RESEARCH PAPER

Impact of Nursing Staff Absenteeism on Quality of Care in Health Services

Yaguarema Pincay Ivonne Maricela[1*],Puican Pachon Aura Edelmira[2],Tinoco Luna Luz Angélica[3],Sovenis Goya Karla Alexandra[4],Muñeton Alvarado Adriana Carolina[5] ,Pesantes Salazar Jessica Sulay[6]

[1*]Doctoral student in Nursing Sciences, Professor at ECOTEC University, Guayaquil, Ecuador.
Email: iyaguaremap@ecotec.edu.ec ORCID: 0009-0003-0637-3510
[2]Dr. Aura Edelmira Puican Pachon, Professor at the National University of Tumbes. Graduate School.
Email: apuicanp@untumbes.edu.pe ORCID: 0000-0001-5291-1744
[3]Luz Angélica Tinoco Luna, Registered Nurse at Dr. Roberto Gilbert Elizalde Hospital, Professor at ECOTEC University, Guayaquil, Ecuador.
Email: ltinocol@ecotec.edu.ec ORCID: 0009-0001-7029-1507
[4]Karla Alexandra Sovenis Goya, Registered Nurse at Dr. Roberto Gilbert Elizalde Hospital, Professor at the Espíritu Santo Technological Institute, Guayaquil, Ecuador.
Email: kasovenis@tes.edu.ec ORCID: 0009-0001-5318-2405
[5]Adriana Carolina Muñeton Alvarado, Registered Nurse at Roberto Gilbert Elizalde Hospital, Guayaquil, Ecuador.
Email: adriana.muneton@uees.edu.ec ORCID: 0009-0001-8191-2962
[6]Jessica Sulay Pesantes Salazar, Licensed in Nursing at Dr. Roberto Gilbert Elizalde Hospital, Professor at ECOTEC University, Guayaquil - Ecuador.
Email: jpesantes@ecotec.edu.ec ORCID: 0009-0005-6808-0742

***Corresponding Author:** iyaguaremap@ecotec.edu.ec

Abstract
This review examines how nursing staff absenteeism undermines continuity, safety, and efficiency of care. Its objective was to synthesize empirical evidence published between 2015 and 2025 to identify causes, consequences, and management strategies that can inform policy and practice. A systematic review was conducted using rigorous selection criteria across databases including PubMed, MDPI, Scielo, ScienceDirect, and Google Scholar, yielding 12 studies employing cross-sectional, retrospective, and mixed designs, analyses of administrative records, standardized surveys, and applications of machine learning. The synthesis shows a consistent association between burnout, fatigue, and adverse psychosocial conditions and higher absence rates; additionally, individual factors (age, comorbidities, family responsibilities), work-related factors (shift patterns, precarious contracts), and organizational factors (work climate, recognition) interact to produce heterogeneous absenteeism patterns. The COVID-19 pandemic intensified sickness-related and burnout-related absences, while multifaceted interventions (wellness programs, shift reorganization, and participatory models) demonstrated short-term benefits. Studies using predictive models based on machine learning indicate potential to anticipate absence episodes, but they require external validation and ethical safeguards. Integrating these findings highlights the operational and clinical impact of absenteeism on patient safety and team cohesion, and supports prioritizing integrated policies that improve work organization, psychosocial support, and professional recognition. Limitations include methodological heterogeneity, the predominance of cross-sectional designs, and a paucity of longitudinal and cost-effectiveness evaluations. Practically and socially, the review provides evidence to guide the design of more equitable and sustainable interventions that preserve care quality and workforce stability.

Keywords absenteeism; nursing; burnout; quality of care; occupational well-being

How to cite this article: Maricela YPI, Edelmira PPA, Angélica TLL, Alexandra SGK, Carolina MAA, Sulay PSJ. Impact of Nursing Staff Absenteeism on Quality of Care in Health Services. Int J Drug Deliv Technol. 2026;16(33s):283-290. DOI: 10.25258/ijddt.16.33s.33.

1. Introduction

Nursing is one of the fundamental pillars of contemporary health systems, being responsible for ensuring continuity of care, patient safety, and the efficiency of care processes [1]. Its role goes beyond performing clinical procedures and also encompasses resource management, interdisciplinary coordination, and comprehensive attention to patients' physical, emotional, and social needs [1]. The quality of nursing care has become established as a critical indicator of institutional performance, since it reflects both the technical capacity of staff and the strength of the organizational structures that support them [2, 3].

Nursing care is closely linked to patient satisfaction and to the reduction of adverse events. Recent studies have shown that adequate nurse staffing and team stability are associated with lower rates of medication errors, improved communication with patients, and higher perceived service quality [4]. Likewise, the literature indicates that care quality depends on factors such as staff motivation, psychological well-being, and resilience, which directly influence clinical and

*Author for Correspondence: iyaguaremap@ecotec.edu.ec

organizational performance [5]. Therefore, understanding the determinants of nursing care requires analysis of both individual conditions and the institutional dynamics that shape the work environment.

In this context, the phenomenon of absenteeism emerges as a disruptive factor that can compromise the stability of nursing teams and, consequently, the quality of care. Absenteeism-understood as the recurrent or prolonged absence of workers from their posts-has been widely studied in organizational research because of its implications for productivity, efficiency, and institutional sustainability [6]. In the case of nursing, this phenomenon acquires particular relevance because absent personnel cannot be easily replaced without affecting continuity of care. Recent literature has indicated that the causes of absenteeism in nursing are multifactorial, including occupational illnesses, physical and emotional exhaustion, precarious contractual conditions, and lack of professional recognition [2, 7].

The COVID-19 pandemic intensified this problem by increasing absenteeism rates in the health sector and revealing the vulnerability of nursing staff during health crises. During this period, nurses faced prolonged shifts, continuous exposure to infection risk, and a high emotional burden, which resulted in a significant increase in sickness-related and burnout-related absences [8]. Studies conducted in different countries documented that nursing absenteeism during the pandemic reflected not only the direct impact of the virus but also the accumulated wear from extreme working conditions [9, 10]. This scenario highlighted the need to strengthen organizational resilience policies and psychosocial support for healthcare personnel, recognizing that nursing absenteeism constitutes a critical challenge to health systems' capacity to respond.

In this regard, the impact of absenteeism on organizational performance has been widely documented in the literature. In general terms, it is recognized that work absences generate direct and indirect costs for institutions, including salary payments during absences, hiring substitute staff, productivity losses, and reduced process quality [6]. In healthcare settings, these effects are amplified because the absence of nursing staff compromises continuity of care and team cohesion [3]. Moreover, absenteeism can affect institutional reputation and patient satisfaction by limiting service responsiveness and creating tensions in service delivery [1].

Against this background, it is essential to analyze nursing staff absenteeism from an integrated perspective that considers both its causes and its consequences for organizational performance. Accordingly, this article aims to evaluate the impact of nursing staff absenteeism on quality of care in health services through a systematic review of the literature published between 2015 and 2025. This synthesis will identify factors associated with absenteeism, its consequences for healthcare delivery, and strategies implemented to mitigate its effects. It will also provide a comprehensive overview of the opportunities and challenges health systems face in managing nursing human resources, offering evidence to inform policies and practices that promote more effective, safe, and sustainable care.

2. Materials and Methods

This review was conducted following the PRISMA statement and employed a qualitative, interpretive approach focused on conceptual interpretation and thematic analysis of the included studies, with particular emphasis on nursing staff absenteeism and its implications for organizational performance and nursing practice. Evidence published between 2015 and 2025 was systematically identified, organized, and synthesized using predefined inclusion and exclusion criteria designed to ensure transparency and reproducibility.

The review process prioritized the detection of recurring patterns, points of convergence and divergence regarding causes of absenteeism, management strategies implemented across settings, and documented effects on the stability of care teams. The analytical approach emphasized the extraction of theoretical frameworks and empirical findings that clarify how nursing absenteeism relates to institutional dynamics and health-service responsiveness. The review remained within the scope of observational and evaluative literature, avoiding experimental manipulations or interventions that would exceed the review's objectives.

2.1. Procedure for article selection

A systematic search was conducted during the first week of September 2025 in the databases PubMed, MDPI, Scielo, ScienceDirect, and Google Scholar. The search strategy used the MeSH descriptors "Nursing Staff", "Absenteeism", "Sick Leave", "Health Services Administration", and "Quality of Health Care", together with their Spanish equivalents "personal de enfermería", "ausentismo laboral", "licencia por enfermedad", "gestión de servicios de salud", and "calidad de la atención en salud". Terms were combined with the Boolean operators AND and OR to broaden and refine the search strategy.

Inclusion criteria comprised empirical studies published between 2015 and 2025, in English or Spanish, that analyzed absenteeism among nursing personnel and its implications for organizational management or health-service delivery. Excluded were theoretical reviews, letters to the editor, conference abstracts, and publications lacking quantitative or qualitative outcome assessment.

The selection process began with manual removal of duplicate records by comparing titles, authors, and year of publication. Titles and abstracts of the remaining records were then screened, excluding studies that did not specifically address nursing absenteeism or that focused on other professional groups unrelated to clinical practice. Reference lists of included articles were hand-searched to identify additional studies, which underwent the same title, abstract, and year screening.

Finally, a critical appraisal of full texts was performed, comparing methodologies, measurement instruments, and results, and discussing any discrepancies among

studies. Throughout the process the PRISMA guidelines were followed for selection, data extraction, and construction of the flow diagram, and key variables were recorded, including sample size and characteristics, study design, intervention details, and follow-up duration.

2.2. Inclusion criteria

- Study designs: Randomized controlled trials, quasi experimental studies, prospective and retrospective cohort studies, cross sectional studies, and other observational designs that analyze workplace absenteeism among nursing personnel.
- Outcomes of interest: Research evaluating the relationship between absenteeism and organizational variables, institutional performance, or quality of health services.
- Population and setting: Studies focused on nursing staff working in hospitals, clinics, primary care centers, or other health care services.
- Language: Articles available in English or Spanish.
- Publication period: Publications dated between 2015 and 2025.
- Access: Open access articles with full text available.

2.3. Exclusion criteria

- Publication type: Systematic reviews, meta analyses, research protocols, and conference presentations due to lack of primary data.
- Secondary or non empirical sources: Books, book chapters, theoretical papers, and secondary reviews without empirical evidence.
- Population not relevant: Studies that do not include nursing personnel or that focus exclusively on other health professionals without direct reference to nursing absenteeism.
- Timeframe and language: Publications outside the 2015-2025 period or in languages other than English or Spanish.
- Access: Works without open access or without full text availability.

3. Results

The selection process began with the identification of 412 records from PubMed (71), MDPI (46), Scielo (53), ScienceDirect (47), and Google Scholar (195). After an initial screening of titles and abstracts, 318 records were excluded as not relevant and 34 duplicates were removed, leaving 60 studies for full-text assessment. Application of the exclusion criteria led to the removal of 17 systematic reviews or meta-analyses, 11 articles with irrelevant outcomes, 7 studies with non-pertinent research designs, 9 works whose study populations did not meet the criteria, and 4 theoretical articles. Ultimately, 12 studies met all inclusion criteria and were included in the analysis. Figure 1 details the complete search strategy and selection flow (see Figure 1).

The 12 included studies comprised approximately 5,171 participants, predominantly nurses and other health professionals from diverse geographic settings (USA, Europe, Middle East, Brazil, and South Africa). Sample sizes ranged from 60 to 2,211 participants per study. Methodologically, cross-sectional and descriptive designs predominated, although retrospective, mixed-methods (quantitative-qualitative), quality improvement projects (QIP), and predictive modeling studies were also represented. Data sources spanned institutional record reviews to direct surveys of clinicians and managers (see Table 1).

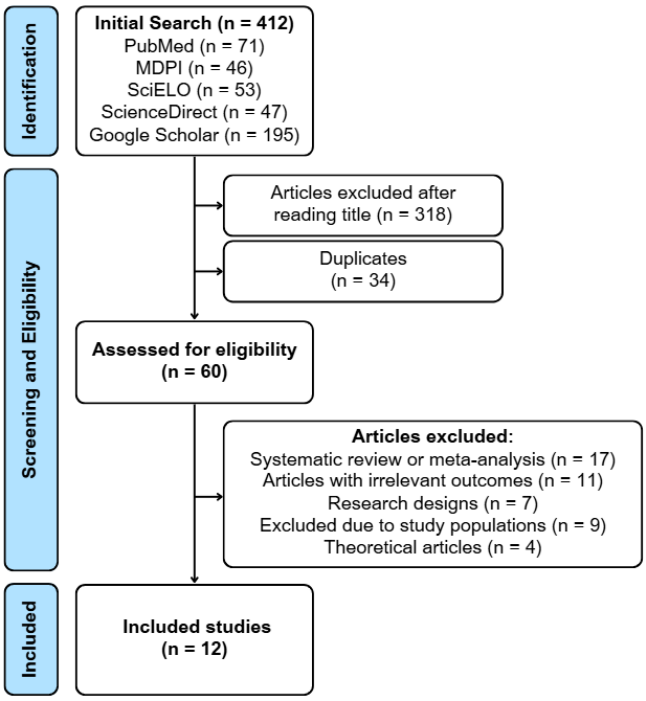

Figure 1. Search and selection process

Instruments and methodologies exhibited considerable heterogeneity in scope and technical complexity: from self-

administered questionnaires and psychometrically validated scales (e.g., Maslach Burnout Inventory [MBI], Job Satisfaction Survey [JSS], adapted WRQOL), to quality-management tools (FOCUS, PDCA) and advanced data-analysis techniques using machine learning algorithms (Naïve Bayes, Random Forest, Artificial Neural Networks) and Bayesian models (see Table 1).

The studies evaluated, either jointly or separately, critical parameters such as absenteeism rates and causes (illness, leave, seasonal factors); the impact of conditions like burnout, fatigue, and occupational stress; and predictors related to organizational climate, leadership, and job satisfaction. Several investigations also examined sociodemographic risk factors (age, shift, workload) alongside performance metrics, personal motivation, and work-life quality, aiming to establish correlations between practice environment and professionals intention to leave their posts or the profession.

Table 1. Summary of the 12 selected studies, including authors, year, design, samples, instruments, and evaluated parameters

Author and Year	**Design**	**Sample**	**Instruments**	**Parameters evaluated**
Alzu'bi et al., 2024	Cross-sectional with predictive modeling	191 nurses (King Abdullah University Hospital, Jordan)	Custom questionnaire, preprocessing with OpenRefine, ML algorithms (Naïve Bayes, Logistic Regression, Decision Trees, Random Forest), Artificial Neural Network (ANN)	Absenteeism prediction, associated factors (marital status, children, education, leadership), model performance metrics (precision, recall, F1-score), ANN accuracy 82%
Banjar et al., 2023	Quality Improvement Project (QIP)	112 ED employees in Jeddah hospital (Saudi Arabia)	Action plan addressing physiological, safety, belonging, esteem, self-actualization needs; QI tools (FOCUS, PDCA)	Reduction of absenteeism and sick leave (−17.3%), job satisfaction, engagement, communication, teamwork
Dyrbye et al., 2019	Cross-sectional study	637 nurses (USA)	Maslach Burnout Inventory (MBI), WHO Health and Work Performance Questionnaire (HPQ), PRIME MD, fatigue scale	Burnout, absenteeism, job performance, depression, fatigue
García-Herrero et al., 2017	Cross-sectional with Bayesian model	2,211 health professionals in 35 European countries (EWCS)	EWCS survey (106 items), theoretical models (JDC, DCS, ERI, JD-R), Bayesian network analysis	Occupational stress, emotional/family demands, job control, social support (colleagues/supervisors), recognition
Masum et al., 2016	Cross-sectional study	417 nurses in six private hospitals (Turkey)	Structured questionnaire; Job Satisfaction Survey (JSS, 36 items, 6-point Likert); descriptive, bivariate, logistic regression analysis	Job satisfaction facets (environment, supervision, colleagues, pay, benefits, rewards); intention to resign; relationship with sociodemographic variables; negative association between satisfaction and intention to quit

Mudaly & Nkosi, 2013	Quantitative, non-experimental	60 nurses (professional, enrolled, auxiliary) in Durban general hospital (South Africa)	Survey with closed and open questions	Personal, professional, organizational absenteeism factors: family issues, lack of motivation, illness, financial problems, favoritism, unfriendly managers, long shifts, overload, poor conditions, lack of equipment, unfair promotions, staff shortages, absence of rewards, inconsistent decisions
Pinheiro et al., 2025	Cross-sectional retrospective	839 nursing professionals in Brazilian university hospital (2019–2022)	Institutional absence database; sociodemographic/occupational variables; statistical analysis (ANOVA, Chi-square, Poisson with robust variance)	Factors linked to sick-leave absenteeism before/during/after pandemic; main causes (COVID-19, musculoskeletal diseases); rates by sector/period; risk variables (≤41 years, nursing technicians, male gender, marital status)
Shdaifat et al., 2023	Cross-sectional study	306 nurses (Saudi Arabia, university hospital)	Self-administered questionnaires (Nicholson & Payne; Paget; Zboril-Benson), adapted work conditions scale (Shields & Wilkins), 5-point Likert	Costs of absenteeism, causes and frequencies, working conditions, predictors (shift, children, unit, BMI)
Smokrović et al., 2019	Cross-sectional, non-experimental	111 registered nurses in Croatia	Anonymous questionnaire; Multidimensional Work Motivation Scale (MWMS); Practice Environment Scale of Nursing Work Index (PES-NWI)	Job satisfaction, personal motivation (SDT), practice environment, personal characteristics, absenteeism, intention to leave
Starc & Fabjan, 2023	Descriptive and causal non-experimental	178 nursing professionals at different levels of care	Anonymous online questionnaire, OPSA, questionnaire from National Institute of Public Health; 5-point Likert; SPSS analysis	Types of absenteeism (vacation, illness, maternity, etc.), causes, sex/age differences, health perception, organizational climate
Teixeira et al., 2019	Cross-sectional, descriptive-correlational	109 nursing workers in UPA 24h (Brazil)	Demographic-occupational questionnaire; WRQoL instrument adapted from Walton model; 5-point Likert	Work-life quality, demographic/occupational profile, satisfaction/dissatisfaction, associated factors (professional category, illness, PPE provision/access)

Ticharwa et al., 2019	Mixed study (quantitative + qualitative)	Retrospective hospital data + interviews with nursing unit managers	Review of absenteeism records; semi-structured interviews	Absenteeism trends (seasonal, daily, demographic), managers' perceptions, impact of workload on physical/mental health

4. Discussion

The discussion of the findings integrated in this systematic review confirms that nursing staff absenteeism is a critical determinant of care quality in health services, acting both as a symptom and as an amplifier of organizational dysfunctions. First, the evidence converges on identifying professional burnout, accumulated fatigue, and adverse psychosocial working conditions as central factors that increase the likelihood of absence and deteriorate clinical performance.

Studies that evaluated the relationship between work stress, burnout, and absentee behaviours show associations between higher levels of exhaustion and a greater frequency of days not worked, as well as with indicators of reduced performance and increased intention to leave the profession [11, 12]. These works emphasize that burnout is not an isolated phenomenon but the result of the interaction between excessive job demands, prolonged shifts, and deficits in organizational support, which explains why units with higher workloads present higher absenteeism rates and poorer patient safety outcomes [11, 12].

Second, the review highlights the multifactorial nature of absenteeism: individual factors (age, comorbidities, family responsibilities), work-related factors (contract type, working hours, shift rotation), and organizational factors (work climate, recognition, human resources policies) interact to produce heterogeneous absence patterns. Research in diverse contexts has documented that contractual precariousness and lack of professional recognition increase vulnerability to absenteeism, while environments with greater cohesion and effective supervision show lower absence rates [13, 14]. In line with this, studies that analyzed administrative series and staff surveys describe seasonal and unit-level patterns that reflect both epidemiological and organizational factors [15, 16]. These observations indicate that management strategies must be sensitive to the temporal and functional heterogeneity of absenteeism, avoiding uniform responses that do not address underlying causes.

A third emergent thematic axis is the operational and clinical impact of absenteeism on continuity and safety of care. The reviewed empirical evidence shows that unplanned absences increase the need for replacements, create mismatches in nurse-to-patient staffing, and raise the probability of errors, delays in medication administration, and deficiencies in communication with patients [17, 18]. Studies linking indicators of working conditions with hospital outcomes report associations between environments with high turnover/absenteeism and worse safety and patient-satisfaction indicators, suggesting that absenteeism acts as a risk multiplier: it not only reduces immediate response capacity but also erodes team cohesion and organizational memory, with cumulative effects on care quality [17, 18].

The COVID-19 pandemic appears in the literature as an accelerator and amplifier of the problem: during periods of greatest clinical pressure a significant increase in absenteeism due to illness and exhaustion was documented, as well as a greater intention to leave among subgroups of nursing staff [19, 20]. These studies show that absences during the pandemic reflected both the direct impact of infection and the psychological and physical wear derived from extended shifts, exposure to risk, and lack of resources, which exposed the fragility of support systems and the need for labor-protection policies and psychosocial support to preserve health-system responsiveness [19, 20]. The pandemic experience therefore not only increased short-term absence rates but also left sequelae in terms of mental health and work expectations that may condition workforce stability in the medium term.

Regarding reported interventions, the literature distinguishes between reactive measures (temporary hiring, shift redistribution, overtime) and proactive policies (wellness programs, resilience training, recognition systems, improvement of working conditions, and participatory management models). Evidence suggests that multifactorial interventions combining improvements in work organization, psychosocial support, and opportunities for professional development are the most promising for reducing both absenteeism and its adverse effects on quality; however, impact evaluation of these interventions is still limited in terms of controlled studies and long-term follow-up [13, 19]. Therefore, implementation of integrated programs should be accompanied by rigorous evaluations that include care-quality and patient-safety indicators and economic cost-benefit analyses.

Methodologically, the heterogeneity of designs among the included studies provides a detailed view but poses limitations for causal inference and comparability of magnitudes. Cross-sectional studies and self-reported surveys allow identification of correlations between burnout and absenteeism but are susceptible to response bias and variability in the temporal definition of absenteeism [11]. Conversely, analyses based on administrative records offer time series and seasonal patterns that lack explanatory variables about staff psychological state or organizational conditions [16]. This methodological diversity reinforces the need for longitudinal and mixed-methods designs that integrate objective absence measures with standardized

assessments of burnout, workload, and clinical outcomes to establish stronger causal relationships [17, 18].

A relevant and practically applicable finding is the potential of predictive tools based on data analysis and machine learning to anticipate absenteeism episodes and target preventive interventions. Recent investigations that applied classification models and neural networks demonstrated that it is possible to identify administrative and performance variables that increase the probability of absence in the following year, opening the possibility of designing early-warning systems and targeted intervention programs [21, 22]. Nevertheless, authors warn about the need to externally validate these models, evaluate their real impact on absenteeism reduction, and consider ethical and equity implications to avoid stigmatization or personnel decisions based solely on predictions [21, 22].

Finally, the review identifies critical gaps for the research and health-policy agenda. These include the need for longitudinal studies to establish causal relationships between working conditions, burnout, absenteeism, and clinical outcomes; external validation and impact evaluation of predictive models in different settings; and cost-effectiveness analyses of interventions aimed at reducing absenteeism that incorporate both direct costs (substitutions, overtime) and indirect costs associated with loss of quality and safety. It is also essential to address the equity dimension: understanding how absenteeism and organizational responses differentially affect subgroups by gender, educational level, or contract type will enable the design of fairer and more effective policies.

5. Conclusion

Nursing staff absenteeism is confirmed as a critical determinant of care quality, functioning both as a symptom of organizational dysfunction and as a multiplier of clinical risks. The integrated evidence indicates that burnout, accumulated fatigue, and adverse psychosocial working conditions increase the likelihood of absence and are associated with poorer outcomes in patient safety, continuity of care, and user satisfaction. The phenomenon's multifactorial nature, combining individual, occupational, and organizational factors, explains the heterogeneity observed across units and time periods.

From clinical practice and health-management perspectives, it is essential to prioritize multifactorial, proactive interventions that integrate improvements in work organization, psychosocial support, professional recognition, and opportunities for career development. Reactive measures such as temporary hiring may relieve immediate pressures but do not address underlying causes; therefore, wellness programs, shift reorganization, and participatory management models should be implemented alongside rigorous evaluations that include care-quality indicators and economic analyses. Predictive tools offer potential for early prevention, but their adoption requires external validation and ethical safeguards to prevent stigmatization and unfair personnel decisions.

To advance knowledge and inform policy, longitudinal and mixed-methods studies are needed that combine objective measures of absenteeism with standardized assessments of burnout, workload, and clinical outcomes, as well as cost-effectiveness research on interventions. Standardizing definitions and metrics of absenteeism is necessary to improve comparability across studies and to validate predictive models in diverse contexts [23]. Finally, research agendas and policies must incorporate an equity perspective, examining how absenteeism and organizational responses differentially affect subgroups by gender, contract type, and educational level, in order to design fairer and more effective solutions.

Acknowledgements

We are very grateful to experts for their appropriate and constructive suggestions to improve this template.

REFERENCES

1. Li L. Z., Yang P., Singer S. J., Pfeffer J., Mathur M. B., Shanafelt T., "Nurse Burnout and Patient Safety, Satisfaction, and Quality of Care: A Systematic Review and Meta-Analysis", JAMA Network Open, vol. 7, n.º 11, págs. e2443059, 2024. DOI: 10.1001/jamanetworkopen.2024.43059
2. Getie A., Ayenew T., Amlak B. T., Gedfew M., Edmealem A., Kebede W. M., "Global prevalence and contributing factors of nurse burnout: an umbrella review of systematic review and meta-analysis", BMC Nursing, vol. 24, n.º 596, págs. 1–13, 2025. DOI: 10.1186/s12912-025-03266-8
3. Needleman J., "Hospital Understaffing and Sick Leave Among Nurses—Absence Begets Absence", JAMA Network Open, vol. 8, n.º 4, págs. e255951–e255951, 2025. DOI: 10.1001/jamanetworkopen.2025.5951
4. Dall'Ora C., Meredith P., Saville C., Jones J., Griffiths P., "Nurse Staffing Configurations and Nurse Absence Due to Sickness", JAMA Network Open, vol. 8, n.º 4, págs. e255946, 2025. DOI: 10.1001/jamanetworkopen.2025.5946
5. Cheverría Rivera S., Velázquez Ramos M., Sánchez Macias A., Flores Rueda I. C., "Ausentismo y satisfacción laboral en personal de enfermería en un hospital de segundo nivel de atención", Ciencia y Sociedad, vol. 48, n.º 4, págs. 39–55, 2023. DOI: 10.22206/cys.2023.v48i4.2894
6. Al Ismail H., Herzallah N.H., Al-Otaibi S.T., "What are the predictors and costs of nurse absenteeism at select multicenter government hospitals? A cross-sectional study", Frontiers in Public Health, vol. 11, n.º, págs. 1–12, 2023. DOI: 10.3389/fpubh.2023.1073832
7. Piacquadio N. S., "Work absenteeism and motivation in nursing in the Latin American context: a panoramic review", Salud, Ciencia y Tecnología, vol. 1, n.º 1, págs. 25–38, 2021. DOI: 10.56294/saludcyt202125

8. Maltezou H.C., Ledda C., Sipsas N.V., "Absenteeism of Healthcare Personnel in the COVID-19 Era: A Systematic Review of the Literature and Implications for the Post-Pandemic Seasons", Healthcare, vol. 11, n.º 22, págs. 2950–2969, 2023. DOI: 10.3390/healthcare11222950
9. Pogo-Carrillo D. I., López-Pérez G. P., "Ausentismo Laboral del Personal de Enfermería durante la Pandemia Covid-19", Polo del Conocimiento, vol. 6, n.º 10, págs. 1–20, 2021. URL: https://polodelconocimiento.com/ojs/index.php/es/article/view/3227/html
10. Ismail H., Huam Z. S., Yew S. Q., Ahmad H., David C. C. H., Baharudin M. H., Muhd Aris N. A., "Sickness absenteeism among nurses after the COVID-19 pandemic: A study protocol", PLoS ONE, vol. 20, n.º 2, págs. e0314763, 2025. DOI: 10.1371/journal.pone.0314763
11. Dyrbye L. N., Shanafelt T. D., Johnson P. O., Johnson L. A., Satele D., West C. P., "A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses", BMC Nursing, vol. 18, n.º 57, págs. 1–9, 2019. DOI: 10.1186/s12912-019-0382-7
12. Teixeira G. S., Silveira R. C. P., Mininel V. A., Moraes J. T., Ribeiro I. K. S., "Quality of working life and occupational nursing stress in emergency care unit", Enfermería Global, vol. 18, n.º 55, págs. 540–553, 2019. DOI: 10.6018/eglobal.18.3.340861
13. Mudaly P., Nkosi Z.Z., "Factors influencing nurse absenteeism in a general hospital in Durban, South Africa", Journal of Nursing Management, vol. 23, n.º 5, págs. 623–631, 2015. DOI: 10.1111/jonm.12189
14. Susana G. H., Jose L. G., Sixto H., Ignacio F., Sonia M. B., Miguel A. M., "The Influence of Recognition and Social Support on European Health Professionals' Occupational Stress: A Demands-Control-Social Support-Recognition Bayesian Network Model", BioMed Research International, vol. 2017, Article ID 4673047, 14 págs., 2017. DOI: 10.1155/2017/4673047
15. Ticharwa M., Cope V., Murray M., "Nurse absenteeism: An analysis of trends and perceptions of nurse unit managers", Journal of Nursing Management, vol. 27, n.º 1, págs. 109–116, 2019. DOI: 10.1111/jonm.12654
16. Shdaifat E.A., Alolayyan M.N., Rosario A.B., Al-Ansari N.M., "Absenteeism among nurses: costs, working conditions, and related factors", International Journal of Productivity and Quality Management, vol. 38, n.º 4, pp. 518–544, 2023. DOI: 10.1504/IJPQM.2023.132087
17. Masum A. K. M., Azad M. A. K., Hoque K. E., Beh L.-S., Wanke P., Arslan Ö., "Job satisfaction and intention to quit: an empirical analysis of nurses in Turkey", PeerJ, vol. 4, n.º e1896, págs. 1–23, 2016. DOI: 10.7717/peerj.1896
18. Smokrović E., Frencl Žvanut M., Bajan A., Radić R., Žvanut B., "The effect of job satisfaction, absenteeism, and personal motivation on job quitting: A survey of Croatian nurses", Journal of East European Management Studies, vol. 24, n.º 3, págs. 398–422, 2019. DOI: 10.5771/0949-6181-2019-3-398
19. Banjar O., Alhedrity S., Jalal D., Almuteri R., "Managing Absenteeism By Applying Maslow's Hierarchy Of Need Theory: A Quality Improvement Project", IOSR Journal of Nursing and Health Science, vol. 12, n.º 4, pp. 42–52, 2023. DOI: 10.9790/1959-1204034252
20. Pinheiro F. S., Paixão M. L. S., Gonçalves G. F., Oliveira J. L. C., Dal Pai D., Tavares J. P., "Factors related to sickness absenteeism among Brazilian Nursing professionals before, during, and after the pandemic", Revista Latino-Americana de Enfermagem, vol. 33, n.º e4623, págs. 1–10, 2025. DOI: 10.1590/1518-8345.7696.4623
21. Alzu'bi D., El-Heis M., Alsoud A.R., Almahmoud M., Abualigah L., "Classification model for reducing absenteeism of nurses at hospitals using machine learning and artificial neural network techniques", International Journal of System Assurance Engineering and Management, vol. 15, n.º 7, págs. 3266–3278, 2024. DOI: 10.1007/s13198-024-02334-7
22. Starc J., Fabjan T. R., "Absenteeism and Fluctuation of Nursing Staff in Health-care Settings", Open Access Macedonian Journal of Medical Sciences, vol. 11, n.º E, págs. 326–337, 2023. DOI: 10.3889/oamjms.2023.11653
23. Benavides AEY. Inteligencia artificial en educación y práctica sanitaria: desafíos éticos y metodológicos para la investigación en ciencias de la salud [Internet]. 2026. Available from: https://invesaludjournal.com/index.php/invesalud/article/view/32