

AN ANALYSIS OF THE EFFECTS OF WORKLOAD AND COMPETENCY BASED TRAINING ON THE QUALITY OF INPATIENT CARE, WITH ORGANIZATIONAL COMMITMENT AS AN INTERVENING VARIABLE, AT ELIM HOSPITAL IN RANTEPAO

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ABSTRACT

The post-pandemic healthcare transformation demands that hospitals consistently maintain the quality of inpatient services amidst increasing patient needs and healthcare workforce dynamics. As a referral center in North Toraja, Elim Rantepao Hospital faces challenges regarding high Bed Occupancy Rates (BOR) and patient complaints, highlighting the crucial need to balance workload management with nurse competency enhancement. This study aims to examine and analyze the direct and indirect effects of nurse workload and competency-based training on the quality of inpatient services, with organizational commitment serving as an intervening variable. A quantitative causal-associative approach with a cross-sectional design was employed. The study population comprised 117 inpatient nurses at Elim Rantepao Hospital, from which a sample of 91 nurses was selected using simple random sampling via Slovin's formula. Primary data were collected through structured questionnaires using a 1-5 Likert scale. Data analysis was executed using Variance-Based Structural Equation Modeling (PLS-SEM) via SmartPLS version 4.1.6.6. Structural model analysis revealed that Competency-Based Training has a positive and highly significant direct effect on Service Quality ($\beta = 0.565$; $t = 4.517$; $p = 0.000$; $f^2 = 0.473$). Conversely, Nurse Workload showed no significant effect on Service Quality ($\beta = -0.007$; $p = 0.944$), nor did Organizational Commitment ($\beta = -0.001$; $p = 0.990$). Furthermore, neither Workload nor Competency-Based Training significantly influenced Organizational Commitment, and Organizational Commitment failed to act as a mediating variable in the structural framework. The quality of inpatient care at Elim Rantepao Hospital is overwhelmingly driven by nurses' clinical capabilities and professional skills developed through targeted training, rather than routine workload levels or organizational commitment. Consequently, hospital management should prioritize a structured competency training roadmap to sustain high-quality patient care.

Informasi Artikel

Kata Kunci:

Beban Kerja,
Pelatihan Berbasis
Kompetensi,
Komitmen
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Kualitas Pelayanan

ABSTRAK

Era transformasi kesehatan pascapandemi menuntut rumah sakit untuk secara konsisten menjaga mutu pelayanan rawat inap di tengah kompleksitas kebutuhan pasien dan dinamika beban kerja tenaga kesehatan. Sebagai rumah sakit rujukan di Toraja Utara, RS Elim Rantepao menghadapi tantangan tingginya angka *Bed Occupancy Rate* (BOR) serta fluktuasi keluhan pasien yang mengindikasikan pentingnya pengelolaan beban kerja dan peningkatan kompetensi perawat. Penelitian ini bertujuan untuk menguji dan menganalisis pengaruh beban kerja perawat dan pelatihan berbasis kompetensi terhadap kualitas pelayanan rawat inap, baik secara langsung maupun tidak langsung melalui komitmen organisasional sebagai variabel *intervening*. Penelitian ini menggunakan pendekatan kuantitatif asosiatif kausal dengan desain *cross-sectional*. Populasi penelitian mencakup seluruh perawat rawat inap di RS Elim Rantepao (117 perawat), dengan sampel sebanyak 91 perawat yang dipilih menggunakan teknik *simple random sampling* berdasarkan rumus Slovin. Pengumpulan data dilakukan melalui kuesioner terstruktur berskala Likert 1-5. Analisis data diolah menggunakan *Variance-Based Structural Equation Modeling* (PLS-SEM) melalui program SmartPLS versi 4.1.6.6. Hasil pengujian hipotesis menunjukkan bahwa Pelatihan Berbasis Kompetensi berpengaruh positif dan signifikan secara langsung terhadap Kualitas Pelayanan ($\beta = 0,565$; $t = 4,517$; $p = 0,000$; $f^2 = 0,473$). Sebaliknya, Beban Kerja Perawat tidak berpengaruh signifikan terhadap Kualitas Pelayanan ($\beta = -0,007$; $p = 0,944$), dan Komitmen Organisasional juga tidak berpengaruh signifikan terhadap Kualitas Pelayanan ($\beta = -0,001$; $p = 0,990$). Lebih lanjut, Beban Kerja dan Pelatihan Berbasis Kompetensi tidak terbukti memengaruhi Komitmen Organisasional, serta Komitmen Organisasional tidak berfungsi sebagai variabel *intervening* (mediasi) dalam model penelitian ini. Kualitas pelayanan rawat inap di RS Elim Rantepao secara dominan ditentukan oleh kapabilitas dan keterampilan klinis perawat yang dibangun melalui pelatihan berbasis kompetensi, ketimbang tingkat beban kerja rutin maupun komitmen organisasional. Oleh karena itu, manajemen rumah sakit disarankan untuk memprioritaskan perencanaan *roadmap* pelatihan kompetensi yang terstruktur dan proporsional untuk mempertahankan keberlanjutan mutu pelayanan.

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1. Introduction

Demands for quality hospital care have become a macro-level phenomenon in the healthcare sector. Inpatient care is one of the main pillars that determine a hospital's reputation and sustainability. As we enter the era of post-pandemic healthcare transformation, patients have much higher expectations regarding the quality of care, which includes speed, hospitality, professional competence, and a comfortable environment. [14] Service quality is no longer assessed solely based on clinical recovery but rather on the patient experience in a holistic manner. [10] As one of the public service institutions in North Toraja, Elim Rantepao Hospital is required to consistently maintain the quality of its inpatient care amid the increasingly complex dynamics of community needs.

However, the delivery of excellent service quality is often hindered by the heavy workload of healthcare workers, particularly nurses in inpatient care units. Excessive workload both quantitatively (an unbalanced patient-to-staff ratio) and qualitatively (the severity of patients' conditions) leads to physical and mental exhaustion (burnout), and their responsiveness and empathy in caring for inpatients tend to decline, which ultimately degrades patients' perceptions of the quality of hospital care. [13]

Table 1. Number of Complaints Against Nurses at Elim Rantepao Hospital, 2022–2025

Tahun	Jumlah Komplain Terhadap Perawat Di Ruang Rawat Inap				Total
	TW 1	TW 2	TW 3	TW 4	
2022	4	3	4	6	17
2023	9	3	1	7	20
2024	7	9	6	5	27
2025	5	4	4	4	17

Source: Report of the Nursing Committee at Elim Rantepao Hospital (2022–2025), compiled by the researcher (2026)

Table 1 shows that from 2022 to 2023, there was a surge in complaints against nurses in the inpatient ward, rising from 17 to 20 cases. A significant spike was observed in the first quarter of 2023 (9 complaints). Meanwhile, 2024 recorded the highest number of complaints at 27 cases, with a critical point in the second quarter (9 complaints). [8] In 2025, the number of complaints dropped sharply back to 17 cases, with a much more stable distribution across each quarter. These complaint data serve as an indirect (lagging) indicator of nurses' mental health and workload. The peak in complaints in 2024 (27 cases) demonstrates that work overload ultimately leads to burnout. It is this burnout that undermines the two main pillars of nursing care quality: responsiveness (due to physical exhaustion) and empathy (due to mental/emotional exhaustion). [1] [2]

Table 2. Monthly Summary of Bed Occupancy Rate (BOR) RS Elim Rantepao 2023–2025

Tahun	Bed Occupancy Rate (BOR)/bulan											
	Jan	Feb	Maret	Apr	Mei	Jun	Jul	Agts	Sept	Okt	Nov	Des
2023	84,4%	83,6%	80,2%	73,6%	76,3%	80,2%	86,4%	87,6%	91,3%	86,3%	92,5%	92,3%
2024	89,2%	90,4%	91,2%	75,6%	72,9%	68,3%	88,7%	89,3%	84,6%	84,4%	83,1%	83,8%
2025	83,8%	83,1%	80,2%	82,8%	85,6%	84,1%	86,4%	87,7%	87,8%	88,4%	82,9%	93,6%

Source: Elim Rantepao Hospital Profile (2023–2025), processed by the researcher (2026)

According to the standards of the Ministry of Health of the Republic of Indonesia, the ideal bed occupancy rate (BOR) for hospitals is 60–80%. The data in Table 1.1 show that the majority of Elim Rantepao Hospital's monthly BOR figures were well above the ideal threshold of 80%. In 2023, only April (73.6%) and May (76.3%) fell within the ideal range. [17] The remaining months saw sharp spikes, peaking in November (92.5%) and December (92.3%). In 2024, sharp spikes occurred early in the year (January–March), ranging from 89% to 91%. The rate dropped below 80% from April through June but surged again toward the end of the year (averaging above 83%). The year 2025 was the most critical. Not a single month fell below or within the ideal range. The lowest BOR was 80.2% (March) and surged dramatically to 93.6% in December. Elim Rantepao Hospital consistently experienced overcrowding; notably, the trend in 2025 was no longer seasonal but had become a constant workload throughout the year.[7] [8]

Table 3. Number of Nurses per Ward at Elim Rantepao Hospital, 2023–2025

Tahun	Mawar	Cempaka	Antorium	Krisan	Lavender	IMT	ICU	NICU	Dahlia	Total
2023	14	19	15	10	10	13	10	9	18	118
2024	17	15	16	10	11	19	11	10	14	123
2025	17	15	16	10	11	19	11	10	14	123

Source: Data from the Elim Rantepao Hospital Annual Report (2023–2025)

The total growth in nursing staff from 118 personnel in 2023 to 123 personnel in 2024 and 2025 reflects an increase in service capacity through dynamic adjustments to human resource distribution based on the operational needs of each care unit. [4] To manage this workload, enhancing staff capacity through competency-based training (hard skills and soft skills) is absolutely necessary to improve work effectiveness and minimize the risk of human error, thereby directly boosting the reliability and assurance of inpatient care services. [5] [6]

Table 4. Number and Types of Employee Training at Elim Rantepao Hospital for 2023–2025

Tahun	Jenis Pelatihan	Jumlah Yang Direncanakan	Jumlah Pelatihan Terlaksana	Realisasi (%)
2023	Pelatihan Internal	5	1	20
	Pelatihan Eksternal	3	1	33,3
2024	Pelatihan Internal	6	2	33,3
	Pelatihan Eksternal	5	2	40%
2025	Pelatihan Internal	11	7	64
	Pelatihan Eksternal	46	31	67

Source: Elim Rantepao Hospital HRD Report (2023–2025)

The significant expansion of training programs at Elim Rantepao Hospital, which will peak in 2025 with 46 planned external training sessions, reflects a drastic increase compared to the previous year, indicating immature planning management and the absence of a structured and proportionate roadmap for the development of medical staff competencies. In fact, fair workload management and the provision of continuous training serve as forms of perceived organizational support that are crucial for strengthening employees' organizational commitment; this is key to ensuring that staff remain dedicated and perform optimally amid work-related stress, while also preventing high absenteeism rates. [2] Given the challenges faced by Elim Rantepao Hospital as a referral center including fluctuations in patient volume and issues regarding nurses' responsiveness and hospitality in inpatient wards in depth research on workload management and the effectiveness of competency-based training is highly strategic for improving the quality of clinical care through the sustained strengthening of organizational commitment. [16] [18]

2. Research Method

This study employed a quantitative associative-causal approach with a cross-sectional design to examine the effects of workload and competency-based training on the quality of inpatient care, both directly and indirectly through organizational commitment as an intervening variable. Data collection was conducted simultaneously within a single time period, while data analysis was performed using Variance-Based Structural Equation Modeling (SEM-PLS) via the SmartPLS software. The SEM-PLS method was chosen due to its ability to test complex composite models and mediating variables simultaneously, its high efficiency for small sample sizes, and its lack of strict normality assumptions [5] [14]

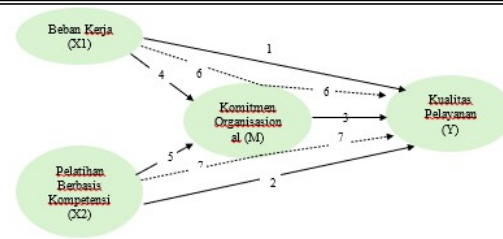


Figure 2. conceptual framework

This study involved a population of 117 inpatient nurses at Elim Rantepao Hospital, using a simple random sampling technique that yielded a sample of at least 91 nurses distributed proportionally across all wards, as well as a patient sample determined via inclusion criteria and the Slovin formula (margin of error 5%). Primary data were collected using a 1–5 Likert-scale questionnaire for the variables Workload (12 items/4 dimensions), Competency-Based Training (12 items/4 domains), Quality of Care (15 items/5 dimensions), and Organizational Commitment (15 items/3 dimensions), in addition to a review of secondary data from human resources records and medical records. Prior to analysis, the instrument was pilot-tested on 30 respondents outside the sample to ensure its validity ($r_{\text{“calculated”}} > r_{\text{“table”}}$) and reliability (Cronbach's Alpha > 0.70). [5] [15] [16]

Descriptive statistical analysis examines the characteristics of respondents and the distribution of responses to variable indicators using frequency tables, percentages, and weighted means for individual data points. Mean values were interpreted into five qualitative categories ranging from Very Low to Very High using a scale interval of 0.80. [15] This assessment of response trends provides an initial overview of the level of workload, training quality, commitment, and perceived quality of inpatient care as experienced by the respondents.

Model and hypothesis testing utilized the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the SmartPLS software. The outer model was evaluated for convergent validity (factor loadings > 0.70 and AVE > 0.50), discriminant validity (Fornell-Larcker/HTMT), and composite reliability. The inner model evaluation assessed predictive power through R^2 , predictive relevance ($Q^2 > 0$), and effect size (f^2). Finally, the testing of 7 hypotheses (5 direct effects and 2 indirect/mediation effects) was conducted via bootstrapping with decision criteria of T-statistics > 1.96 and P-values < 0.05.

3. Results and Discussion

3.1 Results

3.1.1 Description of Respondent Characteristics

Respondents in this study were selected using simple random sampling from the total number of nurses working in inpatient care units. Based on data showing a total of 117 nurses across all care units, the number of respondents was determined using the Slovin formula. Data were collected via an online questionnaire, yielding a total of 91 respondents. All selected respondents were screened against the specified criteria; consequently, the final sample for analysis consisted of 91 respondents. Thus, the collected data is considered representative of the study population.

Table 4. Description of Respondent Characteristics

Karakteristik Usia Responden			
No	Karakteristik	Jumlah (n)	Persentase (%)
1	< 30 Tahun	11	12,1
2	30-40 Tahun	67	73,6
3	41-50 Tahun	13	14,3
Karakteristik Jenis kelamin			
No	Karakteristik	Jumlah (n)	Persentase (%)
1	Laki-Laki	9	9,9
2	Perempuan	82	90,1
Pendidikan Terakhir			
No	Karakteristik	Jumlah (n)	Persentase (%)
1	D3 Keperawatan	43	47,3
2	S1 Keperawatan	13	14,3
3	Ners	35	38,5
Masa Kerja			
No	Karakteristik	Jumlah (n)	Persentase (%)
1	< 1 Tahun	2	2,2
2	1-5 Tahun	10	10,0
3	6-10 Tahun	24	26,4
4	11-20 Tahun	52	57,1
5	21-30 Tahun	3	3,3
Status Kepegawaian			
No	Karakteristik	Jumlah (n)	Persentase (%)
1	Kontrak Magang	9	9,9
2	Calon Pegawai Tetap	7	7,7
3	Pegawai Tetap	75	82,4

Source: Processed Research Data (2026)

Based on Table 4, of the 91 study respondents, the age distribution shows that the majority of respondents were in the 30–40 age group, totaling 67 people (73.6%), followed by the 41–50 age group with 13 people (14.3%), and the under-30 age group with 11 people (12.1%). In terms of gender, female respondents dominated with 82 people (90.1%), while male respondents numbered only 9 (9.9%). Based on highest level of education, the majority of respondents were graduates of a D3 Nursing program, totaling 43 people (47.3%), followed by those with a Professional Nurse degree, totaling 35 people (38.5%), and those with a Bachelor's degree in Nursing, totaling 13 people (14.3%). In terms of years of service, the majority of respondents 52 people (57.1%) had been working for 11–20 years, followed by 24 people (26.4%) with 6–10 years of service, 1–5 years (10 people, 11.0%), 21–30 years (3 people, 3.3%), and less than 1 year (2 people, 2.2%). Finally, based on employment status, the majority of respondents were permanent employees

(75 people, or 82.4%), while 9 people (9.9%) were on contract or as interns, and 7 people (7.7%) were prospective permanent employees.

3.1.2 Description of Research Variables

This section presents an overview of the distribution of respondents' answers regarding the variables observed in the study. The analysis was conducted to evaluate trends in respondents' perceptions regarding each statement indicator. All items in the research instrument were measured using a 1–5 Likert scale, where the mean was used as a parameter to determine the position of respondents' perceptions based on the predetermined rating categories. The frequency distribution and mean values for each research variable are presented as follows

Table 5. Frequency Distribution of the Workload Variable (X1)

Pertanyaan	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Rata-rata	Kriteria
	f	%	f	%	f	%	f	%	f	%		
X1.1.1	2	2,20	17	18,7	35	38,5	34	37,4	3	3,3	3,209	Cukup
X1.1.2	0	0,0	13	14,3	34	37,4	41	45,1	3	3,3	3,374	Cukup
X1.1.3	0	0,0	17	18,7	33	36,3	39	42,9	2	2,2	3,286	Cukup
X1.1.4	1	1,1	23	25,3	25	27,5	40	44,0	2	2,2	3,209	Cukup
X1.2.1	0	0,0	32	35,2	26	28,6	30	33,0	3	3,3	3,044	Cukup
X1.2.2	1	1,1	28	30,8	25	27,5	36	39,6	1	1,1	3,088	Cukup
X1.2.3	1	1,1	31	34,1	17	18,7	39	42,9	3	3,3	3,132	Cukup
X1.3.1	1	1,1	27	29,7	17	18,7	35	38,5	11	12,1	3,308	Cukup
X1.3.2	3	3,3	34	37,4	24	26,4	27	29,7	3	3,3	2,923	Cukup
X1.3.3	1	1,1	34	37,4	23	25,3	31	34,1	2	2,2	2,989	Cukup
X1.4.1	3	3,3	41	45,1	20	22,0	25	27,5	2	2,2	2,802	Cukup
X1.4.2	1	1,1	18	19,8	53	58,2	16	17,6	3	3,3	3,022	Cukup
Rata-rata Beban Kerja											3,116	Cukup

Source: Processed Research Data (2026)

The results of the analysis of the nurse workload variable (X_1) show an overall mean score of 3.116, which falls into the “Moderate” category, indicating that respondents perceive their workload to be at a moderate level. All indicators fall within this moderate range, with the highest perceived workload observed in items X_1.1.2 (3.374), X_1.3.1 (3.308), and X_1.1.3 (3.286), while the lightest workload was reported in item X_1.4.1 (2.802). Although the distribution of responses was generally concentrated on the “Neutral” and “Agree” options, item X_1.3.1 recorded a notably high proportion of “Strongly Agree” responses (12.1%), suggesting that a small proportion of nurses felt very high pressure regarding that specific aspect.

Table 6. Frequency Distribution of the Competency-Based Training Variable (X2)

Pertanyaan	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Rata-rata	Kriteria
	f	%	f	%	f	%	f	%	f	%		
X2.1.1	0	0,0	0	0,0	4	4,4	77	84,6	10	11,0	4,066	Tinggi
X2.1.2	0	0,0	0	0,0	4	4,4	70	76,9	17	18,7	4,143	Tinggi
X2.1.3	0	0,0	0	0,0	6	6,6	62	68,1	23	25,3	4,187	Tinggi
X2.2.1	0	0,0	1	1,1	5	5,5	67	73,6	18	19,8	4,121	Tinggi
X2.2.2	0	0,0	0	0,0	2	2,2	59	64,8	30	33,0	4,308	Sangat Tinggi
X2.2.3	1	1,1	0	0,0	3	3,3	65	71,4	22	24,2	4,176	Tinggi
X2.3.1	0	0,0	0	0,0	5	5,5	69	75,8	17	18,7	4,132	Tinggi
X2.3.2	0	0,0	0	0,0	7	7,7	73	80,2	11	12,1	4,044	Tinggi
X2.3.3	0	0,0	0	0,0	8	8,8	66	72,5	17	18,7	4,099	Tinggi
X2.4.1	0	0,0	0	0,0	3	3,3	69	75,8	19	20,9	4,176	Tinggi
X2.4.2	0	0,0	0	0,0	5	5,5	69	75,8	17	18,7	4,132	Tinggi
X2.4.3	0	0,0	0	0,0	9	9,9	72	79,1	10	11,0	4,011	Tinggi
Rata-rata Pelatihan Berbasis Kompetensi											4,133	Tinggi

Source: Processed Research Data (2026)

The results of the analysis of the Competency-Based Training variable (X₂) show an overall mean score of 4.133 in the “High” category, indicating that nurses rated the implementation of the training program at Elim Rantepao Hospital as very good. Of the 12 survey items, 11 fell into the “High” category, and 1 item (X_{2.2.2}) reached the “Very High” category (4.308), which was also the aspect with the most positive perception along with items X_{2.1.3} (4.187), X_{2.2.3}, and X_{2.4.1} (4.176 each). Conversely, the lowest perception was found in item X_{2.4.3} (4.011), although it still fell within the high range. The predominance of “Agree” and “Strongly Agree” responses, coupled with the minimal or even complete absence of negative responses (STS/TS), underscores that the majority of respondents consistently perceive the benefits and effectiveness of the competency-based training conducted.

Table 7. Distribusi Frekuensi Variabel Kualitas Pelayanan (Y)

Pertanyaan	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Rata-rata	Kriteria Penilaian
	f	%	f	%	f	%	f	%	f	%		
Y1.1.1	0	0,0	0	0,0	2	2,2	60	65,9	29	31,9	4.297	Sangat Tinggi
Y1.1.2	0	0,0	0	0,0	5	5,5	69	75,8	17	18,7	4.132	Tinggi
Y1.1.3	0	0,0	0	0,0	6	6,6	63	69,2	22	24,2	4.176	Tinggi
Y1.2.1	0	0,0	0	0,0	5	5,5	63	69,2	23	25,3	4.198	Tinggi
Y1.2.2	0	0,0	0	0,0	10	11,0	63	69,2	18	19,8	4.088	Tinggi
Y1.2.3	0	0,0	0	0,0	6	6,6	67	73,6	18	19,8	4.132	Tinggi
Y1.3.1	0	0,0	0	0,0	2	2,2	56	61,5	33	36,3	4.341	Sangat Tinggi
Y1.3.2	0	0,0	0	0,0	2	2,2	58	63,7	31	34,1	4.319	Sangat Tinggi
Y1.3.3	0	0,0	0	0,0	4	4,4	67	73,6	20	22,0	4.176	Tinggi
Y1.4.1	0	0,0	0	0,0	5	5,5	71	78,0	15	16,5	4.110	Tinggi
Y1.4.2	0	0,0	0	0,0	3	3,3	53	58,2	35	38,5	4.352	Sangat Tinggi
Y1.4.3	0	0,0	0	0,0	2	2,2	61	67,0	28	30,8	4.286	Sangat Tinggi
Y1.5.1	0	0,0	0	0,0	3	3,3	54	59,3	34	37,4	4.341	Sangat Tinggi
Y1.5.2	0	0,0	0	0,0	2	2,2	49	53,8	40	44,0	4.418	Sangat Tinggi
Y1.5.3	0	0,0	0	0,0	2	2,2	52	57,1	37	40,7	4.385	Sangat Tinggi
Rata-rata Kualitas Pelayanan											4.250	Sangat Tinggi

Source: Processed Research Data (2026)

The results of the analysis of the Service Quality variable (Y) show an overall average score of 4.250, which falls into the “Very High” category, indicating that inpatient services at Elim Rantepao Hospital are consistently perceived as excellent by respondents. Of the 15 measurement items, 8 fell into the “Very High” category and 7 were in the “High” category, with no items rated as “Fair” or “Low.” The most satisfying aspects were demonstrated by items Y1.5.2 (4.418), Y1.5.3 (4.385), and Y1.4.2 (4.352), while the lowest score was on item Y1.2.2 (4.088), which still falls into the “High” category. The absence of negative responses (Strongly Disagree or Disagree) across all indicators reinforces that respondents’ perceptions are overwhelmingly focused on positive assessments of the hospital’s service quality.

Table 8. Frequency Distribution of the Organizational Commitment (M) Variable

Pertanyaan	STS (1)		TS (2)		N (3)		S (4)		SS (5)		Rata-rata	Kriteria Penilaian
	f	%	f	%	f	%	f	%	f	%		
M1.1.1	0	0,0	4	4,4	23	25,3	61	67,0	3	3,3	3.692	Tinggi
M1.1.2	0	0,0	3	3,3	15	16,5	71	78,0	2	2,2	3.791	Tinggi
M1.1.3	0	0,0	0	0,0	18	19,8	69	75,8	4	4,4	3.846	Tinggi
M1.1.4	0	0,0	14	15,4	21	23,1	53	58,2	3	3,3	3.495	Tinggi
M1.2.1	0	0,0	4	4,4	16	17,6	67	73,6	4	4,4	3.780	Tinggi
M1.2.2	0	0,0	6	6,6	21	23,1	60	65,9	4	4,4	3.681	Tinggi
M1.2.3	0	0,0	5	5,5	23	25,3	59	64,8	4	4,4	3.681	Tinggi
M1.2.4	0	0,0	27	29,7	26	28,6	34	37,4	4	4,4	3.165	Cukup
M1.3.1	0	0,0	2	2,2	16	17,6	69	75,8	4	4,4	3.824	Tinggi
M1.3.2	0	0,0	1	1,1	18	19,8	68	74,7	4	4,4	3.824	Tinggi
M1.3.3	1	1,1	3	3,3	19	20,9	64	70,3	4	4,4	3.736	Tinggi
M1.3.4	0	0,0	30	33,0	21	23,1	36	39,6	4	4,4	3.154	Cukup
Rata-rata Komitmen Organisasional											3.639	Tinggi

Source: Processed Research Data (2026)

The results of the analysis of the Organizational Commitment (M) variable show an overall average score of 3.639, falling into the “High” category, indicating that the level of loyalty and commitment among staff at Elim Rantepao Hospital is generally good. Of the 12 measurement items, 10 fell into the “High” category, with the most positive perceptions observed in items M1.1.3 (3.846) as well as M1.3.1 and M1.3.2 (3.824 each). Conversely, there were 2 items in the “Moderate” category, namely items M1.2.4 (3.165) and M1.3.4 (3.154); both recorded a fairly notable proportion of “Disagree” (DS) responses, at 29.7% and 33.0%, respectively. The predominance of “Agree” responses underscores that employee commitment is relatively high, although these two indicators with moderate scores represent specific areas for evaluation that require management’s attention.

3.1.2 PLS-SEM Model Analysis

Statistical analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the assistance of SmartPLS software, version 4.1.6.6. This study used two criteria to evaluate convergent validity: factor loadings and Average Variance Extracted (AVE) values.

Table 9. Outer Loadings from the Convergent Validity Test

Indikator	BKP	KO	KP	PBK	Ket
BKP1	0.898				valid
BKP10	0.796				valid
BKP11	0.730				valid
BKP12	0.735				valid
BKP2	0.899				valid
BKP3	0.841				valid
BKP4	0.865				valid
BKP5	0.814				valid
BKP6	0.812				valid
BKP7	0.789				valid
BKP8	0.742				valid
BKP9	0.863				valid
KO1		0.731			valid
KO10		0.849			valid
KO11		0.802			valid
KO12		0.735			valid
KO2		0.774			valid

KO3		0.855		valid
KO4		0.732		valid
KO5		0.813		valid
KO6		0.820		valid
KO7		0.848		valid
KO8		0.719		valid
KO9		0.853		valid
KP1			0.844	valid
KP10			0.796	valid
KP11			0.767	valid
KP12			0.745	valid
KP13			0.835	valid
KP14			0.782	valid
KP15			0.772	valid
KP2			0.733	valid
KP3			0.710	valid
KP4			0.764	valid
KP5			0.760	valid
KP6			0.786	valid
KP7			0.704	valid
KP8			0.821	valid
KP9			0.726	valid
PBK1			0.799	valid
PBK10			0.811	valid
PBK11			0.706	valid
PBK12			0.726	valid
PBK2			0.773	valid
PBK3			0.760	valid
PBK4			0.729	valid
PBK5			0.754	valid
PBK6			0.705	valid
PBK7			0.882	valid
PBK8			0.812	valid
PBK9			0.713	valid

Source: Processed Research Data (2026)

Based on the results of the Convergent Validity (Loading Factor) test in Table 9, all 42 indicators measuring the four main constructs—Workload (BKP), Competence/Training (KO), Service Quality (KP), and Organizational Commitment (PBK) were deemed valid because, overall, their loading factors exceeded the minimum threshold of 0.70. Specifically, the BKP construct had loading factor values ranging from 0.730 (BKP11) to 0.899 (BKP2), with BKP2 being the highest contributor; the KO construct ranged from 0.719 (KO8) to 0.855 (KO3); the KP construct ranges from 0.704 (KP7) to 0.844 (KP1); and the PBK construct ranges from 0.705 (PBK6) to 0.882 (PBK7), which provides the largest contribution. Since no indicator was found to have a value below the minimum criterion of 0.70, all indicators were proven to represent their respective constructs very well; thus, they were deemed to meet the criteria for convergent validity and are suitable for use in the subsequent structural equation modeling analysis.

Table 10. Results of the Average Variance Extracted (AVE) Test

Variabel	Average variance extracted (AVE)	Keterangan
Beban Kerja Perawat	0,668	Valid
Komitmen Organisasional	0,633	Valid
Kualitas Pelayanan	0,594	Valid
Pelatihan Berbasis Kompetensi	0,587	Valid

Source: Processed Research Data (2026)

The Average Variance Extracted (AVE) test results in Table 10 show that all research variables met the criteria for convergent validity, as the AVE values obtained were consistently above the minimum threshold of 0.50. The Nurse Workload variable recorded the highest AVE value at 0.668, followed by Organizational Commitment (0.633), Quality of Service (0.594), and Competency-Based Training (0.587). These results indicate that each latent construct explains more than 50% of the variance in its constituent indicators; thus, all variables were found to be valid and suitable for use in the subsequent structural equation modeling analysis.

Table 11. Cross-Loading Results

Indikator	BKP	KO	KP	PBK
Beban Kerja Perawat	0.817			
Komitmen Organisasional	0.167	0.796		
Kualitas Pelayanan	0.099	0.192	0.771	
Pelatihan Berbasis Kompetensi	0.152	0.130	0.579	0.766

Source: Processed Research Data (2026)

The results of the Discriminant Validity test using cross-loading analysis in Table 11 show that each indicator consistently has the highest loading value on the construct it measures compared to the cross-loading values on other constructs, such as BKP (0.817), KO (0.796), KP (0.771), and PBK (0.766). Although there is a relatively strong cross-correlation between PBK and KP (0.579) which is consistent with the HTMT results this value remains below PBK's loading value for its primary construct (0.766). These findings confirm that all indicators are able to distinguish and accurately represent their latent constructs without any problematic cross-correlations; thus, the criteria for discriminant validity are fully met, and the model is deemed suitable to proceed to the structural equation modeling (inner model) stage.

Table 12. Latent Variable Correlation Values

Variabel	BKP	KO	KP	PBK	AVE	√AVE	Keterangan
Beban Kerja Perawat (BKP)	1.000	0,167	0,099	0,152	0,817	0,904	Valid
Komitmen Organisasional (KO)	0,167	1.000	0,192	0,130	0,796	0,892	Valid
Kualitas Pelayanan (KP)	0,099	0,192	1.000	0,579	0,771	0,878	Valid
Pelatihan Berbasis Kompetensi (PBK)	0,152	0,130	0,579	1.000	0,766	0,875	Valid

Source: Processed Research Data (2026)

The results of the discriminant validity test using the Fornell Larcker criteria in Table 12 show that the four variables Nurses' Workload (BKP), Organizational Commitment (KO), Quality of Service (KP), and Competency-Based Training (PBK) are deemed valid because the square root of the AVE ($\sqrt{\text{AVE}}$) on the diagonal of each construct is consistently greater than its correlation coefficient with other variables. Specifically, the $\sqrt{\text{AVE}}$ values for BKP (0.904), KO (0.892), KP (0.878), and PBK (0.875) were consistently higher than their interconstruct correlation coefficients, including the highest correlation between KP and PBK (0.579). This confirms that all variables are empirically distinct from one another, a finding further reinforced by testing the Heterotrait-Monotrait Ratio (HTMT) criterion as a complementary evaluation to ensure that the inter-construct ratio values fall below the threshold of 0.85 to 0.90.

Table 13. Heterotrait-Monotrait Ratio (HTMT) Values

Variabel	BKP	KO	KP	PBK
Beban Kerja Perawat (BKP)				
Komitmen Organisasional (KO)	0.148			
Kualitas Pelayanan (KP)	0.140	0.183		
Pelatihan Berbasis Kompetensi (PBK)	0.162	0.146	0.592	

Source: Processed Research Data (2026)

The results of the Heterotrait-Monotrait Ratio (HTMT) test in Table 13 show that all inter-variable ratio values are well below the critical threshold of 0.85, with the following details: the BKP-KO ratio is 0.148; the BKP-KP ratio is 0.140; the KO-KP ratio is 0.183; BKP-PBK at 0.162; KO-PBK at 0.146; and the highest correlation between KP and PBK at 0.592. Although the relationship between Service Quality and Competency-Based Training is relatively stronger than that of the other pairs, these values are still considered safe and meet the criteria for discriminant validity. These findings confirm that each latent construct is unique, does not overlap empirically, and that the measurement model (outer model) is proven to be highly suitable for proceeding to the structural equation modeling (inner model) stage.

Table 14. Summary of Construct Validity and Reliability

Variabel	Cronbach's alpha	Composite reliability	Keterangan
Beban Kerja Perawat	0.958	0.992	Reliabel
Komitmen Organisasional	0.951	0.987	Reliabel
Kualitas Pelayanan	0.951	0.956	Reliabel
Pelatihan Berbasis Kompetensi	0.935	0.938	Reliabel

Source: Processed Research Data (2026)

Thus, it can be concluded that the four constructs in this study Nurses' Workload, Organizational Commitment, Quality of Care, and Competency-Based Training are reliable and suitable for use as measurement instruments in the research model. These results complement the convergent and discriminant validity tests conducted previously, so that overall, the measurement model (outer model) in this study meets the requirements to proceed to the structural equation modeling (inner model) phase.

Table 13. Model Fit Test Results

Parameter	Rule of Thumb	Nilai Parameter	Ket.
SRMR	Lebih Kecil dari 0,10	0,091	Fit
d-ULs	> 0,05	10,868	Fit
d-G	> 0,05	7,416	Fit
Chi Square	χ^2 statistik > χ^2 tabel	2429,559	Fit
NFI	Mendekati nilai 1	0,557	Kurang Fit
GoF	0,1 (GOF kecil), 0,25 (GOF moderate), 0,36 (GOF kuat)	0,3466594	Moderate
Q ² Predictive Relevance	Q ² > 0: Memiliki predictive relevance Q ² < 0 Kurang memiliki predictive relevance 0,02 (Lemah) 0,15 (Moderate) 0,35 (Kuat)	Q ² Komitmen Organisasional -0,069 < 0 Q ² Kualitas Pelayanan 0,251 > 0	Kurang Moderate

Source: Processed Research Data (2026)

Overall, it can be concluded that this research model demonstrates fairly good fit for most indicators (SRMR, d-ULS, d-G, and Chi-Square have met the fit criteria); however, there are notes regarding the NFI value, which is still classified as a poor fit, and the GoF value, which falls into the moderate category. Furthermore, the model's predictive ability regarding the Organizational Commitment variable remains weak (negative Q²), while its predictive ability regarding Service Quality is moderate. These findings indicate that although the model is generally acceptable, there is room for further refinement, particularly in strengthening the model's ability to predict the Organizational Commitment variable.

3.1.3 Hypothesis Testing

This study used a one-tailed test with a significance level of 5%. Based on these criteria, a relationship is considered significant if the P-value is < 0.05 or the T-statistic is > 1.645. Hypothesis testing was conducted to examine the direct and indirect effects between variables in the research model. A hypothesis is accepted if the T-statistic is greater than 1.96 and the P-value is less than 0.05.

Table 11. Results of Direct Hypothesis Testing

Pengaruh Langsung (<i>Direct Effect</i>)					
Koefisien Jalur	Original sample (O)	T statistics	P values	Keterangan	Hasil
Beban Kerja → Kualitas Pelayanan (H1)	-0,007	0,070	0,944	Tidak Signifikan	Ditolak
Pelatihan Berbasis Kompetensi → Kualitas Pelayanan (H2)	0,565	4,517	0,000	Signifikan	Diterima
Komitmen Organisasional → Kualitas Pelayanan (H3)	0,120	0,322	0,990	Tidak Signifikan	Ditolak
Beban Kerja → Komitmen Organisasional (H4)	0,151	0,661	0,509	Tidak Signifikan	Ditolak
Pelatihan Berbasis Kompetensi → Organisasional (H5)	0,107	0,789	0,430	Tidak Signifikan	Ditolak
Pengaruh Tidak Langsung (<i>Indirect Effect</i>)					
Beban Kerja → Komitmen Organisasional → Kualitas Pelayanan	0,018	0,496	0,620	Tidak Signifikan	Ditolak
Pelatihan Berbasis Kompetensi → Komitmen Organisasional → Kualitas Pelayanan	0,013	0,600	0,549	Tidak Signifikan	Ditolak

Source: Processed Research Data (2026)

3.2 Discussion

The discussion of the research results will elaborate on how the analysis of the hypothesis testing addresses the research objectives, relating them to the underlying theory and to the results of previous studies.

3.2.1 The Effect of Nurses' Workload on Quality of Care (H1 – Rejected)

The results show that nurses' workload does not have a significant effect on quality of care (coefficient -0.007; $p=0.944$), with a practically negligible effect size ($f^2=0.000$). This finding is interesting because, in general theory, the Job Demands-Resources model [3] predicts that excessive workload will reduce service quality through burnout. However, the workload category in this study was at the "Moderate" level (3.116) not at an extreme or heavy level so it likely had not yet reached a threshold sufficient to reduce service performance. This is consistent with the Yerkes-Dodson theory regarding the relationship between work load/stress and performance, which follows an inverted U-curve: at moderate levels, performance remains relatively stable, and negative effects only emerge at high levels of workload. [3]

3.2.2 The Effect of Competency-Based Training on Service Quality (H2 – Accepted)

This is the main finding: training has a significant positive effect (coefficient 0.565; $T=4.517$; $p=0.000$) with a large effect size ($f^2=0.473$). This finding aligns with Spencer & Spencer's competency theory and the Human Capital Theory model, which state that investment in the development of employees' knowledge, skills, and attitudes (KSA) directly enhances their capability to provide services. It is also consistent with the Assurance and Responsiveness dimensions in the SERVQUAL

model [12]: well-trained clinical competencies increase patient trust and the speed and accuracy of nurses' responses. The relatively high HTMT value (0.592) and cross-loading between PBK and KP further reinforce that these two constructs are conceptually closely related. [12]

3.2.3 The Effect of Organizational Commitment on Service Quality (H3 – Rejected)

Organizational commitment was not found to be significant ($p=0.990$), contrary to Meyer & Allen's theory, which typically predicts a positive relationship between affective commitment and service performance. The very low R^2 for organizational commitment (0.039) and the negative Q^2 value (-0.069) indicate that this variable is not well predicted by the model; therefore, the nonsignificant results should be interpreted with caution, as they may stem from model limitations rather than the complete absence of a relationship in practice. [11]

3.2.4 Workload and Training on Organizational Commitment (H4, H5 – Rejected)

Neither workload nor training significantly influences organizational commitment. This differs from Social Exchange Theory, which typically predicts that training increases commitment through a sense of reciprocity toward the organization. The low R^2 value (3.9%) suggests that nurses' organizational commitment at Elim Hospital in Rantepao is better explained by factors outside the model such as leadership, organizational culture, or compensation rather than by workload or training [9].

3.2.5 Mediation Effect of Organizational Commitment (Rejected)

Since the path to organizational commitment was not significant, it is reasonable that the mediation effect was also not proven. This indicates that the role of organizational commitment as an intervening variable within this research framework is not supported by empirical data.

4. Conclusion

Based on the testing of seven hypotheses in the study at Elim Hospital in Rantepao, it was found that Competency-Based Training was the only variable that had a positive and significant effect on the quality of inpatient care ("coefficient" = 0.565; "T-statistic" = 4.517; "p-value" = 0.000), and it was also the path with the strongest influence in the model (H_2 accepted). Conversely, Workload did not have a significant direct effect on Service Quality (H_1 rejected), nor did Organizational

Commitment, which was found to have no significant effect on Service Quality (H_3 rejected). Furthermore, neither Workload (H_4 rejected) nor Competency-Based Training (H_5 rejected) showed a significant effect on employees' Organizational Commitment.

The mediation analysis also showed that Organizational Commitment was not found to mediate the effects of Workload (H_6 rejected) or Competency-Based Training (H_7 rejected) on Service Quality; thus, Organizational Commitment does not function as an intervening variable in this model. Overall, of the seven hypotheses tested, only H_2 was found to be significant. These findings reinforce the conclusion that the quality of inpatient care at Elim Rantepao Hospital is determined predominantly by the technical and professional competencies of healthcare workers which are developed through training rather than by the level of work load or employees' organizational commitment.

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