

Employee Performance in Primary Healthcare: The Roles of Competence, Motivation, and Workplace Empathy

Asniwati ^{1*} Fitriani Latief ²

¹ Institut Teknologi dan Bisnis Nobel Indonesia, Makassar, Indonesia. Email: asniwati@stienobel-indonesia.ac.id

² Institut Teknologi dan Bisnis Nobel Indonesia, Makassar, Indonesia. Email: fitri@stienobel-indonesia.ac.id

ARTICLE HISTORY

Submitted: November 29, 2025

Reviewed: December 28, 2025

Revised: January 10, 2026

Accepted: January 24, 2026

Published: January 31, 2026

Conflict of Interest Statement:

The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

ABSTRACT

Purpose: This study examines the effects of competence, motivation, and workplace empathy on employee performance at the Takkalalla Community Health Center in Wajo Regency, while also identifying the most influential variable in the proposed model.

Research Method: The study employed a quantitative case study design with census sampling, involving all 55 employees of the health center as respondents. Data were collected via a structured questionnaire using a 5-point Likert scale and analyzed in SPSS version 24. The analytical procedures included descriptive statistics, validity and reliability tests, classical assumption testing, multiple linear regression, partial t-tests, and coefficient-of-determination analysis.

Results and Discussion: This study demonstrates that employee performance in the Takkalalla Community Health Center is significantly influenced by competence, motivation, and workplace empathy. The findings confirm that performance in primary healthcare is not determined solely by technical skills, but by the combined effects of cognitive, psychological, and interpersonal factors.

Implications: These findings suggest that efforts to improve employee performance in primary healthcare should not focus solely on competence and motivation, but also on strengthening workplace empathy. The study contributes to policy and practice by proposing a more comprehensive performance model for community healthcare settings. Future research is recommended to test this model in broader healthcare institutions with larger samples and more diverse organizational contexts.

Keywords: primary healthcare; employee performance; competence; motivation; empathy; community health center; public health services.

Introduction

Human resources are widely recognized as strategic assets that determine organizational effectiveness, particularly in the public sector and healthcare institutions, where service quality depends heavily on employee capabilities and behavior. Employee performance in such contexts is not a single-dimensional construct but the result of multiple interrelated factors, including competence, motivation, and interpersonal capacities such as empathy. Competence encompassing clinical knowledge, technical skills, and professional capability remains a foundational determinant of performance, as consistently evidenced across healthcare studies (Aymar *et al.*, 2025). In primary healthcare settings, competency frameworks highlight multidimensional domains, including clinical services, public health management, and information utilization, as key drivers of effective performance (Ylitalo *et al.*, 2023). However, empirical evidence also reveals substantial competency gaps; for instance, rural healthcare providers in



China answered only 46.4% of clinical case questions correctly, demonstrating how insufficient competence directly undermines service delivery (Widana *et al.*, 2023). Beyond individual capabilities, organizational culture further shapes performance outcomes, with hierarchical public-sector structures often constraining adaptability and innovation (Widana *et al.*, 2023).

Competence is particularly critical in primary healthcare because it directly determines the quality of patient care. Deficiencies in clinical reasoning, diagnostic ability, and history-taking practices lead to suboptimal treatment outcomes and reduced patient safety (Giannakos *et al.*, 2026; Widana *et al.*, 2023). Moreover, lapses in professionalism, particularly those stemming from inadequate expertise, are a major source of patient dissatisfaction and complaints in general practice (Barnhoorn *et al.*, 2021; Nugraheni *et al.*, 2022). Nevertheless, competence alone does not fully explain variations in employee performance. Motivation plays an equally central role, influencing the degree to which employees apply their skills and sustain effort in demanding work environments. Low levels of clinician motivation have been associated with reduced quality in supervision and skill development processes (Yusupova *et al.*, 2024), while motivational constructs such as self-efficacy significantly shape willingness to engage in complex clinical tasks, including mental health management (Karaferis *et al.*, 2022). In addition to competence and motivation, the importance of empathy as a determinant of performance has gained increasing attention. In primary healthcare settings, patients consistently prioritize interpersonal skills and empathetic communication over purely technical competence, with empathetic physician behavior identified as a central component of perceived service quality (Decety & Li, 2025). Empathy not only enhances patient satisfaction but also strengthens patient-centered care by fostering trust, understanding, and effective communication. Conversely, the absence of empathy, as manifested in experiences such as patients feeling “not taken seriously,” is one of the most frequently reported sources of dissatisfaction in general practice (Barnhoorn *et al.*, 2021). This suggests that performance in healthcare is inherently relational, requiring a balance between technical expertise and emotional engagement.

Despite the recognized importance of these factors, employee performance in community health centers often remains inconsistent. Such inconsistency arises from a complex interplay of structural, organizational, and individual-level constraints. Structurally, limited resources, bureaucratic rigidity, and restricted flexibility hinder healthcare workers' ability to deliver consistent and responsive services (Kabunga *et al.*, 2025). Organizationally, hierarchical cultures typical of public sector institutions may reduce innovation and adaptability, further exacerbating performance variability (Kabunga *et al.*, 2025). At the individual level, factors such as low motivation, burnout, and emotional exhaustion significantly impair performance consistency, particularly in high-pressure healthcare environments (Hale *et al.*, 2025). These conditions are intensified by the emotional labor inherent in healthcare work, where professionals must continuously manage stress, patient expectations, and complex psychosocial demands. Prior research has extensively examined competence and motivation as key predictors of employee performance across organizational contexts. Numerous studies confirm that competence enhances task efficiency and accuracy, while motivation drives persistence and engagement. However, findings regarding the relative strength and consistency of these effects remain mixed, indicating that additional factors may moderate or mediate these relationships. More recent studies have begun to incorporate emotional and psychological variables—such as emotional intelligence, empathy, and self-regulation—into performance models, recognizing their importance in service-oriented environments (Hadi *et al.*, 2026). These studies demonstrate that technical competence alone is insufficient; employees with high emotional intelligence often outperform those with superior technical skills but lower



emotional capability, suggesting that psychological factors can amplify or compensate for technical limitations (Afrifa Jnr *et al.*, 2024; Yusupova *et al.*, 2024).

Emerging evidence highlights the dynamic interaction between technical and psychological dimensions of performance. Emotional intelligence, for instance, has been shown to reduce burnout, enhance teamwork, and improve patient outcomes, thereby facilitating the effective application of technical skills (Reis da Silva, 2024). Similarly, motivation and self-efficacy act as mediating mechanisms through which organizational support and supervision influence employee behavior and performance (Takeed *et al.*, 2025). These findings indicate that employee performance should be understood as a multidimensional construct shaped by the interaction of cognitive, psychological, and emotional factors rather than isolated variables. However, significant gaps remain in literature. First, existing performance models in healthcare are predominantly competence-oriented, with limited integration of empathy as a measurable and independent variable. Although empathy has been linked to improved patient outcomes and satisfaction, it is rarely operationalized within formal performance evaluation frameworks, partly due to conceptual ambiguity and measurement challenges (Decety & Li, 2025). Second, most empirical studies on emotional factors in healthcare have focused on hospital or tertiary care settings, leaving primary healthcare and community health centers underexplored (Aragonès *et al.*, 2026). Third, there is limited research examining the combined and interactive effects of competence, motivation, and empathy within a single analytical model, particularly in public healthcare institutions where contextual constraints are significant. These gaps highlight the need for integrative research that captures the complexity of employee performance in primary care environments.

In response to these gaps, this study aims to analyze the influence of competence, motivation, and workplace empathy on employee performance in a primary healthcare setting. By integrating these three variables into a unified framework, the study seeks to provide a more comprehensive understanding of the determinants of performance, incorporating both technical and emotional dimensions. The novelty of this research lies in its focus on workplace empathy as a core variable alongside competence and motivation, and in its contextual emphasis on a community health center. Through this approach, the study contributes to the development of a more holistic performance model that is better aligned with the realities of service-oriented public healthcare institutions, where both technical proficiency and human interaction are essential to achieving high-quality outcomes.

Literature Review and Hypothesis Development

Employee Performance

Employee performance is a multidimensional construct that reflects how individuals carry out their duties to achieve organizational goals. At its core, performance is the set of tasks and responsibilities that employees carry out, which contribute to organizational effectiveness (Saidin *et al.*, 2024). In healthcare contexts, performance extends beyond task completion to include contextual behaviors such as collaboration, communication, and adaptability, which are critical in service-oriented environments (Madhusudhan & James, 2025). Performance management systems in healthcare are therefore designed not only to measure outcomes but also to monitor and enhance employee contributions to overall service quality (Bibi, 2021). In practice, performance measurement in healthcare institutions involves formal appraisal systems and standardized indicators. For instance, Joint Commission International (JCI) standards provide structured key performance indicators (KPIs) that guide evaluation and improvement processes (Kobayashi *et al.*, 2021). Similarly, the balanced scorecard



approach used in China's public hospital system integrates patient-centeredness, internal processes, service quality, safety, and efficiency into performance assessment (Yao *et al.*, 2025). Empirical evidence also demonstrates that satisfaction with performance appraisals is significantly associated with behavioral outcomes, such as time management, with employees who are satisfied with appraisal systems being 1.7 times more likely to demonstrate effective work behavior (Terefe *et al.*, 2024). In primary healthcare settings, performance is often operationalized through patient satisfaction, which reflects both the technical and relational dimensions of care. Studies identify availability, accessibility, communication, technical skills, and personal qualities as key predictors of patient satisfaction (Alshahrani, 2023). This confirms that performance in healthcare is inherently multidimensional and cannot be reduced to technical outputs alone; it must also include interpersonal and emotional components.

Employee Skills (Competence)

Competence represents a fundamental driver of employee performance, particularly in healthcare organizations where service quality is directly linked to professional capability. Competence encompasses clinical knowledge, technical skills, procedural proficiency, and broader professional attributes that enable effective task execution (ten Cate *et al.*, 2024). Empirical evidence shows that deficiencies in competence—such as poor diagnostic reasoning and inadequate history-taking—directly impair service quality and patient outcomes (Vogler *et al.*, 2025). Competency-based frameworks have become a dominant approach to performance measurement in healthcare. These frameworks assess multiple domains, including medical services, public health, management, and information utilization, and have demonstrated high reliability in empirical studies (E. J. Gong *et al.*, 2025; Sasie *et al.*, 2025). Training and development programs are central to competence enhancement, with evidence showing that targeted training can significantly improve employee performance and even increase compensation outcomes in healthcare systems (Patel *et al.*, 2023). Moreover, competence development is most effective when integrated with organizational systems such as knowledge management and HRM practices (Murkhana *et al.*, 2024). Beyond technical proficiency, competence also encompasses innovative work behavior, reflecting employees' ability to adapt and generate new solutions in dynamic environments. Research grounded in Self-Determination Theory (SDT) highlights competence as a fundamental psychological need that influences both performance and burnout outcomes (Zong & Patall, 2025). In primary healthcare, competence is directly linked to patient satisfaction, reinforcing its role as a non-negotiable foundation of service quality.

Motivation

Motivation is a central determinant of employee performance, influencing engagement, persistence, and overall work outcomes. Motivated employees demonstrate higher levels of productivity and adaptability, as motivation drives the application of skills and effort toward organizational goals (Samrat *et al.*, 2025). Large-scale global data further indicate that declines in intrinsic motivation are associated with reduced engagement and impaired performance, highlighting the critical role of motivational resources in sustaining employee effectiveness (Amin & Rosita, 2026). Motivation also functions as a mediating mechanism linking leadership behavior and employee outcomes. Compassionate leadership has been shown to enhance intrinsic motivation and self-efficacy, which in turn improve work engagement and performance (Pansini *et al.*, 2024). Psychological empowerment,



driven by supportive leadership and empathy, further strengthens motivational states and reduces emotional exhaustion (Tsang *et al.*, 2022). Job demands and emotional conditions influence the relationship between motivation and performance. Employees with higher emotional intelligence are better able to manage stress and maintain motivation under demanding conditions, leading to improved performance (Muthuswamy & Lakshmi Bala, 2022). This dynamic aligns with Affective Events Theory (AET), which explains how emotional experiences at work shape motivation and subsequent performance behaviors (He *et al.*, 2026). The Ability–Motivation–Opportunity (AMO) framework provides an integrative perspective, positing that performance is a function of employees' abilities, motivation, and organizational opportunities. Empirical studies confirm that HRM practices addressing these three dimensions significantly enhance organizational performance (Mahmood *et al.*, 2023). Thus, motivation is not an isolated factor but interacts with competence and organizational conditions to shape performance outcomes.

Workplace Empathy

Workplace empathy is increasingly recognized as a critical determinant of performance, particularly in service-based and healthcare organizations. Empathy refers to the ability to understand and respond to others' emotions, enabling effective communication, collaboration, and relationship-building (Nguyen *et al.*, 2020). In organizational contexts, empathic leadership fosters trust, enhances interpersonal relationships, and improves overall organizational functioning (Arghode *et al.*, 2021). Empathy contributes significantly to team dynamics and employee well-being. Employees who feel understood and supported report higher job satisfaction and engagement, while empathy facilitates conflict resolution and collaborative problem-solving (Keusters *et al.*, 2024; Woime & Shato, 2025). Emotional leadership, characterized by empathic responsiveness, has been shown to positively influence employee performance through the mediation of positive emotional states (Wan *et al.*, 2022). In healthcare settings, empathy is particularly important as it directly influences patient experience and service quality. Healthcare professionals with high emotional intelligence, including empathy, demonstrate better communication, adaptability, and performance (Subramani & Manoharan, 2025). Empathy also supports patient-centered care by fostering trust and understanding in doctor–patient relationships (Han *et al.*, 2025). However, the literature highlights a nuanced relationship: while cognitive empathy enhances clinical outcomes, excessive emotional empathy may lead to burnout and reduced performance if not properly regulated (Matiz-Moya *et al.*, 2023). Empirical evidence across sectors consistently shows a positive relationship between emotional intelligence—including empathy—and employee performance. Studies indicate that emotional intelligence explains a substantial proportion of performance variance and enhances both task and contextual performance (Al-Mandhari, 2024; Turjuman & Alilyyani, 2023). Nevertheless, some context-specific findings suggest that empathy may not always have a direct effect on performance in highly technical environments, indicating that its impact may depend on organizational context (Prasetyo *et al.*, 2023).

Positioning and Research Gap

The reviewed literature demonstrates that employee performance in healthcare is shaped by an interaction of competence, motivation, and emotional factors, particularly empathy. Competence provides the technical foundation for service delivery, motivation drives engagement and persistence, and empathy enhances interpersonal effectiveness and service quality. Theoretical frameworks such as



AMO, SDT, and emotional intelligence models collectively support a multidimensional understanding of performance that integrates cognitive, psychological, and emotional dimensions. However, several gaps remain. First, most performance models remain heavily competence-oriented, with limited integration of empathy as a measurable and independent variable. Second, empirical studies on emotional factors are predominantly concentrated in hospital and tertiary care settings, leaving primary healthcare and community health centers underexplored. Third, there is a lack of integrative models that simultaneously examine competence, motivation, and empathy within a single analytical framework. Addressing these gaps is essential for developing a more comprehensive understanding of employee performance in primary healthcare contexts, where both technical proficiency and interpersonal interaction are critical to service effectiveness.

Research Method

This study employs a quantitative approach to test the causal relationships among competence, motivation, workplace empathy, and employee performance. The quantitative approach was chosen because it allows for objective measurement, statistical testing, and the generation of generalizable findings through structured data collection and analysis. In the context of performance research in the health sector, a cross-sectional survey design is one of the most commonly used methods because it efficiently captures relationships among variables within a single observation period (Hajra *et al.*, 2025). Additionally, this study adopts a case study strategy focused on the Takkalalla Community Health Center in Wajo Regency. This strategy allows researchers to examine employee performance in depth within a real organizational setting, thereby maintaining contextual relevance without compromising analytical rigor. By combining quantitative approaches with case studies, this research not only achieves statistical validation but also enables a more contextual interpretation of findings.

The research data source comprises all employees at the Takkalalla Community Health Center, including both medical and administrative staff. Due to the relatively small population size, this study employs a saturated sampling technique, or census, which involves all members of the population as respondents. This technique was chosen to eliminate potential sampling bias and ensure comprehensive representation of the organizational conditions under study. Thus, the sample size in this study is 55 employees. This number is considered adequate for regression-based statistical analysis in small-scale organizational research. Although more complex techniques, such as structural equation modeling (SEM), generally require larger sample sizes, multiple linear regression analysis is still considered appropriate and sufficiently robust for this sample size (Hair *et al.*, 2021).

Data were collected using a structured questionnaire designed to measure four main variables: competence (COM), motivation (MOT), workplace empathy (EMP), and employee performance (Y). All items were measured using a five-point Likert scale, ranging from strongly disagree to agree strongly. The use of the Likert scale in performance research in the health sector is a common practice because this instrument has good reliability and is easy to interpret (Hair *et al.*, 2021). Instrument development was conducted in several stages: item formulation based on theoretical indicators, expert validation to assess content validity, and a pilot test to ensure the clarity and consistency of each item. Operationally, competencies are defined by knowledge, technical skills, and the ability to perform tasks, in line with the competency framework for healthcare services (X. Gong *et al.*, 2024). Motivation is measured through indicators of intrinsic drive, work enthusiasm, and goal orientation, which align with motivation theories such as SDT and AMO (Babar *et al.*, 2025). Empathy is operationalized as the ability to



understand and respond to others' emotions, reflecting emotional dimensions (Hojat *et al.*, 2023). Meanwhile, employee performance is measured through task completion, work quality, and accountability, referencing established performance scales (Bibi & Khan, 2021). Questionnaires were distributed directly to respondents at the community health center, and to enhance contextual understanding and clarify survey responses, informal interviews were also conducted. However, the primary analysis of this study remains quantitative.

Data analysis began with descriptive statistics to describe respondent characteristics and the distribution of research variables. These statistics included the minimum, maximum, mean, and standard deviation. This stage is crucial for providing an initial overview of the data before conducting inferential testing. Next, the primary analysis technique is multiple linear regression, which allows researchers to test the simultaneous effects of multiple independent variables on a single dependent variable. In performance studies, multiple linear regression is widely used because it can isolate the unique contributions of each predictor while controlling for the effects of other variables (Sapkota *et al.*, 2023). The regression model in this study is formulated as $PERF = \beta_0 + \beta_1 COM + \beta_2 MOT + \beta_3 EMP + \epsilon$, where Y denotes employee performance, COM denotes competence, MOT denotes motivation, and EMP denotes empathy. To test the hypotheses partially, a t-test was used with a significance level of $p < 0.05$. This test aims to determine whether each independent variable has a significant effect on employee performance. Additionally, the coefficient of determination (R^2) is used to assess the extent to which the model's independent variables explain variation in employee performance.

To ensure the quality of the instruments and the accuracy of the analysis results, this study also conducted validity, reliability, and classical assumption tests. Validity testing was conducted using the Corrected Item-Total Correlation method, with the criterion that the calculated r-value must be greater than or equal to the table r-value (between 0.160 and 0.224), and the significance level must be less than or equal to 0.05. The test results indicated that all questionnaire items met these criteria; the instrument was deemed capable of accurately measuring the intended construct. Reliability testing was conducted using Cronbach's Alpha with a threshold of $\alpha > 0.6$. The results showed that the competency variable had an alpha of 0.780, motivation had an alpha of 0.753, and empathy had an alpha of 0.773. These values indicate strong internal consistency across all variables, so the instrument can be deemed reliable.

Before interpreting the regression results, classical assumption tests were conducted to ensure that the model used met the requirements for analysis. The normality test showed that with a sample size of 55 respondents, the Asymp. Sig. (2-tailed) The value was 0.063, which is greater than 0.05. This indicates that the residuals are normally distributed. The multicollinearity test showed that all independent variables had a tolerance value of 0.760 and a VIF value of 1.380. Since the tolerance is above 0.1 and the VIF is below 10, there is no evidence of multicollinearity in the model. Furthermore, the heteroscedasticity test based on the residual scatterplot indicates that the points are randomly distributed above and below zero, with no discernible pattern. This finding indicates the absence of heteroscedasticity, so the regression model is deemed suitable for use in further analysis.

Results and Discussion

Analysis Results

Descriptive Analysis of Respondents

The descriptive analysis provides an overview of the demographic characteristics of respondents involved in this study. A total of 55 employees from the Takkalalla Community Health Center participated, representing the entire population via a census approach. This ensures that the findings reflect the actual organizational condition without sampling bias.

Table 1. Respondent Characteristics

Variable	Category	Frequency	Percentage (%)
Gender	Male	5	9.09
	Female	50	90.91
Age	20–30 years	38	69.09
	31–40 years	15	27.27
	> 40 years	3	3.64

Source: SPSS Output (2025)

The results indicate that the workforce is predominantly female (90.91%), reflecting common patterns in healthcare staffing, particularly in primary care settings. In terms of age, the majority of respondents fall within the 20–30 years category (69.09%), followed by 31–40 years (27.27%), and a small proportion above 40 years (3.64%). This suggests that the workforce is relatively young, which may influence adaptability, learning capacity, and responsiveness to organizational demands.

Instrument Testing Results

Table 2. Validity and Reliability Results

Variable	Indicator	r-value	Sig.	r-table	Result	Cronbach's Alpha
Competence (COM)	Com.1	0.604	0.000	0.224	Valid	0.780
	Com.2	0.752	0.000	0.224	Valid	
	COM.3	0.586	0.000	0.224	Valid	
	COM.4	0.797	0.000	0.224	Valid	
Motivation (MOT)	MOT.1	0.732	0.000	0.224	Valid	0.753
	MOT.2	0.823	0.000	0.224	Valid	
	MOT.3	0.788	0.000	0.224	Valid	
Empathy (EMP)	EMP.1	0.470	0.000	0.224	Valid	0.773
	EMP.2	0.801	0.000	0.224	Valid	
	EMP.3	0.769	0.000	0.224	Valid	
	EMP.4	0.672	0.000	0.224	Valid	
Performance (PERF)	PERF.1	0.712	0.000	0.224	Valid	0.766
	PERF.2	0.874	0.000	0.224	Valid	
	PERF.3	0.826	0.000	0.224	Valid	
	PERF.4	0.833	0.000	0.224	Valid	

Source: SPSS Output (2025)



These results confirm that all measurement instruments are both valid and reliable, ensuring the accuracy and consistency of subsequent statistical analysis.

Classical Assumption Tests

Before conducting regression analysis, classical assumption tests were performed to ensure that the model meets the requirements of linear regression.

Normality Test

Table 3. Normality Test (Kolmogorov-Smirnov)

Parameter	Value
N	55
Mean	0.000
Std. Deviation	0.182
Test Statistic	0.116
Asymp. Sig (2-tailed)	0.063

Source: SPSS Output (2025)

The significance value (0.063 > 0.05) indicates that the residuals are normally distributed, satisfying the normality assumption.

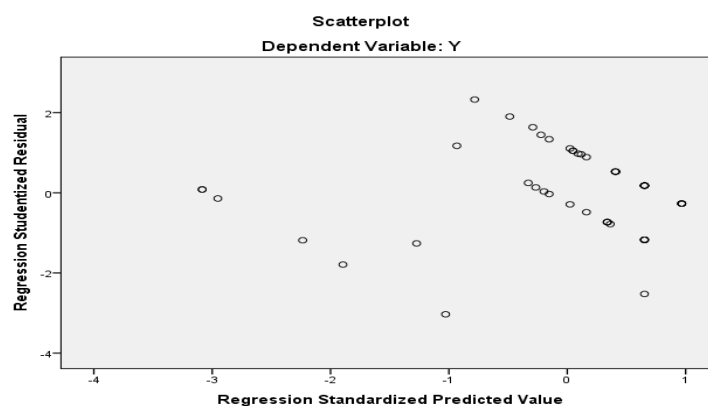
Tabel 4. Multicollinearity Test

Variable	Tolerance	VIF
COM	0.760	1.380
MOT	0.760	1.380
EMP	0.760	1.380

Source: SPSS Output (2025)

All tolerance values exceed 0.1 and VIF values are below 10, confirming the absence of multicollinearity among independent variables.

Heteroscedasticity Test



Source: SPSS Output (2025)

Figure 1. Scatterplot of Residuals

The scatterplot shows randomly distributed points without a clear pattern, indicating no heteroscedasticity. This confirms that the regression model is appropriate for further analysis.

Hypothesis Testing (Partial T-Test)

Hypothesis testing was conducted using the t-test to examine the individual effect of each independent variable on employee performance. The decision rule is $p < 0.05$ for significance.

Table 5. Regression Results (t-Test)

Variable	B	Std. Error	Beta	t-value	Sig.
Constant	-1.060	0.580	–	-1.826	0.074
COM	0.258	0.094	0.264	2.733	0.009
MOT	0.634	0.122	0.465	5.178	0.000
EMP	0.330	0.094	0.322	3.514	0.001

Source: SPSS Output (2025)

The results show that:

- Competence (COM) has a positive and significant effect on performance ($t = 2.733$; $p = 0.009$).
- Motivation (MOT) has the strongest positive effect ($t = 5.178$; $p = 0.000$; $\beta = 0.465$).
- Empathy (EMP) also significantly influences performance ($t = 3.514$; $p = 0.001$).

These findings indicate that all three independent variables significantly contribute to employee performance.

Coefficient of Determination (R²)

Table 5. Model Summary

R	R Square	Adjusted R-Square	Std. Error
0.821	0.675	0.656	0.18746

Source: SPSS Output (2025)

The model shows a strong correlation ($R = 0.821$) between independent and dependent variables. The coefficient of determination ($R^2 = 0.675$) indicates that 67.5% of the variation in employee performance is explained by competence, motivation, and empathy. In comparison, the remaining 32.5% is influenced by other factors not included in the model.

Discussion

The findings of this study confirm that competence, motivation, and workplace empathy each exert a positive and significant influence on employee performance at the Takkalalla Community Health Center. More importantly, the pattern of results suggests that these variables should not be understood as isolated determinants but as a mutually reinforcing system that shapes employee performance in a primary healthcare environment. The regression results show that competence contributes to performance by strengthening employees' capacity to carry out technical and procedural tasks accurately. Furthermore, motivation sustains effort and persistence in service delivery, while empathy



enhances the quality of relationships in interactions with patients and colleagues. This overall pattern supports the view that performance in healthcare is multidimensional, involving technical, psychological, and interpersonal domains simultaneously.

The significant effect of competence is consistent with the argument that technical capability underpins effective healthcare work. In healthcare settings, competence is not limited to general knowledge; it also includes task mastery, accuracy, responsiveness, and the ability to apply professional judgment in service situations. Studies on person-centered nursing and safety-care activities show that clinical competency directly improves the quality of performance and is even more effective when supported by communication skills and patient-centered interaction (ten Cate *et al.*, 2024; Vogler *et al.*, 2025). The present study's findings fit this logic. Employees with greater competence are better able to perform effectively because they possess the technical foundation required for high-quality service delivery. At the same time, the moderate beta coefficient for competence suggests that technical ability alone is not sufficient to explain performance differences in this context fully.

Motivation emerged as the strongest predictor of employee performance, making it one of the most important findings of this study. This result indicates that in a public primary healthcare setting, willingness to work, persistence, internal drive, and commitment to tasks may be more decisive than technical skill alone in determining day-to-day performance. This pattern aligns with Self-Determination Theory and related evidence showing that motivation is the activating force that determines whether employees actually apply their competence in practice (Samrat *et al.*, 2025; Zong & Patall, 2025). In other words, competence provides the capacity to perform, but motivation determines the extent to which that capacity translates into sustained action. This dynamic is particularly relevant in primary healthcare settings, where workloads, interpersonal demands, and administrative pressures often require sustained psychological energy rather than solely technical knowledge.

The significant effect of workplace empathy also deserves close attention. The result indicates that employees who are more sensitive to others' emotions and perspectives tend to perform better. In primary healthcare, empathy likely strengthens service quality by improving communication, responsiveness, cooperation, and patient-centeredness. This finding is consistent with person-centered care research showing that empathy functions not merely as a supplementary soft skill but as a core mechanism for achieving effective performance (Decety & Li, 2025; Han *et al.*, 2025). The present result reinforces the argument that healthcare performance is inherently relational. Employees do not perform in a social vacuum; they work through interaction, and the quality of those interactions directly affects both organizational effectiveness and service outcomes.

Taken together, these findings support the concept of an interdependent architecture of performance determinants. Competence provides the technical foundation, motivation activates and sustains effort, and empathy translates both elements into socially effective action. The relatively strong overall explanatory power of the model suggests that employee performance in this health center is shaped by a coherent combination of these three domains rather than by any single factor in isolation. The present findings are broadly consistent with prior literature. The significant contribution of competence aligns with research demonstrating that technical and professional skills remain indispensable in healthcare service contexts. Studies on healthcare competency and patient satisfaction consistently show that technical capability predicts safety, quality of care, and service effectiveness (ten Cate *et al.*, 2024; Vogler *et al.*, 2025). The current study confirms this pattern in a primary healthcare setting, suggesting that competence remains a stable predictor across different levels of health service delivery. The predominant role of motivation also reflects established findings in healthcare



performance models. Previous studies show that intrinsic motivation, self-efficacy, and the meaningfulness of work strongly shape engagement, resistance to burnout, and professional performance (Amin & Rosita, 2026; Samrat *et al.*, 2025). The current study supports this by demonstrating that motivation is the most influential variable among the three predictors. This strengthens the argument that motivation is not simply one factor among many but is often the central force that mobilizes available competence and emotional resources into actual work behavior.

The result for empathy is likewise consistent with the literature on emotional intelligence and person-centered care. Prior studies demonstrate that empathy improves patient-centered care, prosocial conduct, communication quality, and humanistic practice (Decety & Li, 2025; Han *et al.*, 2025). The present findings extend this evidence to employees at a community health center, supporting the claim that empathy is relevant not only in hospital-based or specialist care but also in local primary healthcare organizations. At the same time, the literature also introduces nuance. Some studies caution that empathy can become a double-edged sword if motivational and organizational resources do not support it, as great empathic concern may also create stress and an emotional burden (Matiz-Moya *et al.*, 2023). The current study found a positive net effect of empathy. However, because it relies on a direct-effect model, it cannot capture whether some forms of empathy are more adaptive than others. This points to an important theoretical refinement: empathy may matter most when it is regulated, professionally channeled, and supported by organizational conditions.

Conclusion

This study demonstrates that employee performance in the Takkalalla Community Health Center is significantly influenced by competence, motivation, and workplace empathy. The findings confirm that performance in primary healthcare is not determined solely by technical skills, but by the combined effects of cognitive, psychological, and interpersonal factors. Competence provides the technical basis for performing duties effectively; motivation is the strongest driving force sustaining effort and commitment; and empathy strengthens communication, cooperation, and service quality in daily healthcare interactions. Among the three predictors, motivation emerged as the most dominant variable, indicating that employee willingness, internal drive, and persistence are central to maintaining effective performance in a demanding public service environment. At the same time, the importance of competence and empathy underscores that effective service delivery in primary healthcare requires both professional capability and human sensitivity. The regression model, which explains 67.5% of the variance in performance, shows that these three variables collectively form a substantial explanatory framework for understanding employee effectiveness in this setting.

The study contributes theoretically by offering a more holistic model of employee performance that includes workplace empathy alongside competence and motivation. Practically, the findings imply that community health centers should improve employee performance through integrated strategies, including skills development, motivational support, and empathy-oriented communication training. Although the study is limited to a single health center and relies on self-reported cross-sectional data, it provides useful empirical evidence to strengthen human resource management in primary healthcare. Future studies are encouraged to include broader institutional settings and additional organizational variables to deepen the understanding of employee performance in public health services. The study offers several theoretical implications. First, it supports a multidimensional model of employee performance in healthcare by integrating competence, motivation, and empathy into a single



framework. This approach moves beyond traditional performance models that focus predominantly on technical ability, adding emotional and interpersonal capacity as a substantive predictor. Second, the finding that motivation is the strongest variable suggests that healthcare performance theory should treat motivational energy as a central mechanism connecting skills with action. Third, the significant role of empathy strengthens arguments derived from emotional intelligence and person-centered care frameworks, emphasizing that relational competence is a core component of effective performance rather than merely an accessory trait. Practically, the findings suggest that health center managers should not rely on one-dimensional interventions. Instead, improving performance requires parallel strategies. Managers can strengthen competence through training, mentoring, and task-based professional development. Furthermore, they can enhance motivation through recognition, supportive supervision, equitable workload distribution, and meaningful job design. Additionally, empathy can be cultivated through communication training, reflective practice, emotional intelligence development, and team-based support mechanisms. These implications are consistent with the literature emphasizing supportive supervision, empathy training, and emotionally intelligent leadership as practical approaches to improving healthcare performance (Pansini *et al.*, 2024; Subramani & Manoharan, 2025; Wan *et al.*, 2022). The primary scholarly contribution of this study lies in its contextual and conceptual integration. Contextually, it provides evidence from a community health center, a setting that remains underrepresented compared to hospitals and tertiary care institutions. Conceptually, the research highlights empathy as a formal explanatory variable alongside competence and motivation, thereby broadening the traditional analytical framework for evaluating employee performance in public healthcare.

This study has several limitations. First, it was conducted in a single community health center, which restricts generalizability to other primary healthcare institutions with different organizational cultures, staffing structures, or service pressures. Second, the study relies on self-reported questionnaire data, which raises the possibility of common method variance, social desirability bias, and response distortion. Third, the cross-sectional design limits causal inference; the results identify statistically significant relationships, but not temporal direction with certainty. Fourth, the model includes only three predictors, leaving open the possibility that organizational culture, leadership, workload, burnout, or supervisory climate may also play important roles. These limitations also point to future research directions. Subsequent studies should use multi-site designs, include supervisor or patient-based performance assessments, and consider longitudinal approaches to better capture causal dynamics. Future models should also test mediating and moderating effects, especially whether motivation mediates the impact of competence on performance or whether empathy operates differently under conditions of stress, workload, or organizational support.

References

- Afrifa Jnr, S., Dzogbewu, T. C., Dzansi, D. Y., & de Beer, D. J. (2024). Moving beyond technical competence in 3D printing industry in South Africa: The effect of emotional intelligence and organizational emotional climate in driving job performance. *African Journal of Science, Technology, Innovation and Development*, 16(7), 899–913. <https://doi.org/10.1080/20421338.2024.2397172>
- Al-Mandhari, S. (2024). The Impact of Emotional Intelligence on Employee Job Performance: The Case of Oman. *Proceedings of International Conference on Research in Education and Science*, 10(1), 2807–2823. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85217704188&partnerID=40&md5=24bfabbbf9980069cca00b8483be4faed>



- Alshahrani, A. M. (2023). Predictors of Patients' Satisfaction with Primary Health Care Services in the Kingdom of Saudi Arabia: A Systematic Review. *Healthcare*, 11(22), 2973. <https://doi.org/10.3390/healthcare11222973>
- Amin, S., & Rosita, S. (2026). Employee engagement as a driver of performance improvement: A case study of foreign companies in Indonesia. *Multidisciplinary Science Journal*, 8(2). <https://doi.org/10.31893/multiscience.2026044>
- Aragonès, E., Rodoreda, S., Guitart, M., García, E., Berenguera, A., Martín-Luján, F., Rambla, C., Aragonès, G., Calvo, A., Mas, A., Rodríguez, D., & Basora, J. (2026). Implementing a Group Psychoeducational Program for Emotional Well-Being in Primary Care Teams: A Qualitative Study in Catalonia. *Healthcare (Switzerland)*, 14(3). <https://doi.org/10.3390/healthcare14030402>
- Aymar, S., du Plessis de Grenédan, E., Renouf, T., Corvaisier, P., Riegert-Danichert, É., and Hugelmann, T. (2025). Simulation for comprehensive skills: technical and psychosocial. *Oxymag*, 38(205), 19–23. <https://doi.org/10.1016/j.oxy.2025.09.007>
- Babar, S., Yasmeen, A., and Rehman, W. ur. (2025). HPWPs, Creativity, and Innovative Performance: Moderating Role of Knowledge Sharing. *Asia Pacific Journal of Human Resources*, 63(2). <https://doi.org/10.1111/1744-7941.70002>
- Barnhoorn, P. C., Essers, G. T. J. M., Nierkens, V., Numans, M. E., van Mook, W. N. K. A., & Kramer, A. W. M. (2021). Patient complaints in general practice seen through the lens of professionalism: a retrospective observational study. *BJGP Open*, 5(3), 1–10. <https://doi.org/10.3399/BJGPO.2020.0168>
- Bibi, M. (2021). Linkage between performance of healthcare professionals and management practices in healthcare organizations. *Journal of the Pakistan Medical Association*, 71(2 B), 725–728. <https://doi.org/10.47391/JPMA.941>
- Bibi, M., & Khan, R. A. (2021). Evaluating the impact of performance appraisal on doctor's task and contextual performance: A view of public sector hospitals in Karachi, Pakistan. *International Journal of Endorsing Health Science Research*, 9(2), 184–189. <https://doi.org/10.29052/IJEHSR.v9.i2.2021.184-189>
- Decety, J., & Li, J. (2025). The value of empathy in medical practice: A neurobehavioral perspective. *Social Sciences and Humanities Open*, 12. <https://doi.org/10.1016/j.ssaho.2025.101956>
- Giannakos, K., Tsigilis, N., & Koustelios, A. (2026). Organizational Culture as a Driver of Reform in the Greek Public Health Sector. In *Digital Transformation, Leadership, and Human-Centered Public Management* (pp. 319–358). <https://doi.org/10.4018/979-8-2600-0246-9.ch010>
- Gong, E. J., Bang, C. S., Lee, J. J., & Baik, G. H. (2025). Knowledge-Practice Performance Gap in Clinical Large Language Models: Systematic Review of 39 Benchmarks. *J Med Internet Res*, 27, e84120. <https://doi.org/10.2196/84120>
- Gong, X., Yu, S., Xu, J., Qiao, A., and Han, H. (2024). The effect of PDCA cycle strategy on pupils' tangible programming skills and reflective thinking. *Education and Information Technologies*, 29(5), 6383–6405. <https://doi.org/10.1007/s10639-023-12037-4>
- Hadi, S. S., Ibrahim, S. A., Bajjay, R. T. A., Sajid, W. A., Brieg, J. M., & Hotsalyuk, A. (2026). Data-Driven Analysis of Emotional Intelligence and Managerial Effectiveness in Transitional Work Environments. *Communications in Computer and Information Science*, 2855 CCIS, 490–506. https://doi.org/10.1007/978-3-032-17023-1_29
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., and Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-80519-7>
- Hajra, A., Ghosh, B., & Bhowmik, S. (2025). Cross-sectional studies. In *Translational Cardiology* (pp. 221–225). <https://doi.org/10.1016/B978-0-323-91790-2.00099-X>
- Hale, F. B., Lim, E., Griffin, C., & Fontenot, H. B. (2025). Factors Contributing to Well-Being Among Hospital-Based Nurses. *Worldviews on Evidence-Based Nursing*, 22(2). <https://doi.org/10.1111/wvn.70019>
- Han, C., Wu, Q., Liu, C., and Wang, P. (2025). Patient-perceived empathy can predict the doctor-patient relationship in medical interactions. *BMC Medical Education*, 25(1). <https://doi.org/10.1186/s12909-025-07117-7>



- He, P., Anand, A., Jiang, C., and Zhou, H. (2026). How and when mindful leadership inhibits employee deceptive knowledge hiding: an affective events perspective. *Knowledge Management Research and Practice*. <https://doi.org/10.1080/14778238.2026.2634401>
- Hojat, M., Maio, V., Pohl, C. A., & Gonnella, J. S. (2023). Clinical empathy: definition, measurement, correlates, group differences, erosion, enhancement, and healthcare outcomes. *Discover Health Systems*, 2(1), 8. <https://doi.org/10.1007/s44250-023-00020-2>
- Kabunga, A., Udho, S., Anyolitho, M. K., Musinguzi, M., Auma, A. G., Nalwoga, V., & Kigongo, E. (2025). Healthcare Experiences and Service Delivery Gaps for Pregnant Women Living with HIV in Kiryandongo Settlement Camp, Northern Uganda. *HIV/AIDS - Research and Palliative Care*, 17, 77–86. <https://doi.org/10.2147/HIV.S521307>
- Karaferis, D., Aletras, V., Raikou, M., & Niakas, D. (2022). Factors Influencing Motivation and Work Engagement of Healthcare Professionals. *Materia Socio-Medica*, 34(3), 216–224. <https://doi.org/10.5455/msm.2022.34.216-224>
- Keusters, G., Hertogh, M., Bakker, H., & Houwing, E.-J. (2024). Empathic Ability as a Driver for Project Management. *International Journal of Project Management*, 42(4). <https://doi.org/10.1016/j.ijproman.2024.102591>
- Kobayashi, K., Ando, K., Nakashima, H., Machino, M., Kanbara, S., Ito, S., Inoue, T., Yamaguchi, H., Ishiguro, N., & Imagama, S. (2021). Challenges for Joint Commission International accreditation: orthopedic surgeons' performance against international standards. *Nagoya Journal of Medical Science*, 83(1), 87–92. <https://doi.org/10.18999/najims.83.1.87>
- Madhusudhan, U., & James, L. (2025). The Role Of Leadership Behavior on Team Success In Omani Healthcare: A Mediation Analysis In Diverse Clinical Settings. *Journal of Applied Bioanalysis*, 11(4), 25–35. <https://doi.org/10.53555/jab.v11i4.312>
- Mahmood, Q.-U.-A., Ahmed, R., & Philbin, S. P. (2023). The moderating effect of big data analytics on green human resource management and organizational performance. *International Journal of Management Science and Engineering Management*, 18(3), 177–189. <https://doi.org/10.1080/17509653.2022.2043197>
- Matiz-Moya, E., Delgado Bolton, R. C., García-Gómez, E., & Vivanco, L. (2023). Empathy and Occupational Health and Well-Being in Ecuadorian Physicians Working with COVID-19 Patients: A Mixed-Method Study. *Healthcare*, 11(8), 1177. <https://doi.org/10.3390/healthcare11081177>
- Murkhana, M., Majid, M. S. A., Idris, S., Agustina, M., Hafasnuddin, H., & Yahya, Y. (2024). Optimizing Knowledge Management, Innovation, and Competence for Sustainable Organizational Development. 2024 International Conference on Sustainable Islamic Business and Finance, SIBF 2024, 170–176. <https://doi.org/10.1109/SIBF63788.2024.10883824>
- Muthuswamy, V. V., & Lakshmi Bala, M. (2022). The sway of Emotional Intelligence and its cutting-edge on the Performance of Employees. *Przestrzen Społeczna*, 22(3), 257–276. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85152797250&partnerID=40&md5=959a1b6062ea8f432279c65ed7474b36>
- Nguyen, T. N. Q., Tran, Q. H. M., & Chylinski, M. (2020). Empathy and delight in a personal service setting. *Australasian Marketing Journal*, 28(1), 11–17. <https://doi.org/10.1016/j.ausmj.2019.08.003>
- Nugraheni, L., Waluyo, H. J., & Wardani, N. E. (2022). The Influence of Wayang Beber (The Legend of Wasis Joyokusumo) as a Character-based Learning Media on Students' Critical Thinking Ability. *International Journal of Instruction*, 15(3), 267–290. <https://doi.org/10.29333/iji.2022.15315a>
- Pansini, M., Buonomo, I., & Benevene, P. (2024). Fostering Sustainable Workplace Through Leaders' Compassionate Behaviors: Understanding the Role of Employee Well-Being and Work Engagement. *Sustainability*, 16(23), 10697. <https://doi.org/10.3390/su162310697>
- Patel, N., Patel, J., Patel, V., Pandya, H., & Shah, K. (2023). Effectiveness of Induction Training on Newly Joined Employee Knowledge and Hospital Performance. *Global Journal on Quality and Safety in Healthcare*, 6(3), 77–80. <https://doi.org/10.36401/JQSH-23-11>



- Prasetyo, Y. T., Perez, J. P. A., Gumasing, M. J. J., Persada, S. F., & Nadlifatin, R. (2023). The effects of communication, empathy, encouragement, growth, and rewards on employee performance: A structural equation modeling approach. *Work*, 76(2), 749–758. <https://doi.org/10.3233/WOR-220470>
- Reis da Silva, T. M. H. (2024). Emotional Intelligence in Integrative Medicine: Enhancing Patient-Centred Care Through Humanised Technology. In *Humanizing Technology With Emotional Intelligence* (pp. 263–280). <https://doi.org/10.4018/979-8-3693-7011-7.ch012>
- Saidin, K., Wan, P., & Halim, W. F. S. W. A. (2024). A Synthesis Towards the Construct of Job Performance: Dimensions and Theoretical Approaches. *Pakistan Journal of Life and Social Sciences*, 22(1), 5764–5776. <https://doi.org/10.57239/PJLSS-2024-22.1.00425>
- Samrat, B., Dash, M., Tewatia, N., Shukla, N., & Suri, S. (2025). Investigating the effects of motivation and rewards on employee productivity and organizational success. *Multidisciplinary Science Journal*, 7. <https://doi.org/10.31893/multiscience.2025ss0221>
- Sasie, S. D., Ayano, G., Van Zuylen, P., Aragaw, F. M., Darebo, T. D., Guerrero-Torres, L., Mulugeta, A., & Spigt, M. (2025). Developing a comprehensive framework for evaluating public health emergency management program implementation: A scoping review. *Public Health*, 239, 22–31. <https://doi.org/10.1016/j.puhe.2024.12.012>
- Subramani, K., & Manoharan, G. (2025). Educating Empathetic Healthcare Systems with AI Technologies among Practitioners. *2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics, IC3ECSBHI 2025*, 1327–1332. <https://doi.org/10.1109/IC3ECSBHI63591.2025.10990431>
- Takeed, Z., Ali, M. D., Shah, S. I., Muhammad, A., & Qiu, S. (2025). The effect of entrepreneurial leadership on innovative work behavior: the mediating roles of creative self-efficacy and organizational learning. *Journal of Entrepreneurship in Emerging Economies*, 17(5), 1288–1310. <https://doi.org/10.1108/JEEE-08-2024-0326>
- Ten Cate, O., Hennis, M. P., Khursigara-Slattery, N., López, M. J., and Sternszus, R. (2024). Entrustable professional activities, entrustment, and the conceptualization of competence in the health professions. In *Entrustable Professional Activities and Entrustment Decision-Making in Health Professions Education* (pp. 15–24). <https://doi.org/10.5334/bdc.b>
- Terefe, A., Demtse, A., Abebe, F., Misl, E., & Tachbele, E. (2024). Predictors of time to full enteral feeding in low birth weight neonates admitted to neonatal intensive care unit: a prospective follow up study. *BMC Pediatrics*, 24(1), 64. <https://doi.org/10.1186/s12887-024-04545-0>
- Tsang, K. K., Du, Y., and Teng, Y. (2022). Transformational leadership, teacher burnout, and psychological empowerment: A mediation analysis. *Social Behavior and Personality*, 50(1). <https://doi.org/10.2224/sbp.11041>
- Turjuman, F., & Alilyyani, B. (2023). Emotional Intelligence among Nurses and Its Relationship with Their Performance and Work Engagement: A Cross-Sectional Study. *Journal of Nursing Management*, 2023, 1–8. <https://doi.org/10.1155/2023/5543299>
- Vogler, A., Küster, B., & Stonis, M. (2025). Sustainable Automation Solutions: The Development of a Guide to Secure the Future and to Increase the Competitiveness. *ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb*, 120(1–2), 33–36. <https://doi.org/10.1515/zwf-2025-1001>
- Wan, J., Pan, K. T., Peng, Y., & Meng, L. Q. (2022). The Impact of Emotional Leadership on Subordinates' Job Performance: Mediation of Positive Emotions and Moderation of Susceptibility to Positive Emotions. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.917287>
- Widana, I. W., Sumandya, I. W., Citrawan, I. W., Widana, I. N. S., Ibarra, F. P., Quicho, R. F., Santos, M. R. H. M. D., Velasquez-Fajanela, J. V., & Mukminin, A. (2023). The Effect of Teacher's Responsibility and Understanding of the Local Wisdom Concept on Teacher's Autonomy in Developing Evaluation of Learning Based on Local Wisdom in Special Needs School. *Journal of Higher Education Theory and Practice*, 23(10), 152–167. <https://doi.org/10.33423/jhetp.v23i10.6189>

- Woime, A. W., & Shato, G. A. (2025). The Role of Emotional Intelligence and Conflict Management in Job Satisfaction and Teamwork: A Systematic Review. *Public Health Challenges*, 4(2). <https://doi.org/10.1002/puh2.70054>
- Yao, S., Ma, S., Shi, L., Wu, F., & Reis, E. (2025). Balancing Stakeholder Interests: A Balanced Scorecard Perspective on Performance Appraisal Implementation in China's Public Hospitals. *International Journal of Health Planning and Management*, 40(5), 1122–1139. <https://doi.org/10.1002/hpm.3948>
- Ylitalo, A., Laukka, E., Heponiemi, T., & Kanste, O. I. (2023). Primary healthcare managers' perceptions of management competencies at different management levels in digital health services: secondary analysis. *Leadership in Health Services*, 36(2), 247–260. <https://doi.org/10.1108/LHS-07-2022-0078>
- Yusupova, D. G., Zimin, A. A., Girzhova, I. N., Baydina, E. V., Trifonova, O. V., Suponeva, N. A., Tsvetkova, E. A., & Titkova, Y. S. (2024). Motivation of administrative and medical personnel in medical organization: similarities and differences. *Profilakticheskaya Meditsina*, 27(2), 15–21. <https://doi.org/10.17116/profmed20242702115>
- Zong, Y., & Patall, E. A. (2025). Personalizing With Choices to Promote Autonomy: A Self-Determination Perspective on Personalized Learning Design. In *Handbook of Personalized Learning* (pp. 141–158). <https://doi.org/10.4324/9781032719467-12>

Corresponding author

Asniwati can be contacted at: asniwati@stienobel-indonesia.ac.id

