The Relations of Knowledge, Attitude, and Motivation, General Surgeons and Nurses, Toward Nosocomial Infection Prevention Practices Inside the Operating Room

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Abstract
This study aims to analyze the effect of knowledge, attitudes, and motivation on healthcare workers' service performance in the context of infection prevention in operating rooms. The study employed a quantitative approach with a cross-sectional design. The population consisted of all healthcare workers involved in operational services at RSUD H. Hanafie Muara Bungo, Indonesia, using a total sampling technique with a sample size of 30 respondents. Data was collected through structured questionnaires and analyzed using Spearman correlation and linear regression. The findings indicate that knowledge does not have a significant effect on service performance, while attitudes show a significant relationship with moderate strength. Motivation emerges as the most dominant factor, exhibiting a strong and significant relationship with service performance. Simultaneously, knowledge, attitudes, and motivation significantly influence service performance, contributing 53.4% to its variance. These findings suggest that service performance is not solely determined by cognitive aspects but is strongly influenced by behavioral and motivational factors. Therefore, improving service quality requires an integrated managerial approach focusing on strengthening motivation and fostering professional attitudes, alongside enhancing workforce competencies.
Keywords*: Attitude, healthcare workers, knowledge, motivation and service performance.*

I. INTRODUCTION

The quality of hospital services is a primary indicator in assessing the performance of healthcare organizations, particularly in responding to increasingly complex societal needs[1]. From a management perspective, service success is not only determined by the availability of facilities and medical technology, but is also strongly influenced by the quality of human resources as the main factor in the service delivery process[2]. Therefore, managing behavioral factors among healthcare personnel becomes a strategic aspect in improving service performance and ensuring patient safety sustainably[3][4]

One of the ongoing challenges in healthcare delivery is the high incidence of infections occurring during the service process, particularly in high-risk units such as operating rooms[5]. This issue not only affects patient conditions but also has implications for declining service quality, increasing operational costs, and reduced public trust in hospital institutions[6]. Global data indicate that healthcare-associated infections remain a significant issue requiring serious attention from various stakeholders[7].

In this context, infection prevention can be viewed as part of service performance indicators that reflect the effectiveness of implementing procedures and operational standards in hospitals[8]. Within the framework of human resource management, the performance of healthcare personnel is influenced by various internal factors related to cognitive, affective, and motivational aspects[9].

Knowledge represents individual competence in understanding work standards and service procedures, while attitude reflects readiness and behavioral tendencies in responding to organizational policies[10]. Meanwhile, motivation serves as the primary driving force that determines the intensity and consistency with which individuals carry out their duties[11]. These three factors simultaneously shape work behavior, which ultimately contribute to overall service performance[12]. Previous studies have shown varying results regarding the relationship between knowledge, attitude, and motivation with healthcare personnel performance[13], [14].

Some studies found that a high level of knowledge does not always correlate with optimal service

practices, while others emphasize that attitude and motivation have a more dominant influence in encouraging compliance with operational standards[15]. Furthermore, studies from a human resource management perspective indicate that individual behavioral factors significantly contribute to overall organizational performance[16], [17]. These differing findings suggest a research gap, particularly in understanding the simultaneous role of these three variables in shaping service performance within more specific contexts[18].

On the other hand, most previous studies have positioned infection prevention primarily from a clinical perspective and thus have not been comprehensively examined through performance management and organizational behavior approaches[19]. In practice, however, the successful implementation of service procedures heavily depends on how healthcare personnel internalize knowledge, develop professional attitudes, and maintain work motivation in a dynamic work environment. Therefore, a more integrative approach is needed to examine these factors as part of the healthcare service management system[20].

Based on the above explanation, this study aims to analyze the influence of knowledge, attitude, and motivation of healthcare personnel on service performance in the context of infection prevention in hospital operating rooms[21]. This research is expected to provide theoretical contributions to the development of human resource management studies in the healthcare sector, as well as practical contributions for hospital management in formulating strategies to improve service quality through strengthening the behavioral factors of healthcare personnel[22].

II. METHODS

This study employs a quantitative approach with an analytical design using a cross-sectional method to analyze the relationships and effects of knowledge, attitude, and motivation on the service performance of healthcare personnel. This approach is selected because it provides an empirical overview of the relationships among variables at a single point in time and is relevant for examining work behavior within the context of healthcare service management. The research was conducted at RSUD H. Hanafie Muara Bungo, Indonesia from January to February 2025. The location was selected purposively, considering the characteristics of service units with high complexity and the need for strict compliance with operational standards to support service quality.

The population in this study includes all healthcare personnel involved in operational services, namely general surgeons, nurses, anesthesia staff, and the service quality control team. Given the relatively limited population size, this study applies a total sampling technique, where all members of the population are included as respondents. This approach allows for a more comprehensive analysis of the relationship between individual factors and service performance within an integrated work system[23].

Data collection was carried out using a structured questionnaire designed to measure research variables, namely knowledge, attitude, motivation, and service performance. The instrument includes respondent characteristics, measurement of knowledge levels, assessment of attitudes, and indicators of work behavior[24]. The use of questionnaires is considered effective in systematically identifying behavioral factors influencing healthcare personnel performance. The data used consists of both primary and secondary data.

Primary data were obtained through the distribution of questionnaires to respondents, while secondary data were used to support information from various relevant sources. Before use, the instrument was tested for validity and reliability to ensure the accuracy and consistency of the data generated. This testing is essential to guarantee the quality of research results in analyzing relationships among variables. Data processing was conducted systematically through editing, coding, data entry, and cleaning to ensure data quality before further analysis. This process aims to minimize errors and ensure that the data aligns with the research objectives. Data analysis was carried out using both descriptive and inferential approaches.

Descriptive analysis was used to describe respondent characteristics and the distribution of research variables, while inferential analysis was used to examine relationships and influences among variables.

Hypothesis testing was conducted using correlation tests and linear regression analysis to identify the simultaneous effects of knowledge, attitude, and motivation on service performance[25].

This approach aligns with human resource management concepts that emphasize the importance of integrating behavioral factors in improving organizational performance[26]. In conducting the research, ethical considerations were prioritized by ensuring that all respondents participated voluntarily through an informed consent process. The researcher also ensured data confidentiality and maintained research integrity to avoid causing harm to any parties involved[27], [28].

III. RESULT AND DISCUSSION

The study involved 30 respondents consisting of healthcare personnel with various strategic roles in hospital operational services, including general surgeons, nurses, anesthesia staff, and the service quality control team. The diversity of professional backgrounds provides a comprehensive overview of service performance implementation, particularly in the context of infection prevention in the operating room.

The results of the instrument testing indicate that all items across the research variables have correlation values above the required minimum threshold, thus confirming their validity. In addition, Cronbach's Alpha value of 0.940 demonstrates that the instrument has a very high level of reliability, making it suitable for consistently measuring the variables of knowledge, attitude, motivation, and service performance.

Descriptive analysis shows that most respondents have a high level of knowledge (96.7%). However, this is not fully reflected in the optimal implementation of actions. Based on Table 1, only 43.3% of respondents fall into the positive action category, while 56.7% are still categorized as negative.

Category	Frequency	Percentage
Negative	17	56,7%
Positive	13	43,3%

Fig.1. Distribution of Precautionary Measures

Source: Research Data (2025)

Meanwhile, the distribution of attitudes shows relatively balanced results, with 53.3% of respondents demonstrating positive attitudes and 46.7% showing negative attitudes. For the motivation variable, most respondents (56.7%) are in the low motivation category, while 43.3% have high motivation. Correlation test results indicate that knowledge does not have a significant relationship with actions (Sig. = 0.391), whereas attitude shows a significant relationship with moderate strength (r = 0.413; Sig. = 0.023).

The motivation variable demonstrates a very strong and significant relationship with actions (r = 0.729; Sig. = 0.000), indicating that motivation is the dominant factor influencing healthcare personnel behaviour. Furthermore, regression analysis results show that, simultaneously, knowledge, attitude, and motivation significantly influence actions (F = 9.923; Sig. = 0.000). The R-squared value of 0.534 indicates that 53.4% of the variation in actions can be explained by these three variables, while the remaining variation is influenced by other factors outside the model

The findings indicate that although healthcare personnel demonstrate a high level of knowledge, this does not automatically translate into improved service performance. This suggests a gap between cognitive aspects and behavioral implementation, which is often influenced by organizational and environmental factors. This condition aligns with previous studies stating that knowledge alone is not always a primary determinant of performance improvement unless supported by behavioral and organizational system factors.

In contrast, attitude is shown to have a significant relationship with actions. This indicates that attitude serves as a psychological factor bridging knowledge and work behavior. Healthcare personnel with positive attitudes tend to exhibit higher compliance with operational standards, thereby improving service quality. This finding is consistent with organizational behavior theory, which emphasizes the importance of attitude in shaping individual work behavior within organizations.

Moreover, motivation emerges as the most influential variable affecting actions. This result highlights that motivation acts as the primary driving force in determining the consistency and quality of healthcare personnel's performance. Individuals with high motivation tend to be more disciplined, responsible, and committed to carrying out their duties. This finding supports previous studies indicating that motivation significantly contributes to improving both individual and organizational performance.

Simultaneous analysis reveals that the combination of knowledge, attitude, and motivation collectively has a significant effect on service performance. This confirms that healthcare personnel performance cannot be explained by a single factor, but rather is the result of the interaction between competence, behavior, and internal drive. From a human resource management perspective, the integration of these three factors is essential for enhancing organizational effectiveness.

However, the coefficient of determination (53.4%) indicates that other factors also influence service performance, such as organizational culture, leadership, and supervisory systems. This implies that efforts to improve service quality should not only focus on individual factors but also require a systemic approach in managing healthcare service organizations.

Overall, this study emphasizes that improving healthcare service performance requires a holistic approach by integrating knowledge, attitude, and motivation within a sustainable management framework. The practical implication of these findings is the need for strategies that strengthen motivation and foster professional attitudes, in addition to enhancing competence, to promote more optimal service implementation.

IV. CONCLUSION

Based on the research findings, it can be concluded that behavioral factors among healthcare personnel play distinct roles in shaping service performance. High levels of knowledge do not significantly influence preventive actions, indicating that cognitive capacity alone is insufficient to drive optimal implementation of work behavior. This condition suggests a gap between understanding and practice, which may be influenced by workplace environment, supervision systems, and the dynamics of healthcare service organizations.

In contrast, attitude has been shown to have a significant relationship with actions, indicating that psychological readiness and individual perceptions of the importance of patient safety play a crucial role in promoting compliance with operational standards. A positive attitude reflects the internalization of professional values, which ultimately contributes to improving service quality.

Furthermore, motivation emerges as the most dominant factor influencing healthcare personnel's actions. Strong motivation, whether intrinsic or extrinsic, has been proven to enhance consistency in work behavior and strengthen commitment to implementing service procedures. This finding underscores that motivation is a key element in improving service performance, particularly in work environments characterized by high complexity and risk.

Simultaneously, knowledge, attitude, and motivation collectively have a significant effect on service performance, contributing 53.4% to its variation. This finding indicates that healthcare personnel performance is the result of interactions among complementary factors, where knowledge serves as the foundation of competence, attitude as the behavioral guide, and motivation as the primary driving force in implementation.

Therefore, improving service performance cannot be achieved through a partial approach, but rather requires a holistic and integrated strategy through the strengthening of human resource aspects. The implications of this study highlight the importance of managerial strategies that focus not only on enhancing competence but also on fostering professional attitudes and strengthening work motivation in order to achieve optimal and sustainable service quality.

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