

Review Article

# The impact of quality of nursing care on patient satisfaction: A systematic review

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## Abstract

**Background:** Patient satisfaction is a key indicator of healthcare quality and reflects how patients evaluate the care they receive during treatment. Among the determinants of patient satisfaction, the quality of nursing care has a particularly important role because nurses maintain the most continuous contact with patients across healthcare settings. A systematic synthesis is therefore needed to clarify how the quality of nursing care influences patient satisfaction.

**Objective:** This systematic review aimed to identify, synthesize, and interpret the available evidence on the impact of quality of nursing care on patient satisfaction across various healthcare settings.

**Methods:** This study used a systematic review design. Literature searches were conducted in PubMed, Scopus, ScienceDirect, Google Scholar, and the Directory of Open Access Journals for studies published between 2015 and 2025. The search strategy used combinations of keywords related to nursing care, nursing service quality, and patient satisfaction in English and Indonesian. Studies were included if they examined patients receiving care in hospitals, primary healthcare centers, or clinics and reported patient satisfaction in relation to nursing care. Ten studies met the inclusion criteria and were synthesized narratively.

**Results:** The findings consistently showed that better quality of nursing care was associated with higher patient satisfaction across inpatient, outpatient, primary care, and specialty care settings. Interpersonal dimensions of nursing care, particularly responsiveness, attention, caring behavior, and therapeutic communication, emerged as the most influential contributors to patient satisfaction. Several studies also indicated that patient satisfaction was shaped by contextual factors such as hospital type, educational level, income, and service organization.

**Conclusion:** The quality of nursing care has a meaningful and consistent impact on patient satisfaction across diverse healthcare contexts. Nursing care that is responsive, communicative, caring, and patient-centered contributes substantially to favorable patient evaluations of care.

## Background

Patient satisfaction reflects patients' evaluations of whether healthcare services meet their expectations during treatment and recovery, and this indicator increasingly guides quality improvement across many care settings (Amor et al., 2018). Hospital-based evidence shows that service quality significantly shapes patient satisfaction because patients judge care through timeliness, responsiveness, and interpersonal attention during admission and treatment processes (Cahyo et al., 2025). In inpatient services, nursing actions directly influence how patients perceive hospital care because nurses maintain the most frequent and sustained contact with patients throughout hospitalization (Agusianita et al., 2023). Empirical findings also show that the quality of nursing care predicts patient satisfaction at the national level, which confirms that nursing performance remains central to overall patient

experience (Al-Hammouri et al., 2024). Earlier evidence further established that patients who perceive nursing care as respectful, competent, and responsive report higher satisfaction with care quality in hospital settings (Karaca & Durna, 2019).

This relationship remains important because nurses deliver continuous clinical, emotional, educational, and coordinative functions that patients directly observe during care encounters (Purwanza et al., 2022). Therapeutic communication strengthens this relationship because clear, empathetic, and respectful interactions help patients understand care and feel valued during treatment (Yuliana et al., 2024). Recent reviews also confirm that nursing services are consistently associated with patient satisfaction levels, although the strength and explanation of this relationship vary across studies and service contexts (Gurning & Duwith, 2025). Meta-analytic evidence from Iran

similarly shows that patient satisfaction with nursing care depends on how patients perceive nurse responsiveness, competence, and interpersonal conduct in daily practice (Hosseini et al., 2023). In addition, nursing workforce conditions may indirectly influence patient satisfaction because workload and job satisfaction affect nurses' ability to provide attentive, safe, and patient-centered care in clinical units (Yanwarin, 2024).

Beyond nursing-specific factors, broader service experiences also shape satisfaction because patients interpret care quality through organizational efficiency, communication, comfort, and continuity of services (Suliati et al., 2025). Outpatient evidence further indicates that satisfaction arises from multiple service factors, which suggests that patient evaluation reflects a complex interaction between technical care, interpersonal behavior, and system performance (Wiladatika et al., 2025). This complexity becomes more important in vulnerable populations because disparities in access and service utilization may alter how patients judge the quality and fairness of care delivery (Amin, 2026). In chronic and cancer care, patient-centered follow-up models also influence experiences because continuity, accessibility, and responsiveness support better engagement with care processes over time (Newton et al., 2022). Studies in radiotherapy settings confirm that patient satisfaction remains sensitive to how healthcare professionals organize information, support treatment navigation, and respond to individual needs during complex care trajectories (Fabian et al., 2024).

Patient satisfaction also matters because it connects with broader patient outcomes, including symptom burden, quality of life, adherence, and willingness to continue care (Valero-Cantero et al., 2023). Evidence from day care oncology services shows that higher satisfaction with service delivery contributes to better quality of life, which highlights the clinical relevance of positive care experiences (Vastardi et al., 2025). Research in advanced chronic kidney disease consultations also shows that perceived care quality relates to patient well-being, thereby reinforcing the importance of respectful and supportive professional care in long-term illness management (Gimeno-Hernán et al., 2026). Conceptual and clinical discussions further indicate that health-related quality of

life functions as a meaningful outcome in evaluating whether healthcare services actually support patient recovery and adaptation (Nolazco & Chang, 2023). Reviews in head and neck cancer populations add that psychosocial distress and unmet needs remain common when supportive care is insufficient, which suggests that care quality must address both technical and relational dimensions (McDowell et al., 2022).

The broader literature on quality of life supports this perspective because patient outcomes are strongly shaped by sociodemographic, disease-related, and care-related determinants across chronic conditions (Andreu et al., 2022). Studies among patients with surgically treated spinal tumors also show that clinical outcomes alone do not explain patient well-being because supportive care and contextual determinants remain influential (Barańska et al., 2023). Similar findings in breast cancer populations identify quality of life as a multidimensional construct that depends on social, clinical, and service-related factors during treatment and survivorship (Belhaj et al., 2024). Systematic review evidence further demonstrates substantial global variation in quality of life among breast cancer patients, which underscores the need to understand how care experiences may contribute to these differences (Javan Biparva et al., 2024). Additional studies confirm that sociodemographic factors, treatment contexts, and pandemic-related challenges shape patient well-being, thereby strengthening the relevance of supportive nursing care in complex care environments (Gupta et al., 2022; Witwaranukool et al., 2024).

Innovative supportive interventions also show that patients benefit when healthcare systems address psychological comfort, physical functioning, and individualized care needs alongside clinical treatment (Bachelard et al., 2024). Evidence from pediatric oncology similarly indicates that virtual reality interventions can improve fear, physical function, and quality of life, which reflects the value of holistic care approaches that complement routine treatment (Czech et al., 2023). Protocol-based innovation studies further suggest that psychologically supportive interventions may improve depressive symptoms and patient well-being when care models integrate broader patient needs beyond biomedical management (Sancassiani et al.,

2025). At the provider level, occupational stressors such as sleep problems and reduced psychological resilience among medical staff may affect care quality, which makes the examination of nursing care quality even more important for patient satisfaction research (Zhang et al., 2024).

Therefore, this systematic review aims to synthesize and critically analyze the available evidence on the impact of quality of nursing care on patient satisfaction.

## Methods

### Study Design

This study employed a systematic review design with an integrative approach to synthesize evidence derived from both quantitative and qualitative studies. This design was selected because the topic of nursing care and patient satisfaction is multidimensional and cannot be adequately explained by a single type of evidence alone. Quantitative studies contribute measurable evidence regarding the magnitude and direction of the relationship between dimensions of nursing care and patient satisfaction, whereas qualitative studies contribute contextual insight into how patients perceive, interpret, and value nursing services in real clinical settings.

The integrative approach was therefore justified because it enabled the review to capture not only statistical associations but also experiential and meaning-based dimensions of satisfaction. In this review, the reporting process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guideline, which is the reporting guideline recommended within the EQUATOR Network for systematic review study designs. The use of PRISMA 2020 strengthened the transparency, reproducibility, and completeness of reporting by structuring the review process from identification, screening, eligibility assessment, and final inclusion of studies.

### Research Question

The review was guided by a structured research question developed using the PICO framework to improve conceptual clarity and ensure alignment between the review objective, search

strategy, and synthesis process. The population comprised patients of all age groups who received healthcare services in hospitals, community health centers, or clinics. The intervention or exposure referred to dimensions of nursing care, including nursing service quality, caring behavior, therapeutic communication, responsiveness, empathy, technical competence, and other care-related attributes that could shape the patient experience. The comparison involved variation in the quality or characteristics of nursing care, as well as comparisons across different healthcare settings or levels of service performance. The outcome was patient satisfaction specifically related to nursing care or to nursing contributions within the broader healthcare experience. Based on this framework, the research question was formulated as follows: What factors related to nursing care influence patient satisfaction across hospitals, primary care facilities, and clinical settings?

### Inclusion and Exclusion Criteria

The eligibility criteria were established a priori to ensure consistency, reduce arbitrary decision-making, and improve methodological rigor during the screening process. Studies were included if they met four main criteria. First, the study had to use a quantitative design, such as cross-sectional, cohort, correlational, or other observational approaches, or a qualitative design that explored patient experiences, perceptions, or meanings related to nursing services. Second, the article had to be published in English or Indonesian, because these were the languages accessible for accurate appraisal, interpretation, and synthesis by the review team. Third, the population had to consist of patients from any age group who received healthcare services in hospitals, primary health centers, or clinics. Fourth, the primary outcome had to be patient satisfaction explicitly related to nursing care, nursing service quality, or nursing-related dimensions of care.

These inclusion criteria were justified by the review objective, which focused on nursing care as a determinant of patient satisfaction rather than on general service quality alone. The

inclusion of both quantitative and qualitative studies was methodologically important because patient satisfaction includes measurable evaluative components and subjective experiential components. The language restriction to English and Indonesian was applied to maintain interpretive accuracy and analytical consistency during full-text review and synthesis. The inclusion of multiple service settings was also justified because nursing care is delivered across a continuum of care, and limiting the review to one setting would reduce the external relevance of the findings. The review did not restrict patient age because satisfaction with nursing care can be relevant across lifespan groups, although its expression and determinants may vary.

Studies were excluded if they were editorials, expert opinions, theses, dissertations, case reports, conference abstracts without sufficient data, or other non-research publications. Studies were also excluded when the full text was unavailable, because full methodological appraisal and reliable data extraction could not be conducted from abstracts alone. In addition, articles were excluded when nursing care was not addressed as a principal variable or when patient satisfaction was reported only in relation to general hospital services without any clear nursing-specific component. These exclusion criteria were necessary to preserve conceptual specificity and methodological quality. The decision to exclude non-research and inaccessible publications helped reduce the risk of incomplete evidence extraction and unsupported interpretation. The decision to exclude studies that did not specifically address nursing care ensured that the final synthesis reflected the actual review objective and avoided dilution of the evidence base by unrelated service quality literature.

### *Search Strategy*

A comprehensive literature search was conducted across five electronic sources, namely PubMed, Scopus, ScienceDirect, Google Scholar, and the Directory of Open Access Journals (DOAJ). These databases were selected because together they provide broad coverage of nursing, medical, public health, and

interdisciplinary healthcare literature. PubMed and Scopus were used to identify peer-reviewed international literature with strong indexing standards. ScienceDirect was included because it contains a large number of full-text health science publications. Google Scholar was used to increase retrieval sensitivity and to identify additional studies and grey literature that may not have been indexed in conventional databases. DOAJ was included to capture open-access studies that could contribute relevant evidence, especially from regional and emerging journals.

The search strategy was developed using combinations of English and Indonesian keywords to maximize retrieval from both international and local literature sources. The principal search terms included “nursing care,” “nursing service quality,” “nursing services,” “patient satisfaction,” “patient experience,” “keperawatan,” and “kepuasan pasien.” These keywords were combined using Boolean operators AND and OR, with syntax adapted to the requirements of each database. An example of the search string used in PubMed was: (“nursing care” OR “nursing service quality” OR “nursing services”) AND (“patient satisfaction” OR “patient experience”) AND (“hospital” OR “primary health care” OR “clinic”). Equivalent search formulations were then modified for use in Scopus, ScienceDirect, Google Scholar, and DOAJ, including title, abstract, and keyword field restrictions when appropriate to improve search precision. The search period was limited to 2015 to 2025 to ensure that the review captured contemporary evidence that reflects recent standards of nursing care, service delivery, and patient-centered evaluation.

The final search was conducted in June 2025, and this date served as the endpoint for study identification. In addition to database searching, supplementary retrieval methods were used to reduce the risk of missing relevant studies. These methods included checking the reference lists of included articles and screening potentially relevant literature identified through Google Scholar as a grey literature source. This expanded search approach was justified because publication indexing practices differ across journals and countries, and some

relevant studies may not be retrieved through database searching alone. The use of multiple databases, multilingual keywords, Boolean logic, and manual reference checking was intended to balance sensitivity and specificity in study identification. This strategy increased confidence that the review captured a sufficiently broad and representative body of evidence on the relationship between nursing care and patient satisfaction.

### Study Selection Process

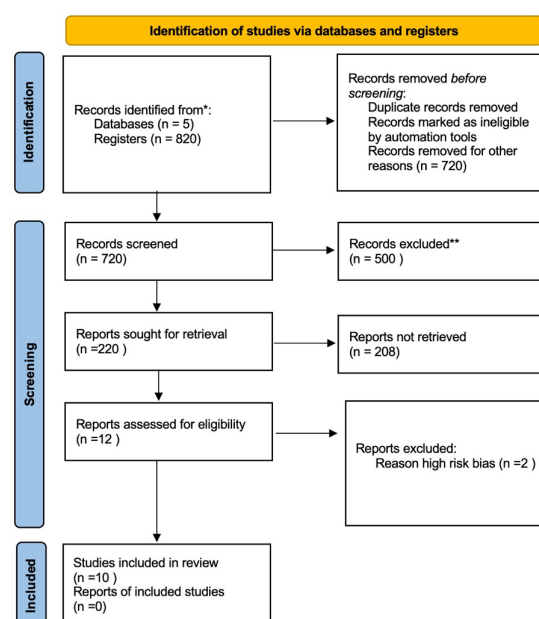
The study selection process followed the sequential stages recommended in PRISMA 2020, namely identification, screening, eligibility assessment, and inclusion. All references retrieved from the search process were first compiled and managed to identify duplicate records. The initial search yielded 820 records across the selected databases and supplementary sources. After preliminary record management, 720 records proceeded to the title and abstract screening stage. At this stage, records were reviewed for obvious irrelevance to the review question, including studies that did not concern nursing care, did not assess patient satisfaction, or did not represent original research. Records that appeared potentially relevant were then advanced to the full-text retrieval stage for detailed eligibility assessment.

Based on the information provided in the uploaded PRISMA flow diagram, 220 reports were sought for retrieval after the title and abstract screening phase. Of these, 208 reports were not retrieved, leaving 12 full-text reports available for eligibility assessment. During the eligibility stage, each full-text article was evaluated against the predefined inclusion and exclusion criteria. A further 2 studies were excluded because they were judged to have a high risk of bias, and 10 studies were ultimately included in the final review. The PRISMA flow figure therefore provides a visual representation of how the evidence base was reduced from the initial identification stage to the final analytic sample. The inclusion of this flow diagram in the manuscript is important because it documents the transparency of record handling and enables readers to trace the

rationale for study inclusion and exclusion across all review phases.

The entire selection process was conducted by two reviewers independently to minimize selection bias and improve procedural reliability. Each reviewer screened titles and abstracts separately and then evaluated full-text articles using the same eligibility criteria. When differences in judgment arose, the two reviewers discussed the article until a shared decision was reached. When disagreement could not be resolved through discussion alone, a third reviewer was consulted to make the final determination. This multi-reviewer process was justified because independent screening reduces the influence of individual assumptions and strengthens confidence in the objectivity of the final study set. The use of a consensus-based selection process is particularly important in reviews that include heterogeneous study designs, because relevance and methodological fit may require careful interpretation during eligibility assessment.

In this review, the study selection process followed the PRISMA 2020 flow framework, and the detailed screening results are presented in Figure 1.



**Figure 1.** PRISMA 2020 flow diagram of study identification, screening, eligibility assessment, and inclusion

### *Quality Appraisal*

The methodological quality of each included study was appraised using critical appraisal tools matched to the design of the study. This design-sensitive approach was necessary because the review included both quantitative and qualitative evidence, and the quality indicators relevant to these designs differ substantially. For quantitative studies, appraisal focused on elements such as clarity of study objectives, appropriateness of the sampling approach, validity and reliability of measurement instruments, control of confounding variables, consistency of statistical analysis, and risk of selection or reporting bias. For qualitative studies, appraisal focused on methodological congruence, credibility of findings, adequacy of data collection, clarity of analytic procedures, dependability, and transferability. This dual approach was justified because a single appraisal framework would not adequately capture the quality dimensions relevant to each methodological tradition.

The quality appraisal was performed independently by two reviewers to ensure objectivity and consistency. Each reviewer assessed the studies separately using the agreed appraisal criteria. After independent scoring or judgment, the reviewers compared their assessments and resolved discrepancies through discussion. When necessary, a third reviewer was consulted to adjudicate unresolved differences. Studies judged to have critical methodological weakness, particularly those with a high risk of bias, were considered unsuitable for inclusion in the final synthesis. According to the study selection information reflected in the uploaded PRISMA flow figure, two reports were excluded at the eligibility stage because of high risk of bias. This indicates that quality appraisal was not treated as a formalistic step, but rather as a substantive methodological safeguard to ensure that the synthesized findings were grounded in evidence of sufficient trustworthiness.

### *Data Extraction and Synthesis*

Data extraction was conducted using a structured extraction form developed specifically for this review. The extraction sheet

captured core study characteristics, including author, year of publication, country or location, study design, population characteristics, sample size, healthcare setting, nursing care variables, patient satisfaction measures, instruments used, and principal findings. The extraction process also documented whether the study emphasized technical quality of care, interpersonal communication, caring behavior, responsiveness, competence, or other nursing-related constructs. This structured approach was justified because it enabled systematic comparison across studies that differed in design and context. By standardizing the extraction categories, the review team ensured that essential information relevant to the research question was consistently captured from each included article.

The extraction process was performed by two researchers independently to reduce the possibility of error or selective interpretation. Each researcher reviewed the eligible full-text studies and entered the relevant information into the extraction template. The extracted data were then compared, and discrepancies were discussed until consensus was achieved. This approach supported methodological rigor because it reduced dependence on a single reviewer's judgment and improved the completeness and accuracy of the extracted evidence. The dual-reviewer extraction process also aligned with the broader quality assurance strategy used in the screening and appraisal stages of the review. In a systematic review that includes both quantitative and qualitative evidence, such procedural consistency is particularly valuable because studies often present findings in different terminologies and reporting structures.

### **Results**

The literature search identified a total of 820 records from databases and registers. After removal of records before screening and initial record management, 720 records remained for title and abstract screening. During this stage, 500 records were excluded because they did not meet the review objective, did not examine nursing care or service-related factors, or did not assess patient satisfaction as an outcome. A

total of 220 reports were sought for retrieval, but 208 reports were not successfully retrieved in full text. Consequently, 12 full-text articles were assessed for eligibility. Of these, 2 reports were excluded because they were judged to have a high risk of bias. Finally, 10 studies were included in the systematic review. The entire identification, screening, eligibility, and inclusion process is presented in the uploaded PRISMA flow diagram.

### *Study characteristics*

The 10 included studies were published between 2018 and 2025 and represented evidence from Indonesia, Jordan, Türkiye, Germany, and Greece. Most studies used a cross-sectional design, while one study used a secondary analysis of a large multicenter dataset. The included studies were conducted across several healthcare settings, including inpatient wards, outpatient clinics, community health centers, dental polyclinics, internal medicine polyclinics, radiotherapy services, and oncology day care units. This distribution indicates that patient satisfaction in relation to nursing care and service quality has been examined in diverse clinical environments rather than in a single service context. The sample size varied substantially across studies, ranging from 55 participants to 1,014 participants, which suggests variability in study scale and representativeness.

The principal exposure variables reported in the included studies consisted of quality of nursing care, nursing service quality, nurses' roles, therapeutic communication, and broader health service quality dimensions such as responsiveness, reliability, empathy, and information provision. The most frequently reported outcome was patient satisfaction, although some studies extended the analysis to related outcomes such as patient loyalty or quality of life. Several studies used structured patient satisfaction questionnaires, and two studies explicitly reported the use of the Patient Satisfaction with Nursing Care Quality Questionnaire (PSNCQQ). Overall, the included studies reflected a predominantly patient-reported evaluation of how nursing-related

service experiences influenced satisfaction with care.

### *Methodological quality*

Based on the appraisal process described in the Methods section, the included studies were considered methodologically adequate for narrative synthesis after excluding two reports with high risk of bias at the eligibility stage. The retained studies generally presented clear objectives, relevant populations, appropriate service settings, and measurable outcomes related to nursing care or patient satisfaction. However, the overall evidence base was still dominated by observational cross-sectional studies, which limited causal interpretation. Most studies measured perceptions of care and satisfaction at one point in time, which means that temporal directionality between service quality and patient satisfaction could not be fully established. Despite this limitation, the consistency of findings across different settings strengthened the interpretive value of the evidence.

Another methodological consideration concerned the heterogeneity of variables and instruments. Although several studies focused explicitly on nursing care quality, other studies examined service quality more broadly, including organizational responsiveness, communication, or patient support. This variation increased conceptual breadth but reduced the comparability required for statistical pooling. Therefore, the evidence was synthesized narratively rather than through formal meta-analysis. This approach was methodologically justified because it preserved contextual differences across studies while still allowing identification of common patterns.

The synthesis showed a consistent overall pattern in which better perceived nursing care or service quality was associated with higher patient satisfaction. This pattern appeared in hospital-based studies, primary care settings, and specialty care services. In the Indonesian inpatient context, Agusianita et al. found that better nursing services were significantly associated with greater satisfaction among insured inpatients. Purwanza et al. similarly reported that service quality and nurses' roles

were significantly related to patient satisfaction. Cahyo et al. extended this pattern by showing that overall hospital service quality was associated with patient satisfaction, which

suggests that nursing care quality functions within a broader service environment but remains a central component of the patient experience

**Table 1.** Characteristics of studies included in the review

Author, Year, Country	Study design	Population, sample, and setting	Nursing care / service variables	Outcome / instrument	Main findings
Agusianita et al., 2023, Indonesia	Cross-sectional	Inpatients enrolled in JKN at Rafflesia Hospital, Bengkulu; n=162; inpatient setting	Nursing service quality	Patient satisfaction questionnaire	Nursing service quality was significantly associated with patient satisfaction. Most respondents perceived nursing services as good, and better service ratings were followed by higher satisfaction.
Al-Hammouri et al., 2024, Jordan	Descriptive correlational cross-sectional	Inpatients from six hospitals; n=1,014; hospital setting	Quality of nursing care and patient-related predictors	PSNCQQ	Patient satisfaction with nursing care was generally high. Income, educational level, and hospital type were significant predictors of satisfaction with nursing care.
Karaca and Durna, 2019, Türkiye	Cross-sectional	Hospitalized patients in a private hospital; n=635; inpatient units	Quality of nursing care, nurse attention, information provision	PSNCQQ	Most patients rated nursing care positively. Nurse attention and concern received the highest ratings, whereas information provision was identified as the weakest aspect of care.
Purwanza et al., 2022, Indonesia	Descriptive analytic cross-sectional	Patients receiving care in a health facility; n=55; healthcare facility setting	Service quality and nurses' roles	Patient satisfaction questionnaire	Service quality and nurses' roles were significantly related to patient satisfaction. The findings showed that nursing contribution remained an important determinant of patient experience.
Cahyo et al., 2025, Indonesia	Cross-sectional	Hospital patients; sample size not specified in the bibliography summary; hospital setting	Health service quality	Patient satisfaction	Health service quality showed a significant association with patient satisfaction in hospital care. Better service performance was linked with better patient-reported satisfaction.
Suliati et al., 2025, Indonesia	Cross-sectional	Dental polyclinic patients; sample size not specified in the bibliography summary; outpatient setting	Health service satisfaction factors	Patient satisfaction	Patient satisfaction in the dental service setting was influenced by service-related factors, indicating that perceived service quality remained central in patient evaluation.
Wiladatika et al., 2025, Indonesia	Cross-sectional	Internal medicine polyclinic patients at a general hospital; sample size not specified in the bibliography summary; outpatient setting	Factors of service satisfaction	Patient satisfaction	Multiple service factors shaped patient satisfaction in the internal medicine polyclinic, suggesting that patient satisfaction was multidimensional and sensitive to service organization.
Yuliana et al., 2024, Indonesia	Cross-sectional	Patients at a community health center; sample size not specified in the bibliography summary; primary care setting	Therapeutic communication	Patient satisfaction	Therapeutic communication was significantly related to patient satisfaction. Better nurse-patient communication improved patients' perceptions of care quality.
Fabian et al., 2024, Germany	Secondary analysis of a large	Cancer patients receiving radiotherapy;	Satisfaction with	Patient satisfaction with care	Satisfaction with radiotherapy care remained an important patient-reported outcome and

Author, Year, Country	Study design	Population, sample, and setting	Nursing care / service variables	Outcome / instrument	Main findings
Vastardi et al., 2025, Greece	multicenter study Observational study	multicenter setting Cancer patients receiving day care unit services; day care oncology setting	radiotherapy care Satisfaction with day care unit services	Patient satisfaction and quality of life	reflected the quality of interaction, information, and support during treatment. Satisfaction with day care unit services had a positive impact on quality of life, indicating that favorable service experiences may extend beyond immediate satisfaction and influence broader patient well-being.

Studies focusing more specifically on the quality of nursing care also demonstrated similar results. Karaca and Durna found that patients rated nursing care positively overall, especially in relation to nurse attention and concern. However, the study also identified information provision as the weakest dimension, which indicates that communication content and patient education remain critical areas for improvement. Al-Hammouri et al. reported high satisfaction with nursing care in a national hospital sample and found that satisfaction was shaped not only by care quality but also by contextual factors such as education, income, and hospital type. These findings suggest that patient satisfaction reflects both the performance of nursing care and the broader clinical and social context in which that care is delivered.

The evidence further indicated that communication was a key dimension of satisfactory care. Yuliana et al. showed that therapeutic communication was significantly associated with patient satisfaction at the community health center level. This finding supports the interpretation that patient satisfaction depends not only on technical care delivery but also on how nurses communicate, explain, respond, and build trust with patients during service encounters. In this review, communication emerged as one of the most patient-visible dimensions of nursing care quality.

Studies conducted in specialty and outpatient settings showed that the relationship between service quality and satisfaction remained relevant beyond general inpatient care. Suliati et al. and Wiladatika et al. demonstrated that

patient satisfaction in outpatient and polyclinic settings was influenced by service-related factors, indicating that responsiveness, organization, and perceived support remain important across care models. Fabian et al. reported that satisfaction with radiotherapy care reflected the adequacy of support, interaction, and treatment-related communication in a multicenter cancer population. Vastardi et al. further showed that satisfaction with day care unit services was positively linked to patients' quality of life. Taken together, these findings suggest that positive service experiences may influence not only immediate satisfaction but also broader perceptions of well-being.

## Discussion

This systematic review found that the quality of nursing care was consistently associated with patient satisfaction across inpatient, outpatient, primary care, and specialty care settings. The findings showed that patients reported higher satisfaction when nurses demonstrated responsiveness, attention, caring behavior, and effective communication during care delivery. The review also revealed that interpersonal dimensions of nursing care appeared more prominent than purely technical dimensions in shaping patients' evaluations of care. In addition, the findings indicated that patient satisfaction was influenced not only by nursing performance itself but also by contextual factors such as hospital type, educational background, and service organization. Across the included studies, the overall direction of evidence remained stable despite differences in setting, population, and measurement instruments. These results suggest that nursing care quality

should be understood as a central determinant of patient experience and as an essential component of healthcare quality improvement.

This finding is consistent with the broader view that patient satisfaction represents an important indicator of healthcare quality because patients evaluate services through direct encounters during treatment and recovery processes (Amor et al., 2018). Hospital-based evidence also shows that better health service quality is associated with higher patient satisfaction, which supports the interpretation that nursing care quality contributes substantially to the patient's overall service experience (Cahyo et al., 2025). Evidence from inpatient care further demonstrates that nursing services have a significant relationship with patient satisfaction among insured hospitalized patients, which strengthens the relevance of nursing performance in daily care delivery (Agusianita et al., 2023). Another study also confirms that service quality and nurses' roles are significantly related to patient satisfaction, which indicates that patients value not only what nurses do but also how nurses function within the care process (Purwanza et al., 2022). A literature review on nursing services similarly concludes that nursing care remains closely linked to patient satisfaction levels across healthcare settings (Gurning & Duwith, 2025). Therefore, the present review reinforces the argument that nursing care quality should be positioned as a primary element in strategies to improve patient-centered care outcomes (Karaca & Durna, 2019).

The prominence of interpersonal aspects in this review deserves particular attention because patients often judge nursing care through the relational quality of repeated interactions with nurses during illness and recovery (Karaca & Durna, 2019). Research in community health centers shows that therapeutic communication has a significant relationship with patient satisfaction, which indicates that respectful and understandable communication helps patients feel supported and valued during care (Yuliana et al., 2024). National-level evidence also identifies quality of nursing care as a predictor of patient satisfaction, and this finding suggests

that interpersonal responsiveness and professional conduct are highly visible dimensions of care from the patient perspective (Al-Hammouri et al., 2024). A systematic review and meta-analysis from Iran further reports a high overall level of satisfaction with nursing care, although it also indicates variation in the extent of complete satisfaction, which implies that not all dimensions of care are perceived equally well by patients (Hosseini et al., 2023). In Turkish hospital settings, patients rated nurse attention and concern highly, while information provision remained an area that needed improvement, which confirms that communication content is as important as communication tone (Karaca & Durna, 2019). These patterns suggest that patient satisfaction emerges not only from clinical competence but also from the nurse's capacity to communicate clearly, respond empathically, and sustain therapeutic presence throughout care encounters (Yuliana et al., 2024).

The review also indicates that patient satisfaction is multidimensional because it reflects both nursing care quality and broader service conditions within the healthcare system (Wiladatika et al., 2025). Evidence from internal medicine polyclinics shows that multiple service satisfaction factors shape how patients evaluate care, which means that nursing care is embedded within organizational efficiency, waiting processes, and continuity of service delivery (Wiladatika et al., 2025). Similar findings from dental service settings demonstrate that patient satisfaction depends on service-related factors beyond a single interpersonal encounter, which supports the idea that patient experience is produced by an interaction between care processes and system performance (Suliati et al., 2025). Research from Jordan also finds that educational level, income, and hospital type predict satisfaction with nursing care, which indicates that patients interpret the same service differently according to their social and institutional context (Al-Hammouri et al., 2024). Studies on health service utilization among underserved populations further suggest that access, structure, and care context influence how healthcare is experienced and evaluated by

patients (Amin, 2026). For that reason, the relationship between nursing care quality and patient satisfaction should not be interpreted in isolation from the environment in which care is delivered (Amor et al., 2018).

Another important point from this review is that patient satisfaction should be understood not merely as a service indicator but also as a meaningful patient-reported outcome with wider implications for well-being and continuity of care (Valero-Cantero et al., 2023). Evidence from oncology day care services shows that patient satisfaction has a positive impact on quality of life, which suggests that favorable service experiences may extend beyond immediate evaluation and influence broader health-related well-being (Vastardi et al., 2025). Research in advanced chronic kidney disease consultations also emphasizes that perceived care and quality of life are important patient-reported domains, even when their statistical relationship is not always direct, because both reflect how patients live with chronic illness and ongoing treatment demands (Gimeno-Hernán et al., 2026). The role of health-related quality of life in improving clinical outcomes has also been recognized in cancer care, where patient experience increasingly informs comprehensive care evaluation (Nolazco & Chang, 2023). Studies in radiotherapy settings similarly show that satisfaction with care reflects the adequacy of professional support, information, and treatment navigation during complex clinical trajectories (Fabian et al., 2024). These findings indicate that improving nursing care quality may produce benefits that reach beyond satisfaction alone and support broader patient adaptation to illness and treatment (McDowell et al., 2022).

This review also highlights that the observed variation across studies may be explained by heterogeneity in clinical settings, populations, and measurement approaches rather than by contradiction in the core relationship between nursing care quality and patient satisfaction (Javan Biparva et al., 2024). Research on quality of life among cancer survivors shows that patient outcomes are moderated by sociodemographic and disease-related factors,

which suggests that patient evaluation of care is similarly shaped by multiple background characteristics (Andreu et al., 2022). Studies in breast cancer populations also report that social, clinical, and contextual determinants influence patient-reported outcomes, thereby supporting the need to interpret satisfaction findings within broader patient conditions (Belhaj et al., 2024). Evidence from chemotherapy patients during the COVID-19 pandemic further shows that quality of life is affected by associated factors beyond treatment itself, which implies that patient perceptions of service may also shift according to external pressures and vulnerabilities (Witwanukool et al., 2024). Research on spinal tumor patients similarly finds that quality of life is associated with selected determinants rather than with one isolated variable, which strengthens the rationale for a multidimensional interpretation of patient satisfaction (Barańska et al., 2023). Therefore, the present review suggests that future nursing quality evaluations should account for both direct care interactions and the demographic, clinical, and organizational contexts in which patient satisfaction is formed (Gupta et al., 2022).

The findings of this review have practical implications for nursing management, education, and service development because they identify modifiable dimensions of care that are visible to patients and closely linked with satisfaction outcomes (Purwanza et al., 2022). Nurse managers should prioritize interventions that strengthen responsiveness, therapeutic communication, patient information delivery, and caring behavior because these dimensions repeatedly emerged as influential across studies (Karaca & Durna, 2019). Service improvement programs should also address work environment and workforce conditions, since workload and job satisfaction among nurses may influence the consistency and quality of patient-centered care delivery (Yanwarin, 2024). The importance of psychological resilience and sleep among healthcare staff also suggests that caregiver well-being may indirectly affect the relational quality of care that patients experience during treatment (Zhang et al., 2024). Innovative supportive care

models, including psychologically supportive and patient-centered interventions, have shown promise in improving patient well-being, which indicates that nursing services should move toward more holistic and responsive approaches (Bachelard et al., 2024; Sancassiani et al., 2025). In this regard, the review supports the integration of communication training, service-quality monitoring, and patient-reported evaluation into routine nursing quality improvement frameworks across healthcare settings (Al-Hammouri et al., 2024).

The present review has several strengths, but it also has limitations that should be acknowledged when interpreting the findings. The review integrated evidence from different healthcare settings, which allowed a broader understanding of how nursing care quality influences patient satisfaction across contexts. The review also included studies from several countries, which increased the contextual richness of the findings and supported the transferability of the general pattern. However, most included studies used cross-sectional designs, and this feature limits causal interpretation regarding whether better nursing care leads to higher satisfaction or whether more satisfied patients tend to evaluate care more positively. The included studies also varied in instruments, settings, and operational definitions of nursing care quality, which prevented quantitative pooling and required narrative synthesis. Despite these limitations, the consistency of the findings across studies suggests that the relationship between nursing care quality and patient satisfaction is robust enough to inform nursing practice, service policy, and future research.

## Conclusion and Recommendation

This systematic review concludes that the quality of nursing care has a meaningful and consistent impact on patient satisfaction across a variety of healthcare settings. Patient satisfaction increases when nurses provide responsive, caring, communicative, and patient-centered care, while contextual factors such as service organization and patient characteristics also shape how care is evaluated. These findings indicate that nursing care quality should remain a strategic focus in healthcare quality

improvement. Healthcare institutions should strengthen communication training, caring practice, responsiveness, and information delivery as part of routine nursing service development. Future research should use stronger designs, broader settings, and more standardized instruments to clarify causal pathways and improve comparability across studies. In addition, nursing quality evaluation should incorporate patient-reported measures on a regular basis so that service improvement can be guided by the real experiences and expectations of patients.

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The authors declare no competing interests.

## Declaration on the Use of AI

No AI tools were used in the preparation of this manuscript.

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