

Transfer of Training as a Mediator of the Effect of Knowledge Characteristics on Nurses' Performance

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Abstract

The performance of nurses as professionals who are at the forefront of health services has an important role in determining the quality of services, including mental health services. For this reason, it is necessary to improve competence on a continuous basis. However, the knowledge gained by nurses during training has not been fully applied in work practice consistently. The purpose of this study is to analyze the role of transfer of training in mediating the influence of knowledge characteristics on the performance of nurses at the Atma Husada Mahakam Regional Psychiatric Hospital. This study uses a quantitative approach with an explanatory design to test the causal relationship between variables. The sample of this study is clinical nurses who directly provide services to patients, with sampling techniques using the purposive sampling method. The data collection method was carried out using a structured questionnaire that had been tested for validity and reliability. Data analysis using SEM-PLS. The results showed that knowledge characteristics had a positive and significant effect on the transfer of training and nurse performance, but the transfer of training did not have a significant effect on nurse performance, so it was not able to mediate the relationship between knowledge characteristics and performance. These findings suggest that the improvement in nurse performance is more directly influenced by knowledge characteristics than through the process of transferring training results. The study highlights strengthening knowledge characteristics to improve nurse performance and improving training supervision and evaluation for effective training transfer.

Keywords : characteristics of knowledge, *transfer of training*, nurse performance, mediation, sem-pls

INTRODUCTION

According to the report WHO (2021) that about one in seven individuals in the world suffer from a mental disorder, which makes them the largest contributor to the burden of disability. This is one of the global issues that has received increasing attention in recent decades. In Indonesia, it is found that around 20% of the population is at risk of experiencing mental health problems (Kementerian Kesehatan RI, 2022). At the regional level, East Kalimantan is the second highest contributor to the prevalence rate of depression after West Java province, which is 2.2% (Kementerian Kesehatan RI, 2023), so it requires serious attention in the provision of mental health services.

Nurses are the largest professionals in health facilities and have a strategic role in determining the quality of health services, including mental health services. Nurse performance is not only determined by the fulfillment of administrative responsibilities, but also by clinical ability, therapeutic communication and decision-making accuracy (Krijgsheld et al., 2022). Therefore, according to (Dessler, 2020) Improving competence for nurses through training programs is one of the main strategies in improving the quality of health services.

However, the knowledge and skills gained through training are not always applied in work practice. These findings are often obtained from multiple studies, known as gaps Transfer of Training. This is in line with the statement conveyed by (Noe, 2020) that the results of the training are not fully applied in daily work. From a human resource management perspective, the success of training is not only measured by the learning process, but by the extent to which participants are able to transfer the training results into real work behaviors (Mdhlalose, 2022).

Theoretically effectiveness Transfer of Training It is strongly influenced by the role of individual knowledge characteristics. Noah (Noe, 2020) emphasizing that knowledge that includes conceptual, declarative, procedural, and conditional are believed to improve an individual's ability to understand, adapt, and apply training outcomes.

Some empirical research shows that the characteristics of knowledge affect performance, either directly or through certain mediation mechanisms (Roshaida & Razak, 2024).

In the context of health services, especially nursing, research on the relationship between the variables of knowledge characteristics, transfer of training and performance is still limited, especially in psychiatric hospitals. In addition, the performance evaluation of nurses who are still administratively oriented is often not able to comprehensively describe the quality of clinical performance. This shows that there is an empirical gap in understanding how knowledge gained through training actually contributes to nurses' performance in real practice (Daneshfar & Moonaghi, 2025; Gassas, 2021).

In addition, some studies show that the relationship between training transfer and performance still shows inconsistent results. Chong (2020) Finding that the influence of training transfer on performance is not always significant in every organizational context. Meanwhile, Kerins et al (2021) It also shows that the effectiveness of training transfer is highly dependent on the specific conditions of the organization, particularly in the service sector. Therefore, further research is needed in the specific context of the organization, particularly in the health sector.

Based on this background, this study aims to analyze the role of transfer of training in mediating the influence of knowledge characteristics on the performance of nurses in the Atma Husada Mahakam regional psychiatric hospital. This research is expected to make a theoretical contribution to the development of a knowledge-based performance improvement model and training, as well as provide practical implications for human resource management in the field of mental health.

According to Dessler (2020) from the perspective of human resource management, performance is an individual's work behavior that contributes directly to the achievement of organizational goals. In the context of health services, especially performance nursing, it is not only understood as a result of work, but as a multidimensional construction that includes three main dimensions, namely task performance, contextual performance, and adaptive performance (Robbins & Judge, 2024). Meanwhile, in the context of health workers, Warrior et al.(Krijgsheld et al., 2022) emphasized that these three dimensions are important indicators in assessing the effectiveness of performance, especially in dealing with the dynamics of patient conditions and clinical service demands. Therefore, nurse performance is an important indicator that reflects the quality of service comprehensively. The characteristics of individual knowledge are one of the main determinants of performance. Knowledge is a core component of Ability which includes understanding conceptual, declarative, procedural, and conditional

(Noe, 2020). These four dimensions show the level of depth and flexibility of knowledge in supporting the implementation of tasks. Good knowledge tends to be able to understand work procedures more accurately, make the right decisions, and adjust actions to the situation at hand. In the context of an organization Dessler (Dessler, 2020) states that well-structured knowledge is the basis for improving work effectiveness and performance quality. Thus, the characteristics of knowledge have the potential to improve performance directly.

However, the variable relationship between knowledge characteristics and performance is not always straightforward. In other words, that the knowledge that individuals possess as a result of training cannot automatically result in performance improvements in the absence of a process that transforms that knowledge into real work behavior through mechanisms Transfer of Training. Noah (Noe, 2020) Define Transfer of Training as the extent to which the knowledge and skills gained from training can be applied, retained, and have an impact on the job. So it can be concluded that the success of training is not only measured by the increase in knowledge, but also by the extent to which the results of the training are internalized in work behavior.

In the concept of MSDM, Transfer of Training influenced by a variety of factors, including individual characteristics, training design, and work environment support (Noe, 2020). Individuals with higher levels of knowledge have better cognitive capacity to understand training materials and relate them to job demands, thus increasing the likelihood of effective transfer (Mdhlalose, 2022). In addition to Dessler (Dessler, 2020) Affirming that organizational factors such as supervision, feedback, and managerial support also play a role in ensuring that the competencies gained from training can be applied consistently in daily work.

In addition, factors of the work environment and organizational culture also play an important role in supporting the success of training transfers. Gautam (2021), confirming that a conducive organizational culture can increase the effectiveness of training transfers. Meanwhile, Nafukho et al.(2023) Indicates that employer support and individual motivation are important factors in the success of a training transfer.

A number of empirical studies show that Transfer of Training contribute to the improvement of individual performance. As conveyed Roshaida & Razak (Roshaida & Razak, 2024) In his findings, the success of the implementation of training results has a positive effect on work effectiveness. Meanwhile Squirrelly (Mdhlalose, 2022) shows that in the absence of an adequate transfer process, most training outcomes do not have a significant impact on performance. In the context of health workers, empirical research shows that the effective application of competencies in work practices contributes to improving the performance of health workers (Krijgsheld et al., 2022).

These findings are also supported by research Grossman & Salas (2011) which confirms that the effectiveness of training transfer is a major factor that determines the success of improving individual performance in the workplace. In addition, Shahin & Soomro (2022) shows that training transfer has a significant influence on employee performance in various sectors of the organization.

Further, Transfer of Training It is also positioned as a mediating variable in the relationship between knowledge and performance characteristics. A number of studies have shown that training transfer acts as a mediator between individual factors and performance, so

the success of training is largely determined by the individual's ability to implement learning outcomes. Squirrelly (2024) It shows that training transfer has a positive effect on employee performance and plays a role in strengthening the relationship between individual factors and work outcomes.

In addition, Pratiwi & Jayanagara (2025) It was also found that individual characteristics and work environments influence the transfer of learning in nurses through mediation mechanisms, which shows the importance of the role of transfer as a liaison in improving performance. Meanwhile Knowledge characteristics provide a cognitive basis for individuals, while Transfer of Training play a role in turning this potential into real actions that have an impact on performance (Roshaida & Razak, 2024). Thus, the success of transfer is a key factor in determining the effectiveness of the relationship between knowledge and performance.

In the context of nursing, this mechanism has become particularly relevant due to the complex and dynamic demands of the job. Recent research shows that learning transfer in nursing personnel has an effect on improving clinical competence and quality of health services. Tung et al.(2022) found that learning transfer improves the clinical performance of health workers. Hanum et al. (2024) It also shows that the factors influencing training transfer contribute to the improvement of nurse competence. Hakvoort et al (2025) affirm that the measurement of training transfer in nursing practice is an important indicator in assessing the effectiveness of clinical training. Nurses are required not only to have adequate clinical knowledge, but also the ability to apply appropriately in various service situations. Without an effective transfer process, the knowledge possessed will not make an optimal contribution to improving the quality of service (Noe, 2020). Therefore, understanding the role of Transfer of Training As a mediator it is important in explaining how the characteristics of knowledge can contribute to the performance of nurses.

Based on these theoretical and empirical descriptions, it can be concluded that the characteristics of knowledge, transfer of training, and performance of nurses are interrelated variables in a systematic mechanism. The characteristics of knowledge play a role as the basis of individual abilities, while the transfer of training is a process that connects knowledge with work behavior. Thus, the transfer of training has a strategic role in bridging the relationship between the characteristics of knowledge and the performance of nurses.

This research is expected to provide both theoretical and practical benefits. Theoretically, this study enriches the literature on human resource management, particularly in the development of knowledge-based nurse performance improvement models and training transfer, as well as contributing to the theory of transfer of training in the context of mental health services. Practically, the results of this study can be an input for the management of the Atma Husada Mahakam Regional Mental Hospital in designing a more effective training program, improving the mentoring and post-training evaluation system, and strengthening the characteristics of nurse knowledge through case-based learning methods and clinical simulations to improve the quality of mental health services.

METHOD

This research was conducted at the Atma Husada Mahakam Regional Psychiatric Hospital, using a quantitative approach with an explanatory design to test the causal relationship between variables, namely knowledge characteristics, transfer of training and

nurse performance. This study also pays attention to the ethical aspects of research in the data collection process.

The population in this study is all nurses who work at the Atma Husada Mahakam Regional Psychiatric Hospital. Sampling using purposive sampling techniques, with the criteria of clinical nurses who provide services directly to patients and who have participated in training.

Data collection using structured questionnaire distribution based on the indicators of each research variable. The research instrument uses a five-point Likert scale and validity and reliability tests have been carried out to ensure the feasibility of the measurement.

Data analysis was conducted using the Structural Equation Modeling method based on Partial Least Square (SEM-PLS) with the help of SmartPLS software. With the stages of external model evaluation to test the validity and reliability of constructs, as well as internal model evaluation to test the relationship between variables and hypothesis testing, including direct and indirect influence analysis.

RESULTS AND DISCUSSION

Based on the evaluation of the external model, it shows that the research model has met the criteria of validity and reliability. All indicators have loading factor values above the required minimum limit, and composite reliability and average variance extracted (AVE) values indicate a reliable and valid construct.

Meanwhile, according to the evaluation of the inner model, the value of the determination coefficient (R-square) showed that the performance variables of nurses can be explained by the characteristics of knowledge and transfer of training in the category of quite good, as well as the variable of transfer of training can also be explained by the characteristics of knowledge in the category of quite good.

The results of testing the hypothesis of the direct influence between variables in more detail are presented in table 1 below:

Table 1. Bootstrapping Live Test Results

Path Coefficients	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STD EV)	P values	Information
Characteristics of Knowledge -> Performance of nurses	0.709	0.744	0.097	7.340	0.000	Proven
Characteristics of Knowledge -> Transfer of training	0.775	0.784	0.105	7.357	0.000	Proven
Transfer of training -> Performance of nurses	0.128	0.093	0.100	1.286	0.099	Unproven

Source: Primary data analysis using SmartPLS (2025)

Based on table 1, it can be seen that knowledge characteristics have a positive and significant effect on *the transfer of training*. Likewise, the characteristics of knowledge have a positive and significant effect on nurse performance. However, *the transfer of training* has no significant effect on nurse performance, which shows that knowledge from the training results has not been fully implemented or applied in work practice on an ongoing basis.

The visualization of the results of the bootstrapping direct test can be seen in the following image:

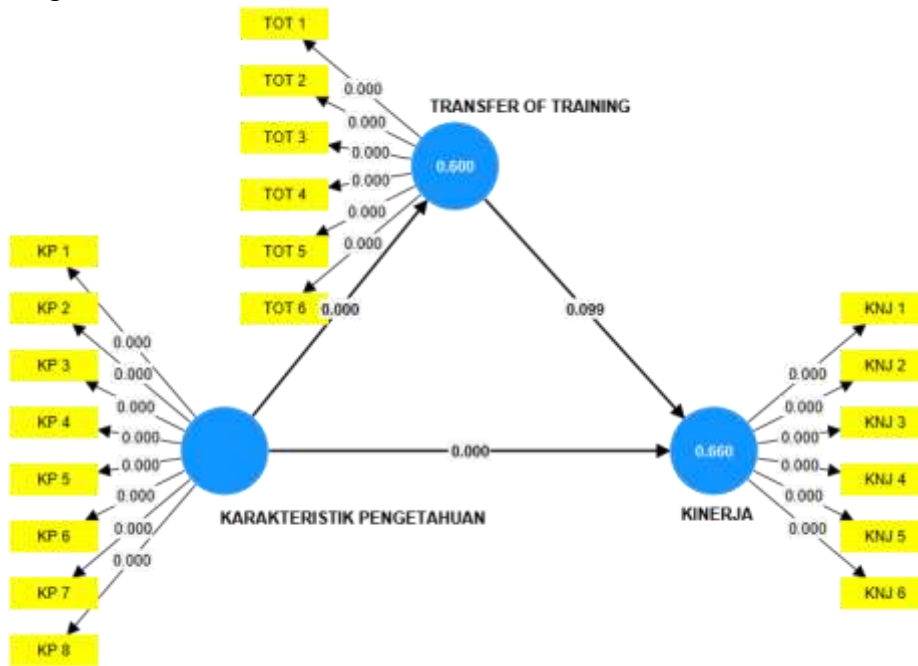


Figure 1. Output model SEM-PLS Direct Effect Test

Source: Primary data analysis using SmartPLS (2025)

Meanwhile, the results of testing the indirect influence hypothesis between variables in more detail are presented in table 2 below:

Table 2. Indirect Test Results of Bootstrapping

Path Coefficients	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Ket
Characteristics of Knowledge -> Transfer of training -> Performance of nurses	0.099	0.069	0.083	1.194	0.116	Unproven

Source: Primary data analysis using SmartPLS (2025)

Based on table 2 of the mediation analysis above, it shows that the transfer of training is not able to mediate the relationship between the characteristics of knowledge and the performance of nurses, so the role of transfer of training as a liaison mechanism is not

empirically proven. Thus, the influence of knowledge characteristics on performance is more dominant than through the transfer of training mechanism.

The results of the study show that the characteristics of knowledge have a positive and significant effect on Transfer of Training and nurse performance. These findings are in line with the theory put forward by Noah (Noe, 2020) which states that knowledge is the main component in improving the ability of individuals to understand and apply training results. Nurses with a good level of knowledge tend to be better able to interpret training materials and adapt them to job demands, thereby increasing the effectiveness of implementation in work practice.

In addition, the significant influence of knowledge characteristics on nurse performance shows that knowledge has a direct role in improving the quality of performance. This supports the view Dessler (Dessler, 2020) that knowledge as part of individual abilities is the main determinant in achieving optimal performance. In the context of nursing, good knowledge allows nurses to make informed decisions and be responsive to the patient's condition.

However, the results of the study show that Transfer of Training does not have a significant effect on nurse performance. These findings indicate that although training has been implemented, the training results have not been fully implemented in work practice. Squirrelly (Mdhlalose, 2022) emphasizes that This condition can be caused by a lack of organizational support, such as supervision, feedback, and post-training monitoring.

Furthermore, the insignificance of the role of transfer of training in mediating the relationship between knowledge and performance characteristics suggests that the improvement of nurse performance is more directly influenced by knowledge than through the training transfer process. These findings imply that strengthening knowledge characteristics is a more effective strategy in improving performance, compared to relying solely on training without adequate implementation mechanisms.

CONCLUSION

The study concluded that knowledge characteristics have a positive and significant influence on both the transfer of training and nurses' performance, indicating that nurses' knowledge is a key factor in enhancing their ability to perform duties and apply training outcomes effectively. However, the transfer of training itself did not significantly affect nurse performance and was unable to mediate the relationship between knowledge characteristics and performance, suggesting that performance improvement is influenced more directly by knowledge than by the training transfer process. Therefore, hospital management should prioritize strengthening nurses' knowledge through case-based learning, clinical simulations, and improved understanding of work procedures, while also optimizing training implementation through better supervision, monitoring, and post-training evaluation to enhance training transfer effectiveness. Future research is recommended to explore additional factors influencing nurse performance, such as work motivation, work environment, and organizational support, in order to develop a more comprehensive performance model.

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