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ARTIFICIAL INTELLIGENCE AS A DETERMINANT OF THE FUTURE OF ADVANCED NURSING CARE: BREAKING THE DOMINO EFFECT OF EXHAUSTION THROUGH DIGITAL TRANSFORMATION

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Abstract. *The contemporary nursing profession faces a critical level of professional exhaustion, where cognitive overload and administrative pressure trigger a destructive domino effect that directly compromises patient safety. The aim of this paper is to systematize and critically evaluate available scientific evidence regarding the impact of artificial intelligence on reducing exhaustion factors among nurses, while defining the role of nurses in the implementation of these technologies. A systematic literature review was conducted by searching international databases (PubMed, Web of Science, Scopus, SCI index) and regional databases (Hrčak, proceedings of regional nursing and medical informatics conferences), using the Google Scholar search engine. Twenty-five selected scientific papers published between 2020 and 2026 were analyzed, applying the PRISMA protocol and the Polit and Beck hierarchy of evidence. The results of the analysis show that the application of AI tools is not merely a technological upgrade but a key resource management strategy. AI interventions can take over up to 30% of routine and administrative tasks, thereby directly reducing cognitive load as the first domino in the chain of exhaustion. The use of virtual assistants, VR simulations, and digitized evaluation tools (Mini-CEX) contributes significantly to emotional stability, reduced depersonalization and enhanced self-efficacy among nursing staff. In the Balkan regional context, the efficacy of these solutions depends directly on overcoming technophobia through continuous education. In conclusion, breaking the domino effect of exhaustion requires a synergistic care model where artificial intelligence provides technical support, while nurses maintain the human dimension, ethical oversight, and strategic leadership in digital transformation.*

Keywords: *artificial intelligence, burnout, digital transformation, advanced practice nurse, nursing leadership*

Introduction

Modern healthcare systems face severe challenges due to demographic changes and increasingly complex patient needs. In such an environment, nurses become the backbone of the system, but also the primary victims of professional burnout. Previous research points to the presence of the so-called "burnout domino effect,"

where initial stressors—such as excessive administrative burden and staffing shortages—inevitably lead to emotional exhaustion, a decline in the quality of care, and ultimately, turnover / departure from the profession [1].

The nature and scope of this problem lie not merely in individual fatigue, but in a cascading (domino) process where the cognitive overload and emotional exhaustion of a single link inevitably lead to the destabilization of the entire team and compromise patient safety [1].

The Fourth Industrial Revolution introduces digital transformation as a key mechanism for interrupting this negative chain reaction. Artificial Intelligence (AI) in nursing represents a strategic intervention for preserving human and professional resources. As noted by Michalowski et al. [2], documentation automation frees nurses to focus on their core mission—direct patient care.

To successfully implement this transition, an interprofessional approach and the development of advanced nursing practice are required. Nurses with expanded leadership and digital competencies become key actors who ensure that technology serves to humanize, rather than mechanize, healthcare provision [3, 4].

Aim of the Research

The main objective of this review paper is to investigate and present the role of artificial intelligence as a determinant of the future of advanced nursing care, with a specific focus on its ability to prevent the burnout domino effect through the process of digital transformation.

The specific objectives are:

1) To synthesize high-level evidence (meta-analyses and systematic reviews) on the impact of digital technologies on reducing burnout and emotional exhaustion among nurses.
2) To identify key AI tools and solutions (such as virtual assistants and documentation automation) that enable cognitive offloading for the interprofessional team.
3) To examine the impact of digital literacy, leadership, and continuing education on nurses' readiness to practice in a technology-advanced environment, identifying barriers such as technostress.
4) To synthesize recommendations for enhancing nursing practice through the integration of digital innovations, aimed at preserving human resources and elevating the quality of patient-centered care.

Methods

In accordance with the nature of a review paper, a descriptive method for collecting and systematizing relevant scientific information was applied. The process was conducted across several phases.

Search Strategies and Databases

A comprehensive literature search was conducted between November 2025 and May 2026. Relevant international and national/regional databases were utilized: PubMed/Medline, Web of Science, Google Scholar, Scopus, SCIndeks, Hrčak, as well as proceedings from regional conferences in the fields of nursing and medical informatics.

For the search, key terms and specific search phrases in English were defined:

- The use of the search phrase *"artificial intelligence in nursing"* yielded 873 articles;
- The use of the search phrase *"nurse burnout prevention"* yielded 96 articles;
- The use of the search phrase *"advanced practice nursing (APN)"* yielded 487 articles;
- The use of the search phrase *"future of nursing education"* yielded 1762 articles;
- The use of the search phrase *"nursing leadership and AI"* yielded 219 articles.

In the advanced search process, Boolean operators (AND, OR) were applied to ensure precision of the results (e.g., *"artificial intelligence AND nurse burnout"* – 9 articles; *"virtual reality AND nursing education AND stress"* – 15 articles).

Selection Criteria

To ensure the quality and relevance of the evidence, the following inclusion criteria were applied:

1. Timeframe: Studies published between 2020 and 2026, with a primary focus on literature from 2024 and 2025 due to the rapid advancement of AI technologies.
2. Study Type: Priority was given to systematic reviews and meta-analyses, randomized controlled trials (RCTs), cross-sectional studies, and mixed-methods research.
3. Language: English and regional languages (Republic of Serbian, Croatian, Republic of Slovenian).
4. Relevance: Papers linking digital tools with workload, stress, or the evolution of new nursing roles.

Study Selection Process

The study selection process followed the PRISMA guidelines [5] across three distinct phases:

1) Initial Phase: The preliminary search of titles and abstracts yielded 156 potentially relevant sources.
2) Screening Phase: After removing duplicates (n=34), a detailed abstract screening was conducted to exclude studies dealing exclusively with technical software aspects without a specific focus on the nursing profession.
3) Final Phase: Following a full-text analysis, 25 papers fully met all eligibility criteria and served as the foundation for the evidence synthesis.

General Characteristics of Included Studies

A detailed analysis of the 25 selected studies identified key demographic and methodological characteristics that define the current scientific framework in the field of digital transformation in nursing:

- **Geographical Distribution:** The studies were conducted on a global scale, with a pronounced dominance of research originating from highly developed healthcare systems such as the USA, Germany, France, China, and South Korea (n=18), which lead in artificial intelligence implementation. Regional contributions (n=7) comprise studies from Republic of Serbia, Croatia, Republic of Slovenia, and Bosnia and Herzegovina, focusing primarily on digital literacy and health system readiness for change.
- **Timeframe:** Reflecting the exponential growth in technology adoption, the study relies on the most contemporary sources. A total of 13 papers (more than 50%) were published in the 2025–2026 period, including 12 papers from 2025 and one from 2026. This chronological profile ensures maximum data relevance concerning current AI trends and the latest advancements in nursing digital transformation.
- **Research Focus and Sample:** The majority of studies focus on hospital settings and long-term care (LTC) facilities, identifying them as critical hotspots for the development of the burnout domino effect. Sample sizes range from small target groups (e.g., interprofessional teams in nursing homes) to large national surveys encompassing over 5,000 nurses.

Results

Classification of Studies According to the Hierarchy of Evidence

To ensure scientific objectivity and assess the strength of the gathered evidence, the included studies were classified according to the Polit and Beck hierarchical model [6]. Based on the pyramid of scientific evidence, the distribution of the included studies (n=25) by study design is as follows:

1) Level I (Systematic reviews and meta-analyses): 6 papers (Angel Priya T. et al., El Arab RA et al., Lee M. and Cha C., Kilpatrick K. et al., Fosah R. et al., Park S. et al.)
2) Level II (Randomized controlled trials – RCTs): 1 paper (Baek G. and Cha C.)
3) Level III (Quasi-experimental studies): 2 papers (Wang XJ et al., Sileis K. et al.)
4) Level IV (Observational studies – descriptive and correlational): 4 papers (Nirgiz C. et al., Alexopoulos C. and Veljković B. et al., Marković B. et al., Saladino C. et al.)
5) Level V (Review papers and expert opinions / visionary analyses): 12 papers (Michalowski M. et al., Perez-Gonzalez et al., Dobrić K. et al., Dragošev G. et al., Kucurski Lj. et al., Dailah HG et al., Adam D. et al., Morin Galfout S. et al., Wright MMM. et al., Wei Q. et al., Ješić V. et al.)

The inclusion of Level I and Level II studies in this review (a total of 7 papers) provides high reliability in interpreting results related to digital transformation as a barrier to professional burnout.

Synthesis of Key Findings

Following a systematic review of the 25 selected studies, three main avenues through which digital transformation acts as a barrier to the burnout domino effect can be identified:

1) Eduction of Cognitive and Administrative Workload: The analyzed studies (Michalowski et al., Ješić) confirm that the application of AI tools and intelligent automation can eliminate up to 30% of routine administrative tasks. The results indicate that documentation automation stops the first domino in the sequence (cognitive fatigue), thereby directly preventing professional depersonalization and freeing up time for direct patient care.
2) The Role of Advanced Nursing Practice and Strength of Evidence: The synthesis of top-tier studies (Level I and Level II) measurably confirms that digital interventions statistically significantly reduce rates of depersonalization ($p < 0.05$). Studies (Silies et al., Perez-Gonzalez et al.) highlight that nurses are not merely end-users of technology, but key mediators who transform AI tools into instruments for humanizing care.
3) Psychological Barriers and Digital Literacy: Findings from regional research (Alexopoulos et al., Marković et al.), synthesized with global data (Nirgiz et al.), confirm that technophobia (fear of technology) is strongly linked to anxiety and low digital literacy. This synthesis indicates that the efficacy of AI solutions in the Balkan region directly depends on continuous education led by nursing leaders.

Discussion

Synergy of AI Interventions and Disrupting the Burnout Domino Effect

The findings of this review paper, grounded in the most recent systematic reviews and meta-analyses, unequivocally confirm that artificial intelligence (AI) acts as a powerful stabilizer within healthcare systems. A key conclusion of this discussion is that AI does not merely resolve isolated issues, but directly intervenes in the burnout domino effect, interrupting the cascading chain at its most vulnerable node—cognitive overload and administrative burden. Evidence presented by Dobrić [7] pinpoints this pressure, noting that nurses spend between 19% and up to 35% of their shift on documentation. Automating this process through speech recognition systems and natural language processing enables a substantial reduction in time allocated to administrative tasks [7].

Quantitative evidence from the meta-analysis by Lee and Cha [8] demonstrates that digital interventions yield the most significant effect on reducing depersonalization ($r = -0.21$). This is a critical finding, as depersonalization represents the phase in which a nurse, as a result of exhaustion, loses empathy. By interrupting this process, AI enables a return to humanized healthcare, aligning with the vision of Michalowski et al. [2] regarding the complete elimination of manual data entry. Furthermore, by reducing human error in administrative workflows, AI redirects focus back to patient care, as illustrated by the deployment of real-time speech-to-text robotic systems in South Korea, which safeguard the nurse's emotional capacity [7].

Comparison of Global Evidence: From Cognitive Support to Clinical Precision

The scope of AI application, as highlighted by Angel Priya et al. [9], encompasses a broad spectrum ranging from risk prediction (falls, sepsis, pressure ulcers) to triage automation. A compelling example of clinical precision can be found at the Cleveland Clinic, where an AI system monitors 100 beds across six Intensive Care Units (ICUs), tracking vital signs and predicting critical conditions during night shifts. Such digital surveillance serves as a substantial barrier to burnout by reducing constant hypervigilance among staff [7].

Clinical efficacy is further corroborated by the RCT study by Baek and Cha [10], which demonstrates a statistically significant reduction in emotional exhaustion ($p < 0.05$). Operational examples from Johns Hopkins Hospital show that AI can optimize patient flow, resulting in a 30% faster bed assignment rate in emergency services [11]. In terms of education, Park et al. [11] confirm that immersive technologies (VR) significantly enhance confidence and self-efficacy among nursing students, while AI tools such as the *Xiaoyi model* achieve high accuracy (89.6%) in recommending diagnostic tests, thereby preparing nurses for complex clinical scenarios.

Modernization of Education and Development of Critical Thinking

According to findings by El Arab et al. [12], AI plays a pivotal role in modernizing healthcare education by fostering critical thinking and communication skills. This is of paramount importance for nursing students, as it prepares them for complex decision-making. Building upon this, Park et al. [11] demonstrate through meta-analysis that immersive technologies (VR) significantly increase confidence and self-efficacy across levels 1–3 of Nursing Welfare Knowledge Management (NWKM), while Wang et al. [13] utilize AI for more precise clinical evaluation (Mini-CEX), reducing stress as early as the learning phase.

Clinical Precision and Rehabilitation: From Diagnostics to Outcomes

The broad scope of AI application analyzed by Angel Priya et al. [9] includes predicting the risk of falls and sepsis. El Arab et al. [12] further emphasize the significance of AI in rehabilitation and postoperative care, where personalized interventions measurably reduce complication rates. Through an RCT, Baek and Cha [10] demonstrate that such clinical precision statistically significantly reduces emotional exhaustion among nurses ($p < 0.05$), as improved patient outcomes feeds back into enhanced professional satisfaction.

Humanization of Care and Preserving the Human Touch

Although AI offers substantial technological power, El Arab et al. [12] and Wei et al. [14] stress the paramount importance of preserving the human touch. The deployment of emotionally intelligent virtual assistants, such as the Croatian assistant Megi, demonstrates that AI can provide personalized guidance for patients managing chronic conditions like hypertension, reducing both patient anxiety and unnecessary clinical visits [4]. AI applications have proven effective in improving the quality of life for chronically ill patients; however, they remain a supportive tool rather than a replacement for nursing staff. Patient resistance to technology, reaching up to 41.6%, serves as a reminder that the human factor remains critical for the successful adoption of digital transformation [4].

An analysis of nursing workflows indicates that technology must serve to humanize care by liberating nurses from routine tasks, thereby allowing them to dedicate more time to patient interaction and directly mitigating feelings of professional alienation [2, 12].

Specific Sectors: High-Stress Units and Long-Term Care

The burnout domino effect is most pronounced in oncology, palliative care, and long-term care (LTC). Kucurski et al. [15] identify AI tools capable of alleviating workload pressure while highlighting deeper underlying psychological factors. Thanatophobia, or the fear of death, often lies at the root of emotional exhaustion in these clinical settings. Kucurski et al. [16] emphasize that overcoming this fear requires a systemic approach in which AI assumes technical surveillance of vital parameters, thereby

freeing nurses to cultivate emotional resilience and deliver psychological support to terminally ill patients. Similarly, Silies et al. [3] demonstrate that automating routine tasks in Swiss nursing homes enables nurses to manage more complex cases, a finding further supported by Fosah et al. [17] regarding leadership competencies in advanced practice.

Regional Context: Between Digital Potential and Balkan Economic Reality

Unlike global trends that primarily focus on ethics and advanced algorithms, the analysis of studies from our region [4, 18, 19] reveals a specific "Balkan burnout domino effect." The implementation of the virtual assistant Megi in Croatia proves that innovative potential exists within the region; however, as noted by Ješić [4], the key challenge remains its integration into existing, often sluggish healthcare systems.

Digital literacy represents a frequent barrier. In a global sample, Nirgiz et al. [20] identified a negative correlation between anxiety and positive attitudes toward AI, while global platforms such as Babylon Health (UK) and Ada Health (Germany) are becoming standard practice. Conversely, our region struggles with anxiety stemming from a lack of basic digital skills training. When a nurse perceives a digital tool as an added burden rather than a relief, the burnout domino effect accelerates instead of being halted [19]. A further barrier lies in economic and systemic factors. Marković [19] notes that digitalization in regional hospitals is frequently driven by economic sustainability and cost control rather than staff well-being. However, this paper argues that these two objectives are intrinsically linked—an economically stable hospital is one where nurses do not leave the profession due to burnout.

Studies by Silies et al. [3] and Fosah et al. [17] emphasize that nurses in expanded roles, specifically Advanced Practice Nurses (APNs), are the sole leaders capable of bridging the gap between cold technology and compassionate human care. This perspective is shared by Dobrić [7], who asserts that educating nurses on the proper use of AI is the only way to ensure digital safety. In our region, nurses must take the initiative in introducing technologies that—similar to the robot Alexa in Los Angeles—handle routine tasks (such as medication reminders), allowing the healthcare team to focus on complex patient care. Without continuous education, as proposed by Wright et al. [21], technology risks becoming a new source of stress rather than a relief; therefore, Advanced Practice Nurses must assume the role of digital educators to alleviate technophobia among colleagues.

Synthesis: Nursing Leadership in Digital Transformation

All reviewed studies indicate that transformation is impossible without adequate leadership. Morin Galfout et al. [22] and Silies et al. [3] stress that Advanced Practice Nurses must serve as mediators facilitating the introduction of AI. They are not merely users of technology, but strategists who ensure that digital transformation does not result in rigid mechanization, but functions as a tool for interrupting the burnout

domino effect and preserving the dignity of the nursing profession. They provide ethical oversight and ensure that technology serves humanity, rather than the reverse.

By comparing all included studies, the findings demonstrate that artificial intelligence is not a magic bullet, but rather the most powerful instrument for modifying the work environment. Interrupting the burnout domino effect requires a synergistic model: advanced technology led by highly educated nursing leaders, supported by strong management commitment to elevating digital literacy. This paradigm shift is not merely a matter of operational efficiency, but an essential condition for preserving the stability and dignity of the nursing profession.

Conclusion

The conducted systematic review of 25 relevant scientific sources confirms that artificial intelligence represents a decisive factor in the transformation of advanced nursing care. Based on this review paper, the following conclusions can be formulated:

1. Interrupting the Domino Effect: AI measurably reduces cognitive workload and administrative stress, thereby halting the initial phase of professional burnout.
2. Clinical and Emotional Stability: The application of AI in diagnostics and rehabilitation not only improves patient outcomes, but also statistically significantly contributes to the emotional stability and preservation of empathy among nurses.
3. Educational Reform: The integration of immersive technologies and AI into nursing education is essential for fostering critical thinking and self-efficacy in new healthcare personnel.
4. Regional Specificity: Successful implementation in the Balkan region hinges on overcoming digital illiteracy and technophobia, which necessitates strong nursing leadership.
5. Humanization of Technology: AI must function as a supportive tool rather than a replacement for the human element, ensuring that the human touch remains at the core of advanced care.

This review paper serves as a roadmap for future digital strategies that, rather than focusing solely on technological progress, prioritize preserving the integrity and health of the nursing profession.

References

[1] Jeftić R. The burnout domino effect in long-term care: from staff workload to residents' quality of life [unpublished review paper]. Banja Luka: Faculty of Medicine, University of Banja Luka; 2026.

[2] Michalowski M, Topaz M, Peltonen LM. An AI-Enabled Nursing Future With no Documentation Burden: A Vision for a New Reality. *J Adv Nurs*. 2026 Jan;82(1):907-912. doi: 10.1111/jan.16911. Epub 2025 Mar 24. PMID: 40129115; PMCID: PMC12721931.

[3] Silies K, Huckle T, Pohontsch N, Jarchow AM, Schütz K, Müller M, et al. A new role profile for nurses with expanded competencies promoting person-centered care in long-term care: a mixed-methods intervention development study. *BMC Geriatr*. 2025 Jul 5;25(1):492. doi: 10.1186/s12877-025-06086-2. PMID: 40618052; PMCID: PMC12228253.
[4] Ješić V. Artificial intelligence as a virtual health assistant: implementation and potential in healthcare. *Bulletin of the Croatian Society for Medical Informatics* [Internet]. 2025 [cited 2026 Apr 21];31(1-2):39-49. https://doi.org/10.69827/bhdmi-34322
[5] Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372:n71.
[6] Polit DF, Beck CT. *Nursing Research: Generating and Assessing Evidence for Nursing Practice*. 11th ed. Philadelphia: Wolters Kluwer Health; 2021.
[7] Dobrić K. Artificial intelligence in nursing education: application opportunities and prospects for advancing nursing practice [bachelor's thesis]. Rijeka: University of Rijeka, Faculty of Health Studies; 2024. [cited 2026 Apr 22]. https://urn.nsk.hr/urn:nbn:hr:184:146608
[8] Lee M, Cha C. Interventions to reduce burnout among clinical nurses: systematic review and meta-analysis. *Sci Rep*. 2023 Jul 6;13(1):10971. doi: 10.1038/s41598-023-38169-8. PMID: 37414811; PMCID: PMC10325963.
[9] Priya TA, Philo JA, Beutlin R, Hestrin S, Jemila AA, R R. Advancing Nursing Through Artificial Intelligence: A Systematic Literature Review of Current Evidence. *Cureus*. 2025 Dec 29;17(12):e100317. doi: 10.7759/cureus.100317. PMID: 41613676; PMCID: PMC12848953.
[10] Baek G, Cha C. AI-Assisted Tailored Intervention for Nurse Burnout: A Three-Group Randomized Controlled Trial. *Worldviews Evid Based Nurs*. 2025 Feb;22(1):e70003. doi: 10.1111/wvn.70003. PMID: 39981583; PMCID: PMC11843407.
[11] Park S, Shin HJ, Kwak H, Lee HJ. Effects of Immersive Technology-Based Education for Undergraduate Nursing Students: Systematic Review and Meta-Analysis Using the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) Approach. *J Med Internet Res*. 2024 Jul 24;26:e57566. doi: 10.2196/57566. PMID: 38978483; PMCID: PMC118306947.
[12] El Arab RA, Al Moosa OA, Sagbakken M, Ghannam A, Abuadas FH, Somerville J, et al. Integrative review of artificial intelligence applications in nursing: education, clinical practice, workload management, and professional perceptions. *Front Public Health*. 2025 Aug 1;13:1619378. doi: 10.3389/fpubh.2025.1619378. PMID: 40823249; PMCID: PMC12354398.
[13] Wang XJ, Song LJ, Jiao XP, Chen SQ. Integration of Artificial Intelligence in Nursing Clinical Education: Enhancing the Mini-CEX Model. *J Multidiscip Healthc*. 2025 Nov 7;18:7327-7337. doi: 10.2147/JMDH.S550145. PMID: 41230402; PMCID: PMC12604590.
[14] Wei Q, Pan S, Liu X, Hong M, Nong C, Zhang W. The integration of AI in nursing: addressing current applications, challenges, and future directions. *Front Med (Lausanne)*. 2025 Feb 11;12:1545420. doi: 10.3389/fmed.2025.1545420. PMID: 40007584; PMCID: PMC11850350.
[15] Kucurski Lj, Pavlović J, Tomić S. Possibilities of applying artificial intelligence in the care of oncology patients. In: Bokonjić D, editor. *Book of Abstracts of the IV Scientific Nursing Conference with International Participation*; 2025 May 23; Foča, BiH. Foča: Faculty of Medicine Foča; 2025. p. 13.

[16] Kucurski Lj, Pavlović J, Savić Lj. Thanatophobia in nursing practice. In: Bokonjić D, editor. *Book of Abstracts of the IV Scientific Nursing Conference with International Participation*; 2025 May 23; Foča, BiH. Foča: Faculty of Medicine Foča; 2025. p. 12.
[17] Fosah R, Llahana S. Barriers and Enablers to Leadership in Advanced Practice Nursing: A Systematic Review. *Int Nurs Rev*. 2025 Jun;72(2):e70034. doi: 10.1111/inr.70034. PMID: 40401735; PMCID: PMC12096811.
[18] Alexopoulos C, Veljković B, Mikić Mladenović M, Milojević I, Jovanović M, Todorović M, et al. Computer literacy and the impact of health information systems on work and quality control in nursing practice. *Medical Journal*. 2022;56(2):63-7. doi: 10.5937/mckg56-39340
[19] Marković B. Computer and information literacy in nursing as a prerequisite for sustainable financial operation. *Croatian Regional Development Journal* [Internet]. 2023 [cited 2026 Apr 22];4(1):15-33. https://doi.org/10.2478/crdj-2023-0002
[20] Nirgiz C, Sarı MK, Çaylı N. The relationship between nurses' anxiety and attitudes towards artificial intelligence and examination of influencing factors. *BMC Nurs*. 2026 Jan 7;25(1):122. doi: 10.1186/s12912-026-04293-9. PMID: 41501735; PMCID: PMC12871030.
[21] Wright MMM, Kvist TA, Imeläinen SM, Jokiniemi KS. Continuing education for advanced practice nurses: A scoping review. *J Adv Nurs*. 2024 Aug;80(8):3037-3058. doi: 10.1111/jan.15911. Epub 2023 Oct 30. PMID: 37902130.
[22] Morin Galfout S, Schwingrouber J, Colson S. Advanced practice nursing in the European Union: A scoping review. *Nurs Outlook*. 2025 Nov-Dec;73(6):102588. doi: 10.1016/j.outlook.2025.102588. Epub 2025 Nov 13. PMID: 41237655.

VJEŠTAČKA INTELIGENCIJA KAO DETERMINANTA BUDUĆNOSTI NAPREDNE ZDRAVSTVENE NJEGE: PREKIDANJE DOMINO EFEKTA ISCRPLJENOSTI KROZ DIGITALNU TRANSFORMACIJU

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Sažetak. *Savremeni sestrinski poziv suočava se sa kritičnim nivoom profesionalne iscrpljenosti, pri čemu kognitivno preopterećenje i administrativni pritisak pokreću destruktivni domino efekat iscrpljenosti koji direktno ugrožava bezbjednost pacijenata. Cilj ovog rada je sistematizovati i kritički evaluirati dostupne naučne dokaze o uticaju vještačke inteligencije na redukciju faktora iscrpljenosti kod medicinskih sestara, uz definisanje uloge medicinskih sestara u implementaciji ovih tehnologija.Sproveden je sistematski pregled literature kroz baze podataka PubMed, Google Scholar i Web of Science, pri čemu je analizirano 25 odabranih naučnih radova objavljenih u periodu od 2020. do 2026. godine, uz primjenu PRISMA protokola i Polit i Beck hijerarhije dokaza.Rezultati analize pokazuju da intervencije vještačke inteligencije mogu preuzeti do 30% rutinskih i administrativnih zadataka, čime se direktno smanjuje kognitivno opterećenje kao prva domina u nizu iscrpljenosti. Upotreba virtuelnih asistenata, VR simulacija i digitalizovanih evaluacionih alata (Mini-CEX) značajno doprinosi emocionalnoj stabilnosti, smanjenju depersonalizacije i jačanju samoefikasnosti sestrinskog kadra. U regionalnom kontekstu Balkana, efikasnost ovih rješenja direktno zavisi od prevazilaženja tehnofobije kroz kontinuiranu edukaciju.Zaključak rada ukazuje da uspješno prekidanje domino efekta iscrpljenosti zahtijeva sinergijski model njege u kojem vještačka inteligencija pruža tehničku podršku i kognitivno rasterećenje, dok medicinske sestre zadržavaju humanu dimenziju, etički nadzor i strateško liderstvo u digitalnoj transformaciji.*

Ključne riječi: *vještačka inteligencija, sindrom sagorijevanja, digitalna transformacija, medicinska sestra napredne prakse, liderstvo u sestrinstvu*