in the form of a frequency distribution and a percentage. The profession categories in this study refer to the Regulations regarding

the types of health workers in Community Health Centers in Indonesia, as regulated in the Regulation of the Minister of Health (Permenkes) Number 19 of 2024. After bivariate testing of all variables, a multivariate test was carried out by entering variables that had a significance value (p) of less than 0.25. The logistic regression test is an analysis test used for multivariate analysis. Multivariate analysis was carried out using a logistic regression test using the "Enter" method which is the method used when all independent variables are entered as predictors. Logistic regression analysis was used to determine which variables had the greatest impact on health professional performance, based on the odds ratio, confidence interval, and p -value of each variable. (Murti, 2018). This research was conducted with the permission of the Faculty of Health Sciences ethics committee, Kusuma Husada University, Surakarta. The ethics letter is numbered No. 1746/UKH/L/02/EC/I/2024.

RESULT

Table 1. Characteristics of health workers

Variables	Fre- quency (n)	Presenta- tion (%)
Age (Years)		
16-25	1	2.3
26-35	21	48.8
36-45	15	34.9
46-55	6	14.0
Total	43	100.0
Education		
Diploma III/ School of Nursing Education	14	32.6
Bachelor	19	44.2
Masters/Specialist	10	23.3
Total	43	100.0
Gender		
Man	3	7.0
Woman	40	93.0
Total	43	100.0
Profession		

Variables	Frequency (n)	Presentation (%)
Health Laboratory Institutions	2	4.7
Public Health	2	4.7
Dentist	2	4.7
Dental and oral therapist	1	2.3
Midwife	11	25.6
Pharmacist	4	9.2
Sanitarian	1	2.3
Nurse	17	39.5
general practitioners	3	7.0
Total	43	100.0

Based on Table 1, the majority of health workers are aged 26-35 years (48.8%). Most of the health workers had a bachelor's degree, 19 people (44.2%). Most health workers are female, 40 people (93%). Most health workers work as nurses, 17 people (39.5%).

Table 2. Bivariate Chi-square Test of Education, training, and work motivation with the performance of health workers

Variable	Performance				p-value
	Good Enough		Good		
	f	%	f	%	
Edu-cation					
SPK/ D3	7	16.3	7	16.3	0.745
S1/ S2	12	27.9	17	39.5	
Total	19	44.2	24	55.8	
Trai-ning					
Pretty good	11	25.6	3	7.0	0.03
Good	8	18.6	21	48.8	
Total	19	44.2	24	55.8	
Work Motiv-ation					
					0.004

Variable	Performance				p-value
	Good Enough		Good		
	f	%	f	%	
Pretty good	12	27.9	4	9.3	
Good	7	16.3	20	46.5	
Total	19	44.2	24	55.8	

Based on Table 2, it is known that the results of the analysis of the level of education on employee performance from 43 samples showed that there were 14 people (32.6%) with Diploma III/Nursing Education School education, of which 7 people (16.3%) had poor performance and 7 people (16.3%) had good performance. Meanwhile, there were 29 respondents with Bachelor's/Master's/Specialist education (67.4%), of which 12 people (27.9%) had poor performance and 17 people (39.5%) had good performance. Statistical tests showed that there was no significant correlation between education level and improved staff performance at Ngoresan Community Health Center and Dili Community Health Service Center in Timor Leste ($p = 0.745$).

It is known that the results of the training analysis of employee performance from 43 samples showed that 14 people (32.6%) had poor training participation, of which 11 people (25.6%) had poor performance and 3 people (7.00%) had good performance. Meanwhile, respondents with good training participation were 29 people (67.4%), of which 8 people (18.6%) had poor performance and 21 people (48.8%) had good performance. Statistical tests showed a significant correlation between the amount of education and increased staff performance at the Ngoresan Community Health Center and the Dili Community Health Service Center in Timor Leste ($p = 0.03$).

It is known that the results of the analysis of work motivation on employee performance from 43 samples showed that 16 people (37.2%) had poor work motivation, of which 12 people (27.9%) had

poor performance and 4 people (9.3%) had poor work motivation. %) has good performance. Meanwhile, there were 27 respondents with good work motivation (62.8%), of which 7 people (16.3%) had poor performance and 20 people (46.5%) had good performance. Statistical tests showed a substantial correlation between the level of work motivation and increased employee performance at Ngoresan Health Center and Dili Health Center in Timor Leste ($p = 0.004$). Variables with a p value of less than 0.25 were included in the multivariate test using logistic regression.

Multivariate analysis was carried out using a logistic regression test using the "Enter" method, which is the method used when all independent variables are entered as predictor variables regardless of whether these variables are related or not to the dependent variable. Regardless of the magnitude of the relationship between the independent and dependent variables, the variables are always considered and included. This study uses many independent variables, including education, training, and work motivation, as predictor variables. The results show that training and work motivation have a positive effect on improving employee performance, but education does not show any impact on improving employee performance. Variables with p -values of less than 0.25 are training and work motivation. Multivariate logistic regression tests revealed that the variable with the strongest correlation to health worker performance was training. Multivariate logistic regression tests were conducted to test the relationship between training and work motivation on health worker performance. The results of this analysis are presented below:

Table 3. Multivariate Logistic Regression Test Results of Training and Work Motivation with Health Workers' Performance

Variable	Sig.	Odds Ratio (OR)	CI 95%
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Training	0.021	7,173	1,338-8,458
Work motivation	0.024	6.124	1,273-9,452

Multivariate logistic regression test, as shown in Table 3, revealed that training had the strongest correlation with the performance of health workers at Ngoresan Primary Healthcare Indonesia and Community Health Service Centre, Dili, Timor Leste. This correlation was statistically significant, with a p -value of 0.021. The odds ratio (OR) was 7.173, indicating a strong relationship between training and performance. The 95% confidence interval (CI) ranged from 1.338 to 8.458. This study showed that health professionals at Ngoresan Primary Healthcare Indonesia and Community Health Service Centre, Dili, Timor Leste, who received comprehensive training performed 7.173 times better than workers who received less comprehensive training. Increasing the level of training for health workers is directly correlated with their improved performance.

DISCUSSION

Human resource development aims to develop reliable and competent personnel with the skills and qualifications necessary to meet the organization's specific requirements. The ultimate goal of human resource development is to improve employee performance by increasing their capacity to excel. If the employee's previous performance is good, the development provided is intended to improve employee performance as their career progresses. Conversely, if the previous performance is not good, the purpose of human resource development is to improve it to achieve positive and satisfactory results. (Sari, 2023).

Employees' education level significantly affects their capacity to

achieve peak performance, as shown by (Wulandari & Fajrah, 2021), The individual also asserted that “Education in an organization involves the systematic development of skills and competencies that are aligned with the goals of the organization.” As an individual’s level of education increases, so does the level of human resources expected. Without educational provision, an individual cannot efficiently acquire new knowledge or skills within a structured framework. Therefore, it can be concluded that a high level of education is very important for an employee because it positively impacts the individual and the organization where they work. The educational attainment of employees significantly affects their performance in carrying out and completing assigned tasks. With a higher level of education, employees have broader information and capabilities, which allows them to effectively address the challenges they face. (Sembiring, 2023).

Based on table 2, most of the research subjects fall into the higher education category and have good performance. This research is in line with research conducted by Ohail, et al. (2014), which states that there is no influence between education and employee performance ($p=0.103$). The level of education possessed by employees does not guarantee maximum employment. What is meant is that employees with a higher level of education do not necessarily have good performance, because there are still many levels of education that are not in accordance with their field of work.

This research is supported by research conducted by Khan N, et al. (2014) that there is no influence of education and improving employee performance ($p=0.335$). Employee performance is influenced by many factors, such as work motivation, remuneration, training, and other relevant features. The governments of Indonesia and Timor Leste, especially the Ministry of Health, have implemented several initiatives to improve the education of health workers. These efforts include providing scholarships to health workers to

continue their studies in their respective fields and areas of competence. On May 7 2024, the Ministry of Timor Leste collaborated with Gajah Mada University, Yogyakarta, Indonesia, for educational collaboration to provide a place for further study for health workers in Timor Leste and Indonesia (Agencia Noticia de Timor Leste, 2024).

Education is a systematic and purposeful process that takes place over a period of time, based on several levels, aiming to provide, develop, and acquire desired knowledge, attitudes, values, skills, or abilities. The process of selecting employees to study and determining which schools they will attend must be done carefully. The selection of personnel for education depends on their specific goals and the type of education they will receive. The government, as the system designer, and other stakeholders have a limited understanding of the implementation of workforce education. The potential risk lies in different techniques producing very different results. Employee awareness in pursuing education should be based on collective institutional awareness to improve their quality for community service (Roshida et al., 2023).

According to Andayani et al., (2024) Training is a methodical procedure to change employee behavior to advance organizational goals. Training fosters an atmosphere in which individuals can develop and acquire specific job-related attitudes, talents, skills, knowledge, and behaviors. Training usually emphasizes the acquisition of specific skills or the correction of performance deficiencies in personnel. (Akdere & Egan, 2020)

Most of the research subjects who fall into the good training category have good performance. According to Hidayatur Rahman & Yuly Peristiowati (2022), career development has a direct relationship with the effectiveness and satisfaction of organizational members. In this scenario, the professional growth trajectory must be aligned with the current and anticipated

needs of the organization. Undoubtedly, employees who undergo more training will have different skills and expertise compared to other employees who have never received training, according to the opinion Awoah et al., (2022) that the more frequently an employee participates in training, the more opportunities he has to achieve higher self-development in preparing for career development. With training, it is hoped that there will be changes in knowledge, abilities, and attitudes towards work. However, some employees still take part in training but lack performance (Haakenstad et al., 2022). This means that these expectations are not in accordance with what is said by Bhaumik et al., (2020), The purpose of organizing training is to improve the ability to complete tasks efficiently, to grow knowledge for rational work implementation, and to foster attitudes that encourage cooperation between colleagues, staff, and executives.

The results are the same as research conducted by Sendawula, et al., (2018), The study found that employee training has a statistically significant impact on employee performance ($p=0.000<0.05$). Consequently, frequent training sessions will result in improved employee performance. This explains that organizations often face difficulties in organizing training sessions aimed at improving the quality of work and performance of their personnel. Companies prioritize training needs and require support from effective training methods, training materials, skilled trainers or instructors, and complete training facilities to achieve optimal results during training sessions.

The research results are in accordance with the opinion of Sendawula, et al., (2018), The study found that employee training has a statistically significant impact on employee performance ($p=0.000<0.05$). Training is a methodical procedure aimed at changing employee behavior to enhance organizational goals. During the training process, a conducive environment is created to facilitate the acquisition and

development of individual employee job-related attitudes, talents, skills, knowledge, and behaviors. The primary purpose of training is to equip personnel with specific skills or address any deficiencies in their performance. Optimizing organizational goals. During the training process, a conducive environment is created to facilitate the acquisition and development of employee job-related attitudes, talents, skills, knowledge, and behaviors. Training usually emphasizes equipping employees with specific skills or helping them address deficiencies in their performance.

The governments of Indonesia and Timor Leste, in this case the Ministry of Health, have made various efforts to provide training for health workers. The training includes training for city district health promotion personnel, district/city level health information system training, and technological guidance for community empowerment facilitators in the fields of Health, Education, and training (Diklat) to improve organizational performance (Pusdiklatpemendagri, 2024). Since 2019, Timor Leste, through the Ministry of Health of the Democratic Republic of Timor-Leste (RDTL) with representatives of the Instituto Nacional de Saude (INS), has carried out various series of comparative studies related to the process of increasing the competency of health workers, as well as the process of accelerating D1 to D3 education, especially nurses, midwife, analyst, nurse, and pharmacist.(Onyango & Wanyoike, 2014)

The Timor-Leste Ministry of Health is in the modeling stage to improve the quality of health workers, so it is necessary to increase training in terms of information technology, health services and training according to the field and expertise of health workers. An example is that on March 26 2024, the Australian government provided training to 25 Timor-Leste medical personnel. Training is provided in family health programs. On 02 April 2024, training was conducted to increase palliative care capacity for nurses and health workers in

Timor Leste by the World Health Organization (WHO) (Agencia Noticia de Timor Leste, 2024).

According to Fauzi et al., (2020), motivation comes from the Latin word "Moreve" which means encouragement from within humans to act or behave. The definition of motivation cannot be separated from the words need, "needs" or "want". A need is a potential within humans that needs to be addressed or responded to. According to Stanford in Anhar et al., (2016) motivation is "a condition that moves humans towards a certain goal." Motivation is also said to be the energy to generate encouragement within oneself. Meanwhile, Awoah et al., (2020) Motivation can be defined as an innate drive within a person that compels them to engage in certain behaviors or actions. (Awoah et al., 2022).

Motivation, according to Vidal-Cevallos et al., (2022), can be defined as a set of beliefs and principles that motivate individuals to achieve specific goals that align with their personal aspirations. Motivation includes emotions, cognitions, and previous experiences contributing to the company's internal and external interactions. In addition, Parmasari et al. (2023) define motivation as a state that drives employees to achieve predetermined goals. Individual motivation can be categorized into two types: Intrinsic motivation comes from within the individual, while extrinsic motivation comes from external sources. Both forms of motivation have a major influence on an individual's behavior and performance in their work. (Parmasari et al., 2023).

Most research subjects who fall into the good motivation category perform well. This is supported by research conducted by (Basir et al., 2022) This study revealed that work motivation has a positive and statistically significant impact on employee performance ($p=0.001$; $F=2.754$). This study shows a strong positive relationship between motivation and employee performance. This implies that increased

motivation will result in increased employee work performance.

This research is in line with research by (Mousa & Othman, 2020). There is a strong correlation between work motivation and health worker performance ($p=0.0001$). High work motivation will drive extraordinary work performance and contribute significantly to achieving organizational goals. Employees who have motivation are expected not to neglect the duties/obligations that have been entrusted to them by the workplace organization, to be able to maintain and increase employee work motivation in an agency is not an easy job to implement, considering that employee problems have complex problems related to human desires with many factors that influence each other both internally and externally (Haakenstad et al., 2022).

CONCLUSION

Training is the factor that most influences improving the performance of health workers at the Ngoresan Community Health Center and Community Health Service Center, Dili, Timor Leste. It is necessary to place employees in areas of work that are appropriate to their abilities to encourage employees to achieve better performance. In this way, employee satisfaction will be achieved and they will not delay the completion of tasks and can improve their performance in accordance with their abilities. Carrying out regular and ongoing training, tailored to employees' current needs so that employees will be able to master their field of work.

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