

Resource Allocation, Nursing Staff Services, and Patient Quality Care Satisfaction

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Date Submitted:

June 13, 2026

Date Accepted:

July 02, 2026

Date Published:

July 16, 2026

DOI:

10.5281/zenodo.21399074

ABSTRACT

This study examined resource allocation, nursing staff services, and patient satisfaction with quality of care among inpatients in four infirmiry hospitals in the Municipality of Quezon, Bukidnon. A quantitative descriptive, correlational, and predictive design was employed. Using universal sampling, the study included 400 adult inpatients who had been admitted for at least 24 hours and had received direct nursing care. Data were collected through a 55-item modified and expert-validated questionnaire adapted from established patient satisfaction and healthcare experience instruments. The instrument demonstrated good internal consistency (Cronbach's alpha = .89). Mean and standard deviation were used to describe the variables, while Spearman's rho and multiple linear regression were used to test relationships

and predictive influence. Patients reported a high level of resource allocation ($M = 4.15$, $SD = 0.76$), high satisfaction with nursing staff services ($M = 4.23$, $SD = 0.75$), and high satisfaction with the quality of care received ($M = 4.00$, $SD = 0.85$). Resource allocation ($\rho = .042$, $p = .398$) and nursing staff services ($\rho = .058$, $p = .246$) were not significantly related to patient satisfaction. The regression model was also not significant, $F = 0.759$, $p = .469$, $R^2 = .062$; neither resource allocation ($B = 0.051$, $p = .681$) nor nursing staff services ($B = 0.142$, $p = .253$) significantly predicted satisfaction. The findings indicate that patients positively evaluated hospital resources and nursing services, but their overall satisfaction was influenced by a broader care experience beyond the predictors tested. Hospitals should therefore sustain resource and workforce improvements while strengthening communication, responsiveness, care coordination, discharge preparation, and patient feedback systems.

Keywords: *infirmiry hospitals, nursing staff services, patient satisfaction, quality of care, resource allocation, rural healthcare*

INTRODUCTION

Patient satisfaction is an important indicator of healthcare quality because it reflects how patients evaluate the competence, timeliness, responsiveness, communication, and interpersonal character of the care they receive. Although clinical outcomes remain central to hospital performance, patient-reported experience provides evidence about whether services meet individual needs and expectations. Reviews of healthcare satisfaction research have shown that patients evaluate care through multiple dimensions, including the accessibility of resources, the behavior of healthcare personnel, the continuity of care, and the overall hospital environment (Akthar et al., 2023; Ferreira et al., 2023; Goodrich & Lazenby, 2023).

Resource allocation is a fundamental structural condition of care delivery. It includes the availability and functionality of equipment and supplies, the ability of the hospital to balance resources with patient demand, and the presence of strategic planning systems that anticipate operational needs. Adequate equipment and supplies support timely and safe interventions, while shortages and poorly coordinated distribution may delay services and

reduce patient confidence. Hospital administration and resource-management systems therefore influence how consistently care processes can be carried out (Asamrew et al., 2020; Bhati et al., 2023; Qin et al., 2023).

Nursing staff services represent the human and relational processes through which available resources are translated into direct patient care. Adequate staffing supports surveillance, responsiveness, and continuity, while clinical expertise enables nurses to make sound decisions and perform procedures safely. Work attitude, including empathy, patience, professionalism, and respect, shapes the emotional and interpersonal quality of the patient experience. Research has consistently linked nurse staffing and care processes with patient-perceived quality, but workload, emotional exhaustion, and missed care may weaken the effectiveness of nursing services (Aiken et al., 2021; Dall’Ora et al., 2022; Maghsoud et al., 2022; Winter et al., 2021).

Despite the importance of these factors, most evidence has been generated in large or tertiary hospitals. Small rural infirmiry hospitals operate under different conditions, including limited diagnostic resources, smaller workforces, and greater dependence on coordinated local systems. The combined and comparative influence of resource allocation and nursing staff services on patient satisfaction remains insufficiently examined in rural Philippine settings. This gap is important because high ratings for hospital resources or nursing care do not necessarily establish that these factors are the principal determinants of the patient’s overall judgment of care.

This study therefore determined the patients’ experienced levels of resource allocation and nursing staff services, assessed their satisfaction with quality of care, tested the relationships among these variables, and identified whether resource allocation and nursing staff services significantly predicted satisfaction. By examining both structural and service-related factors in four infirmiry hospitals in Quezon, Bukidnon, the study provided evidence that may guide hospital planning, nursing management, resource monitoring, quality improvement, and patient-centered service development.

Literature Review

Resource Allocation and Hospital Service Capacity

Resource allocation establishes the material and organizational capacity of hospitals to provide care. Equipment, medicines, supplies, beds, and diagnostic tools must be available, accessible, and functional when needed. Inpatient satisfaction research has shown that the availability of hospital resources affects perceptions of service readiness and reliability, particularly when shortages result in delayed procedures or interrupted care (Asamrew et al., 2020). Effective hospital administration further supports patient outcomes by connecting planning, procurement, maintenance, and unit-level distribution with clinical priorities (Bhati et al., 2023).

The functionality of equipment is as important as its physical presence. Devices that are outdated, unavailable, or poorly maintained may limit clinical decision-making even when staff are competent. Resource distribution must also respond to changing patient volume and acuity. Systems that align supply with demand can reduce delays, prevent avoidable shortages, and improve the continuity of services. Human-resource and institutional planning studies emphasize that coordinated allocation improves organizational efficiency and strengthens the conditions under which healthcare personnel work (Mahdavi et al., 2023; Qin et al., 2023).

Strategic planning integrates these components by helping hospitals anticipate service requirements, identify resource gaps, set priorities, and monitor performance. Within Donabedian’s structure-process-outcome framework, resource allocation forms part of the structural foundation of care. Strong structures do not automatically guarantee satisfaction, but they enable safer and more consistent care processes. Contemporary applications of the framework continue to emphasize that material resources, staffing, and organizational preparation influence patient-centered outcomes (Yang et al., 2025).

Nursing Staff Services and Patient Experience

Nursing staff services are directly visible to hospitalized patients because nurses provide continuous monitoring, assistance, communication, medication support, and preparation for discharge. Staffing adequacy affects the time available for each patient and the capacity of nurses to respond promptly. Multicountry and hospital-based studies have associated sufficient staffing and an appropriate skill mix with better patient ratings, safer care, and stronger quality outcomes (Aiken et al., 2021; Dall’Ora et al., 2022; Winter et al., 2021).

Clinical expertise includes theoretical knowledge, technical competence, judgment, assessment, and therapeutic communication. Patients may interpret correct procedures, clear explanations, and confident responses as evidence of high-quality care. Studies of patient satisfaction with nursing services have found that competence, responsiveness, and communication are among the most influential elements of the inpatient experience (Al-Hammouri et al., 2024; Chen et al., 2022; Kibret et al., 2022). Clinical expertise therefore connects professional nursing standards with patients' perceptions of safety and trust.

Work attitude gives nursing care its human and relational quality. Empathy, respect, patience, courtesy, and emotional support shape whether patients feel recognized as persons rather than treated only as clinical cases. Internal quality systems and supportive work environments may strengthen positive professional behavior, whereas high workload and emotional exhaustion may reduce communication quality and increase missed care (Goula et al., 2022; Maghsoud et al., 2022). Nursing management must consequently support both technical competence and the interpersonal conditions required for compassionate care.

Patient Satisfaction as a Quality Outcome

Patient satisfaction is a multidimensional evaluation of the care experience. It reflects the degree to which patients believe their needs were met and whether hospital services were safe, organized, respectful, and responsive. Systematic and integrative reviews show that satisfaction is affected by technical quality, interpersonal treatment, information, waiting time, continuity, and the physical environment (Akthar et al., 2023; Ferreira et al., 2023; Goodrich & Lazenby, 2023). It should therefore be interpreted as an outcome produced by several interacting hospital conditions.

Nursing care is a major component of overall hospital satisfaction because nurses have frequent and sustained contact with patients. However, patients also evaluate coordination among healthcare providers, comfort, cleanliness, discharge information, access to services, and confidence in the institution. Alibrandi et al. (2023) emphasized that the quality of hospital care and satisfaction are closely related but influenced by several organizational and experiential dimensions. Similarly, Chen et al. (2022) found that the nursing experience contributes substantially to overall satisfaction without completely accounting for it.

High satisfaction scores may coexist with weak statistical relationships between selected predictors and the overall outcome. This can occur when ratings are consistently high, when other unmeasured variables have stronger effects, or when personal expectations differ among patients. For this reason, satisfaction studies should examine both descriptive ratings and inferential relationships rather than assuming that positively rated services automatically explain the final satisfaction score.

Integrated Relationships Among Resources, Nursing Services, and Satisfaction

Resource allocation and nursing staff services are conceptually connected. Equipment and supplies enable nurses to perform clinical tasks, while nurses determine how effectively resources are used in direct care. A hospital may possess adequate material resources but still receive lower satisfaction ratings when communication, responsiveness, or coordination is weak. Conversely, skilled and caring nurses may partially compensate for limitations in the environment, although persistent shortages may eventually constrain performance. The relationship is therefore interactive rather than purely linear.

Evidence from quality and patient-experience research suggests that organizational structures influence care processes, which in turn contribute to outcomes. Yet the strength of these relationships varies across settings and patient groups. Internal quality systems, staffing, workload, and hospital responsiveness may function together or may be overshadowed by factors such as waiting time, discharge teaching, comfort, and personal expectations (Goula et al., 2022; Goodrich & Lazenby, 2023; Yan et al., 2022).

The present study addressed this complexity by testing resource allocation and nursing staff services both as related variables and as predictors of patient satisfaction. This approach allowed the study to distinguish between high descriptive ratings and statistically meaningful explanatory effects. It also provided a basis for identifying whether quality-improvement programs should focus only on resources and nursing services or should include a broader set of patient-experience dimensions.

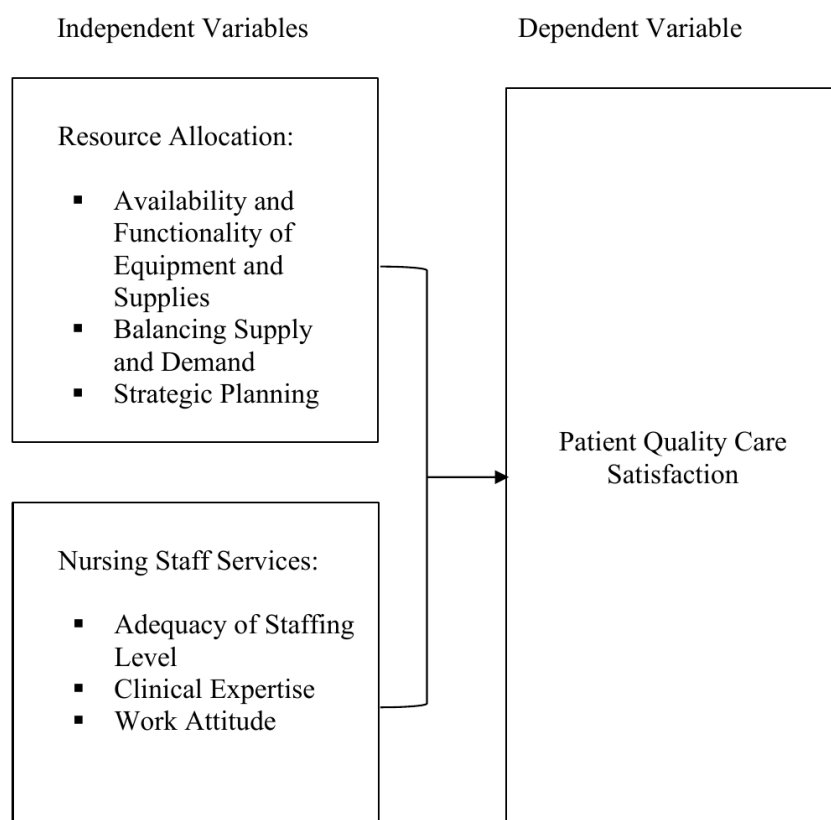
Theoretical and Conceptual Basis

The study was anchored in Donabedian's Structure-Process-Outcome Model, Watson's Theory of Human Caring, and Peplau's Interpersonal Relations Theory. Donabedian's model positioned resource allocation and staffing adequacy as structural conditions, work attitude and clinical expertise as dimensions of the care process, and patient satisfaction as an outcome. Recent applications of the model affirm its value in organizing the relationships among healthcare resources, service delivery, and patient-reported quality (Yang et al., 2025).

Watson's theory supported the work-attitude dimension by emphasizing empathy, compassion, dignity, and holistic caring relationships. Afonso et al. (2024) described the continuing relevance of Watson's theory in understanding humanistic nursing care. Peplau's theory supported clinical expertise and therapeutic communication by explaining how trust, professional interaction, assessment, and guidance shape the nurse-patient relationship. Communication interventions based on Peplau's theory have been associated with improved satisfaction with nursing care (Fathidokht et al., 2024).

The conceptual framework treated resource allocation and nursing staff services as the independent variables and patient quality care satisfaction as the dependent variable. Resource allocation included the availability and functionality of equipment and supplies, balancing supply and demand, and strategic planning. Nursing staff services included adequacy of staffing level, clinical expertise, and work attitude. The framework proposed that these structural and process factors could influence patients' overall evaluation of care.

Figure 1. *Schematic Presentation of the Interplay of Variables in the Study*



METHODS

Research Design

The study employed a quantitative descriptive, correlational, and predictive research design. The descriptive component summarized patients' experienced levels of resource allocation, nursing staff services, and satisfaction with quality of care. The correlational component determined the strength and direction of the relationships among the variables, while regression analysis assessed the predictive contribution of resource allocation and nursing staff services to patient satisfaction. No study variable was experimentally manipulated.

Research Locale

The study was conducted in four infirmary hospitals in the Municipality of Quezon, Bukidnon: St. Ann Hospital, Maraat Hospital, Dr. Alberto M. Pastor Hospital, and Quezon Health Center Infirmery. Three facilities were privately owned, while Quezon Health Center Infirmery was an LGU-managed public facility. Each hospital had a 17-bed capacity and provided essential inpatient, outpatient, emergency, and maternal health services to residents of Quezon and nearby rural communities.

Participants and Sampling Technique

The participants were adult inpatients aged 18 years and above who were able to provide informed consent, had been admitted for at least 24 hours, and had received direct nursing care. Critically unstable patients, minors, and patients unable to provide consent without an authorized representative were excluded. Universal sampling was applied because the accessible monthly inpatient population was relatively small and identifiable. All eligible patients during the data-collection period were invited to participate, producing a total of 400 respondents.

Table 1. *Distribution of Respondents by Participating Hospital*

Hospital	Number of Respondents
Quezon Health Center Infirmery	150
Dr. Alberto M. Pastor Hospital	100
St. Ann Hospital	100
Maraat Hospital	50
Total	400

Research Instrument

Data were gathered using a modified structured questionnaire adapted primarily from the Patient Satisfaction with Nursing Care Quality Questionnaire and guided by the Hospital Consumer Assessment of Healthcare Providers and Systems framework (Bimi, 2025; Giavoni et al., 2025; Kibret et al., 2022). The instrument contained 55 items distributed across seven dimensions: availability and functionality of equipment and supplies (8 items), balancing supply and demand (5 items), strategic planning (5 items), adequacy of staffing level (10 items), clinical expertise (9 items), work attitude (7 items), and patient quality care satisfaction (11 items). Responses were recorded on a five-point Likert scale from 1 to 5. Mean scores of 4.51-5.00 were interpreted as very high, 3.51-4.50 as high, 2.51-3.50 as moderately high, 1.51-2.50 as low, and 1.00-1.50 as very low.

Three subject-matter experts evaluated the instrument for clarity, coherence, relevance, sufficiency, and alignment with the study variables. A pilot test was conducted among approximately 30 patients who were not included in the main study. The overall Cronbach's alpha coefficient was .89, indicating good internal consistency. These procedures supported the content validity and reliability of the questionnaire before its administration to the study respondents (Moreno-Rodriguez et al., 2024; Palese et al., 2023).

Data Gathering Procedure

The researcher secured academic endorsement, research ethics clearance, and written permission from the administrators of the four hospitals before collecting data. Coordination with nursing service personnel and charge nurses was undertaken to identify eligible inpatients. Qualified participants received an explanation of the study's purpose, procedures, potential inconvenience, expected benefits, voluntary nature, and confidentiality protections. After informed consent was obtained, the questionnaire was administered individually and required approximately

10-15 minutes to complete. Completed questionnaires were retrieved, checked, coded, and forwarded for statistical analysis. Data collection was conducted in December 2025 without disrupting routine patient care.

Data Analysis

Mean and standard deviation were used to describe resource allocation, nursing staff services, and patient satisfaction with quality of care. Spearman's rho, as reported in the final statistical output, was used to test the relationships of resource allocation and nursing staff services with patient satisfaction. Multiple linear regression was used to determine whether resource allocation and nursing staff services singly or jointly predicted patient satisfaction. Statistical decisions were made at the .05 significance level.

Ethical Consideration

The study observed the principles of voluntary participation, informed consent, privacy, confidentiality, nonmaleficence, and respect for persons. Respondents were informed that they could decline or withdraw without penalty and that participation would not affect their treatment. No names were written on the questionnaires, and responses were coded and stored securely. Only authorized research personnel had access to the data, which were used solely for academic purposes. The study also maintained cultural sensitivity, avoided interference with hospital operations, disclosed no conflict of interest, and prioritized patient welfare throughout data collection.

RESULTS AND DISCUSSION

Patients' Experienced Level of Resource Allocation

Table 2. *Summary of Patients' Experienced Resource Allocation*

Resource Allocation Dimension	Mean	SD	Description	Interpretation
Availability and functionality of equipment and supplies	4.33	0.68	Agree	High
Strategic planning	3.88	0.87	Agree	High
Balancing supply and demand	4.20	0.71	Agree	High
Overall	4.15	0.76	Agree	High

Patients reported a high overall level of resource allocation ($M = 4.15$, $SD = 0.76$). Availability and functionality of equipment and supplies received the highest rating ($M = 4.33$, $SD = 0.68$), followed by balancing supply and demand ($M = 4.20$, $SD = 0.71$). Strategic planning received the lowest rating but remained within the high category ($M = 3.88$, $SD = 0.87$). These results indicate that respondents generally experienced adequate material support, functional equipment, and organized use of hospital resources.

At the item level, modern and well-maintained equipment received a very high rating, while access to diagnostic equipment was rated only moderately high. The pattern suggests that the participating hospitals were able to maintain visible and commonly used equipment but occasionally faced constraints in immediately accessing diagnostic tools. Limited machines, shared equipment, scheduling, and patient demand may explain why access was less consistently perceived than general equipment condition.

The high overall rating is consistent with evidence that organized resource systems improve service readiness, continuity, and patient confidence (Asamrew et al., 2020; Bhati et al., 2023). However, the lower strategic-planning score indicates a continuing need for more transparent, coordinated, and anticipatory resource management. Hospitals should monitor equipment distribution, diagnostic access, stock levels, and patient flow rather than relying only on the visible availability of supplies.

Patients' Experienced Level of Nursing Staff Services

Table 3. *Summary of Patients' Experienced Nursing Staff Services*

Nursing Staff Service Dimension	Mean	SD	Description	Interpretation
Adequacy of staffing levels	4.30	0.74	Satisfied	High
Clinical expertise	4.29	0.78	Satisfied	High
Work attitude	4.10	0.92	Satisfied	High
Overall	4.23	0.75	Satisfied	High

Patients were highly satisfied with nursing staff services ($M = 4.23$, $SD = 0.75$). Adequacy of staffing levels received the highest summary rating ($M = 4.30$, $SD = 0.74$), closely followed by clinical expertise ($M = 4.29$, $SD = 0.78$). Work attitude was also rated high but obtained the lowest mean among the three dimensions ($M = 4.10$, $SD = 0.92$). The results suggest that patients generally considered nurses available, competent, and capable of providing dependable care.

The strong ratings for staffing adequacy and clinical expertise indicate that the nursing workforce was perceived as sufficient for routine inpatient care and able to carry out necessary clinical responsibilities. These findings are compatible with studies connecting staffing and competence with patient-perceived quality and safety (Aiken et al., 2021; Dall’Ora et al., 2022; Winter et al., 2021). Patients’ confidence in nursing knowledge and skills is especially important in small hospitals where nurses often provide continuous observation and coordinate several aspects of care.

Although work attitude remained highly rated, its lower mean and larger variability suggest that interpersonal experiences were less uniform. Differences in patience, empathy, emotional support, and communication may become more visible during busy periods or when workload pressure is high. This pattern supports previous findings that emotional exhaustion and workload can affect responsiveness and interaction quality even when technical nursing performance remains acceptable (Goula et al., 2022; Maghsoud et al., 2022).

Patient Quality Care Satisfaction

Table 4. *Level of Patient Quality Care Satisfaction Received*

Indicator	Mean	SD	Description	Interpretation
Overall quality of nursing care was excellent	4.38	0.64	Satisfied	High
Care needs were met comprehensively	4.32	0.79	Satisfied	High
Felt safe and secure throughout the stay	4.24	0.86	Satisfied	High
Received individualized care	4.03	0.92	Satisfied	High
Received adequate information about care	4.00	0.92	Satisfied	High
Family was appropriately involved	3.99	0.95	Satisfied	High
Adequately prepared for discharge	3.99	0.94	Satisfied	High
Healthcare providers coordinated care well	3.82	0.75	Satisfied	High
Overall satisfied with hospital stay	3.80	0.79	Satisfied	High
Likelihood to recommend the hospital	3.71	0.82	Satisfied	High
Likelihood to choose the hospital again	3.80	0.87	Satisfied	High
Overall	4.00	0.85	Satisfied	High

The respondents reported high satisfaction with the quality of care received ($M = 4.00$, $SD = 0.85$). The strongest ratings were given to the overall quality of nursing care ($M = 4.38$, $SD = 0.64$), comprehensive attention to care needs ($M = 4.32$, $SD = 0.79$), and feelings of safety and security during hospitalization ($M = 4.24$, $SD = 0.86$). These results indicate that the core clinical and nursing aspects of inpatient care generally met patient expectations.

Lower, although still high, ratings were recorded for willingness to recommend the hospital, overall satisfaction with the hospital stay, care coordination, and willingness to choose the hospital again. These indicators represent a broader institutional judgment rather than an evaluation of nursing tasks alone. Patients may have been satisfied with direct nursing care while remaining less certain about other aspects of the hospital experience, such as waiting time, comfort, coordination, access, or discharge processes.

This distinction reflects the multidimensional nature of patient satisfaction described in the literature. Goodrich and Lazenby (2023) and Ferreira et al. (2023) emphasized that overall satisfaction combines technical quality, interpersonal care, information, responsiveness, and environmental conditions. The results therefore support continued improvement not only in clinical care but also in patient communication, coordination among providers, family involvement, discharge preparation, and institutional service experience.

Relationship of Resource Allocation and Nursing Staff Services with Patient Satisfaction

Table 5. *Correlation of Resource Allocation and Nursing Staff Services with Patient Quality Care Satisfaction*

Variable	Spearman's rho	p-value	Decision	Interpretation
Resource allocation	.042	.398	Fail to reject H0	Not significant
Nursing staff services	.058	.246	Fail to reject H0	Not significant
Overall	.051	.308	Fail to reject H0	Not significant

Note. Statistical significance was evaluated at $p < .05$.

Resource allocation had a very weak and nonsignificant relationship with patient satisfaction ($\rho = .042$, $p = .398$). Nursing staff services also had a very weak and nonsignificant relationship with satisfaction ($\rho = .058$, $p = .246$). The combined result remained nonsignificant ($\rho = .051$, $p = .308$). Accordingly, the null hypothesis of no significant relationship was not rejected.

The absence of significant relationships does not mean that resources and nursing services were unimportant. Both variables received high descriptive ratings and represented necessary conditions for safe and organized care. However, differences in these ratings did not correspond strongly with differences in overall satisfaction among respondents. Satisfaction may have depended more on unmeasured factors, including communication, prompt assistance, comfort, cleanliness, expectations, continuity, and preparation for discharge.

This result is consistent with the view that patient satisfaction is produced by a broad combination of institutional and personal experiences rather than by a single service domain (Goodrich & Lazenby, 2023; Alibrandi et al., 2023). It also illustrates why high mean scores should not be interpreted as evidence of a strong statistical relationship. Quality-improvement efforts should retain resource and nursing priorities while expanding attention to the full patient journey.

Predictive Influence on Patient Quality Care Satisfaction

Table 6. *Regression Coefficients of Resource Allocation and Nursing Staff Services as Predictors of Patient Quality Care Satisfaction*

Predictor	B	SE	t	p-value	Interpretation
Constant	3.229	0.692	4.665	.000	Significant
Resource allocation	0.051	0.125	0.411	.681	Not significant
Nursing staff services	0.142	0.124	1.145	.253	Not significant

Model summary: $R^2 = .062$; $F = 0.759$; $p = .469$. Dependent variable: patient quality care satisfaction.

The regression model was not significant, $F = 0.759$, $p = .469$, and explained only 6.2% of the variance in patient satisfaction ($R^2 = .062$). Resource allocation did not significantly predict satisfaction ($B = 0.051$, $p = .681$), and nursing staff services also failed to reach statistical significance ($B = 0.142$, $p = .253$). Although nursing staff services had the larger coefficient, its contribution was not sufficiently strong to establish predictive influence.

These results indicate that patients' final satisfaction judgments were shaped mainly by factors not included in the model. The participating hospitals received favorable ratings for resources, staffing, expertise, attitude, and care quality, leaving relatively limited variation for the predictors to explain. Moreover, overall satisfaction measures included aspects such as provider coordination, likelihood of recommending the hospital, willingness to return, information, family involvement, and discharge preparation. These dimensions extend beyond the two broad predictors tested.

Hospital leaders should therefore avoid interpreting the nonsignificant model as a reason to reduce attention to resources or nursing services. Instead, the findings support a wider patient-experience strategy that combines adequate resources and competent nursing with reliable communication, timely response, comfortable facilities, coordinated care, clear discharge teaching, and systematic patient feedback. This broader approach is compatible with evidence that workload, responsiveness, interpersonal care, and organizational systems jointly influence satisfaction (Maghsoud et al., 2022; Yan et al., 2022).

CONCLUSION

Patients in the four infirmiry hospitals experienced a high level of resource allocation, were highly satisfied with nursing staff services, and reported high satisfaction with the quality of care received. The hospitals were generally perceived as having functional equipment and supplies, organized resource use, adequate nursing support, competent nurses, and positive care practices. These favorable evaluations indicate that the participating facilities were able to provide dependable inpatient services despite operating in a rural infirmiry context.

However, resource allocation and nursing staff services were not significantly related to, and did not significantly predict, patient quality care satisfaction. The findings demonstrate that high ratings for resources and nursing services do not necessarily mean that these factors explain variation in patients' overall satisfaction. Patient satisfaction appeared to reflect a broader experience that included communication, responsiveness, coordination, comfort, information, family involvement, discharge preparation, expectations, and willingness to return or recommend the hospital. The study contributes local evidence showing that rural hospital quality improvement should integrate structural readiness, professional nursing care, and a wider patient-experience perspective.

Recommendation

Hospital administrators should maintain regular preventive maintenance, equipment inventories, supply monitoring, and fair distribution systems while strengthening strategic planning for diagnostic access, patient flow, and demand fluctuations. Resource decisions should be guided by routine unit-level data, identified service delays, and feedback from patients and frontline personnel.

Nursing service managers should sustain staffing and clinical competency programs and give additional emphasis to work attitude, therapeutic communication, empathy, patience, and respectful interaction. Continuing education, coaching, mentoring, supportive supervision, and workload monitoring may help preserve interpersonal quality during periods of high demand.

The participating hospitals and the Department of Health should develop stronger patient-experience systems that assess communication, responsiveness, coordination, comfort, cleanliness, information, family participation, and discharge readiness. Brief bedside checks or exit surveys can identify concerns that may not be captured by general satisfaction scores. Future studies should include additional predictors, larger and more diverse hospital samples, patient interviews or observations, and subgroup comparisons to clarify the factors that most strongly influence satisfaction in rural and urban healthcare settings.

References

- Afonso, S. R., Padilha, M. I., Neves, V. R., Elizondo, N. R., & Vieira, R. Q. (2024). Critical analysis of the scientific production on Jean Watson's Theory of Human Care. *Revista Brasileira de Enfermagem*, 77(2), e20230231. <https://doi.org/10.1590/0034-7167-2023-0231>
- Aiken, L. H., Simonetti, M., Sloane, D. M., Cerón, C., Soto, P., Bravo, D., Galiano, A., Behrman, J. R., Smith, H. L., McHugh, M. D., & Lake, E. T. (2021). Hospital nurse staffing and patient outcomes in Chile: A multilevel cross-sectional study. *The Lancet Global Health*, 9(8), e1145-e1153. [https://doi.org/10.1016/S2214-109X\(21\)00209-6](https://doi.org/10.1016/S2214-109X(21)00209-6)
- Akthar, N., Nayak, S., & P, Y. P. (2023). Determinants of patient satisfaction in Asia: Evidence from systematic review of literature. *Clinical Epidemiology and Global Health*, 23, 101393. <https://doi.org/10.1016/j.cegh.2023.101393>
- Al-Hammouri, F., Hamdan, K. M., Haymour, A. M., Ibrahim, M. O., Malkawi, A., Al-Hiary, S. S., & Shaheen, A. M. (2024). Quality of nursing care: Predictors of patient satisfaction in a national sample. *Nursing Open*, 11(8), e2252. <https://doi.org/10.1002/nop2.2252>
- Alibrandi, A., Gitto, L., Limosani, M., & Mustica, P. (2023). Patient satisfaction and quality of hospital care. *Evaluation and Program Planning*, 97, 102251. <https://doi.org/10.1016/j.evalprogplan.2023.102251>
- Asamrew, N., Endris, A., & Tadesse, M. (2020). Level of patient satisfaction with inpatient services and its determinants: A study of a specialized hospital in Ethiopia. *Journal of Environmental and Public Health*, 2020, 2473469. <https://doi.org/10.1155/2020/2473469>
- Bhati, D., Deogade, M. S., & Kanyal, D. (2023). Improving patient outcomes through effective hospital administration: A comprehensive review. *Cureus*, 15(10), e47731. <https://doi.org/10.7759/cureus.47731>

- Bimi, D. (2025). Validation of the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ) in Albania. 21. *Yüzylıda Fen ve Teknik Dergisi*, 12(23), 1-17.
- Chen, X., Zhang, Y., Qin, W., Yu, Z., Yu, J., Lin, Y., Li, X., Zheng, Z., & Wang, Y. (2022). How does overall hospital satisfaction relate to patient experience with nursing care? A cross-sectional study in China. *BMJ Open*, 12, e053899. <https://doi.org/10.1136/bmjopen-2021-053899>
- Dall'Ora, C., Saville, C., Rubbo, B., Turner, L., Jones, J., & Griffiths, P. (2022). Nurse staffing levels and patient outcomes: A systematic review of longitudinal studies. *International Journal of Nursing Studies*, 134, 104311. <https://doi.org/10.1016/j.ijnurstu.2022.104311>
- Fathidokht, H., Mansour-Ghanaei, R., Darvishpour, A., & Maroufizadeh, S. (2024). The effect of communication using Peplau's theory on satisfaction with nursing care in hospitalized older adults in a cardiac intensive care unit: A quasi-experimental study. *Journal of Education and Health Promotion*, 13, 53. https://doi.org/10.4103/jehp.jehp_683_23
- Ferreira, D. C., Vieira, I., Pedro, M. I., Caldas, P., & Varela, M. (2023). Patient satisfaction with healthcare services and the techniques used for its assessment: A systematic literature review and a bibliometric analysis. *Healthcare*, 11(5), 639. <https://doi.org/10.3390/healthcare11050639>
- Giavoni, G., Lamura, G., Rocco, G., Alvaro, R., Vellone, E., & De Maria, M. (2025). Validity and reliability of the Home Health Care Survey of the Consumer Assessment of Healthcare Providers and Systems (HHCAHPS) in Italy. *Journal of Preventive Medicine and Hygiene*, 66(1), E1-E8. <https://doi.org/10.15167/2421-4248/jpmh2025.66.1.3526>
- Goodrich, G. W., & Lazenby, J. M. (2023). Elements of patient satisfaction: An integrative review. *Nursing Open*, 10(3), 1258-1269. <https://doi.org/10.1002/nop2.1622>
- Goula, A., Rizopoulos, T., Stamouli, M. A., Kelesi, M., Kaba, E., & Soulis, S. (2022). Internal quality and job satisfaction in health care services. *International Journal of Environmental Research and Public Health*, 19(3), 1496. <https://doi.org/10.3390/ijerph19031496>
- Kibret, G. D., Leshargie, C. T., Wagnew, F., & Alebel, A. (2022). Patient satisfaction with nursing care and associated factors among adult admitted patients in University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia: A cross-sectional study. *PLOS ONE*, 17(5), e0268944. <https://doi.org/10.1371/journal.pone.0268944>
- Maghsoud, F., Rezaei, M., Asgarian, F. S., & Rassouli, M. (2022). Workload and quality of nursing care: The mediating role of implicit rationing of nursing care, job satisfaction and emotional exhaustion using structural equations modeling approach. *BMC Nursing*, 21(1), 273. <https://doi.org/10.1186/s12912-022-01121-1>
- Mahdavi, A., Atlasi, R., Ebrahimi, M., Azimian, E., & Naemi, R. (2023). Human resource management strategies of medical staff during the COVID-19 pandemic. *Heliyon*, 9(10), e20392. <https://doi.org/10.1016/j.heliyon.2023.e20392>
- Moreno-Rodriguez, C., Garcia-Lopez, M., & Santos-Perez, A. (2024). Content validation of a questionnaire on healthcare personnel's perceptions and attitudes toward health technologies. *BMC Health Services Research*, 24, 11234. <https://doi.org/10.1186/s12913-024-11234-5>
- Palese, A., Regattin, L., & Ventura, C. (2023). Developing and validating an integrated instrument for nursing assessments in hospitalization units. *International Journal of Nursing Studies*, 89(1), 45-58. <https://doi.org/10.1016/j.ijnurstu.2023.104567>
- Qin, X., Huang, Y. N., Hu, Z., Chen, K., Li, L., Wang, R. S., & Wang, B. L. (2023). Human resource management research in healthcare: A big data bibliometric study. *Human Resources for Health*, 21(1), 94. <https://doi.org/10.1186/s12960-023-00872-w>
- Winter, V., Dietermann, K., Schneider, U., & Schreyögg, J. (2021). Nurse staffing and patient-perceived quality of nursing care: A cross-sectional analysis of survey and administrative data in German hospitals. *BMJ Open*, 11(11), e051133. <https://doi.org/10.1136/bmjopen-2021-051133>
- Yan, M., Zhi, M., Xu, Y., Hu, L., & Liu, Y. (2022). Inpatient satisfaction with nursing care and its impact factors in Chinese tertiary hospitals: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 19(24), 16523. <https://doi.org/10.3390/ijerph192416523>
- Yang, J., Li, F., Yu, C., Wang, J., Ma, Y., Xu, L., Xu, J., & Wang, J. (2025). Application of Donabedian three-dimensional model in outpatient nursing care quality: A scoping review. *International Journal of Nursing Sciences*, 12(2), 178-189. <https://doi.org/10.1016/j.ijnss.2025.02.008>