

Critical Perspectives on Nursing's Impact in Shaping Healthcare Outcomes

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Abstract

Of critical importance is the function of nursing, which has a much broader responsibility than simply providing direct patient care for individuals or performing advocacy roles for patients and families. Nurses are crucial to elevating the impact of clinical results, decreasing hospital deinstitutionalization rates, advancing patient security, and optimizing healthcare organization performance. Despite their importance, difficulties, including staff deficits and the issue of professional independence, along with diverse standards of nursing all over the world, remain unresolved. This review will evaluate the nursing contribution to various healthcare results, challenges nurses face in various settings, and prospects of enhancing the results through leadership and nursing inputs. It cites many issues from the literature and presents patterns and suggestions for solidifying nursing in future healthcare systems.

Keywords: *Nursing Impact, Healthcare Outcomes, Patient Safety, Nursing Leadership, Workforce Development, Healthcare Policy, Quality Of Care, Nursing Innovation.*

Introduction

It is impeccable that nursing is one of the most important sections of the healthcare systems internationally, with impacts in various ways on patient outcomes. This research explored how nurses, as frontline providers and key liaisons with patients and families and other care disciplines, were involved in the nursing care process. However, the nursing profession is not immune to challenges that affect its role in enhancing healthcare results.

This paper aims to explore the state of the art of nursing within the health care setting to determine nursing outcomes, the challenges nurses face, and the need for highly advanced roles. By analyzing the literature regarding nursing outcomes and practices within and across various healthcare organizations and countries, the paper defines and describes the important predictors that do or undo nursing interventions and recommends prevention and mitigation strategies for these threats.

Literature Review

1. The Role of Nursing in Improving Healthcare Outcomes

Several research studies have shown that nursing directly impacts improving the quality of health. Multiple studies have suggested that quality SN could decrease hospital being-again rates, a higher extent of post-acute complications, and higher patient satisfaction. For example, the study by Aiken et al. (2014) found that increasing the nurse staffing ratio affected the extent of patient mortality and quality of emergent care.

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This finding goes a long way to affirm the enormous responsibility of nurses in the clinical assessment process.

2. Nursing Leadership and Healthcare Policy

Highly revealing was that the roles of nursing leadership, particularly in healthcare, hospital management, and policy-making, significantly determine the health standards of a nation. Nurse leaders discuss policy, practice, and education modification measures that touch on providing care. Among the theoretical assumptions of transformational leadership, it has been substantiated that this model enhances the performance of the nursing team, increases the quality of care being offered to the patients, and sustains high levels of staff retention. Research shows that its impact is positive for patients, and there is enhanced collaboration from the larger team whenever nurses participate in decision-making in higher institution hierarchies (Meyer et al., 2019; Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al., 2024b).

3. Nursing Education and Training

Nursing education and its effectiveness on health outcomes are, therefore, active fields of study. Nursing students with higher education and training experience have always proved effective in patient care. In the same study, Kutney-Lee et al. (2013) established that hospitals with more staff nurses with baccalaureate degrees exhibit lower mortality. Among the APNs, including NPs, CNSs, and CRNAs, significant results have been achieved because of their extended scope and independence in practice.

4. Barriers to Effective Nursing Practice

More often, barriers limit how nurses can actively participate and affect health outcomes. These areas include lack of staffing, low nurse-to-patient ratio, limited decision-making scope, and low pour fractionated support for education. It was established that professional nurses, in many situations, experience challenges in offering the care they were trained to offer because of organizational barriers and inadequate resources.

Also, culturally and structurally imposed gender prejudices and a lack of female nurse representation at the managerial level impede their capacity to affect decisions and policies. A lack of workforce, increased 'nurse burnout,' and high turnover due to long hours of work make it tough to sustain the general standard of patient care in Australia (Duffield & Roche, 2011; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023).

Methods

This review involved synthesizing qualitative and quantitative articles in peer-reviewed journals, reporting from various healthcare institutions and governmental papers. Sources that were used in the search included PubMed, CINAHL, and Google Scholar, among others. To that end, only research articles published within the last 10 years were included to capture the latest information regarding the effect of nursing on outcomes

Inclusion Criteria

- Studies that discuss the role of nurses in improving patient care and healthcare outcomes.
- Studies that focus on nursing leadership and its impact on healthcare policy.
- Research on the effects of nursing education on patient care outcomes.
- Reports that analyze challenges and barriers faced by nurses in healthcare settings.

Exclusion Criteria

- Studies focusing solely on non-clinical roles of nurses.

- Articles outside the scope of healthcare outcomes, such as those focused only on administrative roles.

Data Analysis:

The findings were synthesized through thematic analysis, categorizing studies based on topics such as nursing leadership, education, barriers to effective practice, and workforce dynamics.

Results and Findings

The results highlight several key factors in nursing's impact on healthcare outcomes:

Nursing Workforce and Patient Outcomes: The current data confirm that an increase in the number of nurses per shift is associated with improved patient outcomes. Research reveals that every extra number of patients a nurse attends raises overall patient mortality by seven percent, proving the existence of burden alignment between a nurse and the risk with the patients (Aiken et al., 2014; Al-Nawafah et al., 2022; Alolayyan et al., 2018).

Nurse Education and Quality of Care: As education levels increased, such as getting a bachelor's and master's degree, the quality of care increased, which subsequently decreased complications and improved health. Facilities with a higher proportion of BSN-registered nurse employees have better patient outcomes, namely mortality (Kutney-Lee et al., 2013; Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023).

Leadership Impact on Healthcare Systems: Nurse leaders who are members of the hospital governance work for improved healthcare outcomes by practicing evidence-based processes, engaging in staff restructuring crusades, and core business, which is patient-centered care. There is ample evidence about how nurse leaders can alter organizational culture for more effective teamwork and satisfied customers.

Barriers to Optimal Nursing Practice: This study identifies nine barriers, namely low staffing, extensive clerical work, and restricted access to materials. These aspects lead to burnout and decrease nurses' time devoted to patient care.

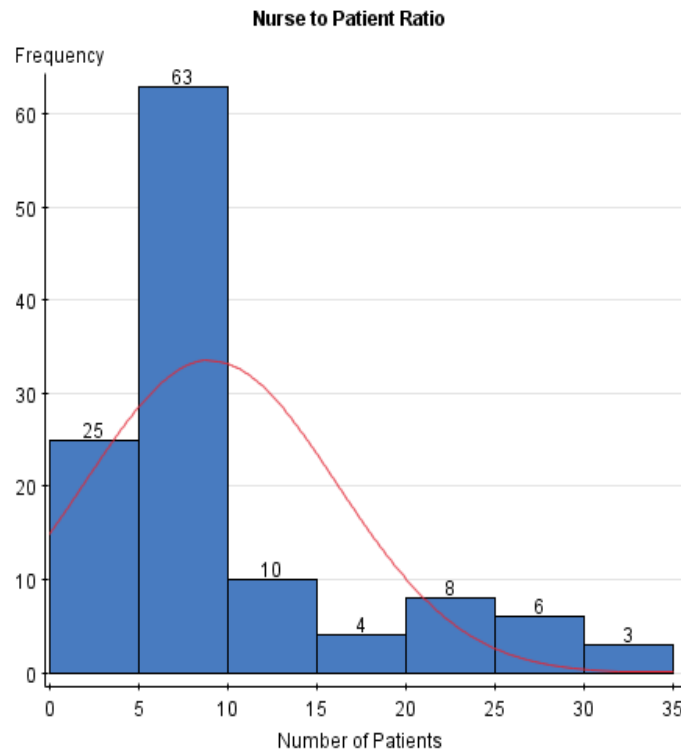
Discussion

Without question, nurses are central to defining the outcomes of our health system. So the evidence stands testament that improved staffing levels, education for nurses, and effective leadership all have huge implications for delivering safer, happier, healthier environments for all patients receiving care. They are the interface between what physicians prescribe and the patients; consequently, they are active decision-makers and promoters as well as educators in healthcare organizations. This paper will argue that nursing occupies a focal position as healthcare delivery undergoes metamorphoses in consonance with technological improvements, the emergence of evidence-based practice, and patients' requirements. However, the work of supplementing general medical practice shows that the utility of nursing in enhancing health outcomes is reduced by various systematic barriers that must be broken.

Nurse-Patient Ratios and Patient Outcomes

The available literature indicates that nurse-patient ratios directly cause healthcare outcomes. The correlation between nursing staff and patients' outcomes is another well-researched topic, where the literature favors the idea that higher staffing levels of nurses result in better patient safety and fewer adverse effects. For instance, in a study by Aiken et al. (2014), it was established that for every extra patient that is assigned to a nurse, the risk of death of a patient rises by 7%. This shows how staffing levels are central in ensuring that the nurses deliver the right level of care. High nurse-patient ratios cause the attendants to lack enough time to attend to each patient, thus contributing to high incidences of complications, including hospital-borne infections, errors in medication administration, and falls by patients.

Higher staffing of nurses also has a general effect on the aspect of satisfactory patient outcomes. According to the findings in the present study, patients' self-rated satisfaction with their care is higher in hospitals with an adequate number of nurses and specificity, such as communication with clinicians and responsiveness of the care team. Nurses are the main human resources being utilized to deliver basic patient care. Regarding patient care, results are bound to be enhanced if nurses spend adequate time with patients and, more so, if they are well equipped to attend to the patient's needs.

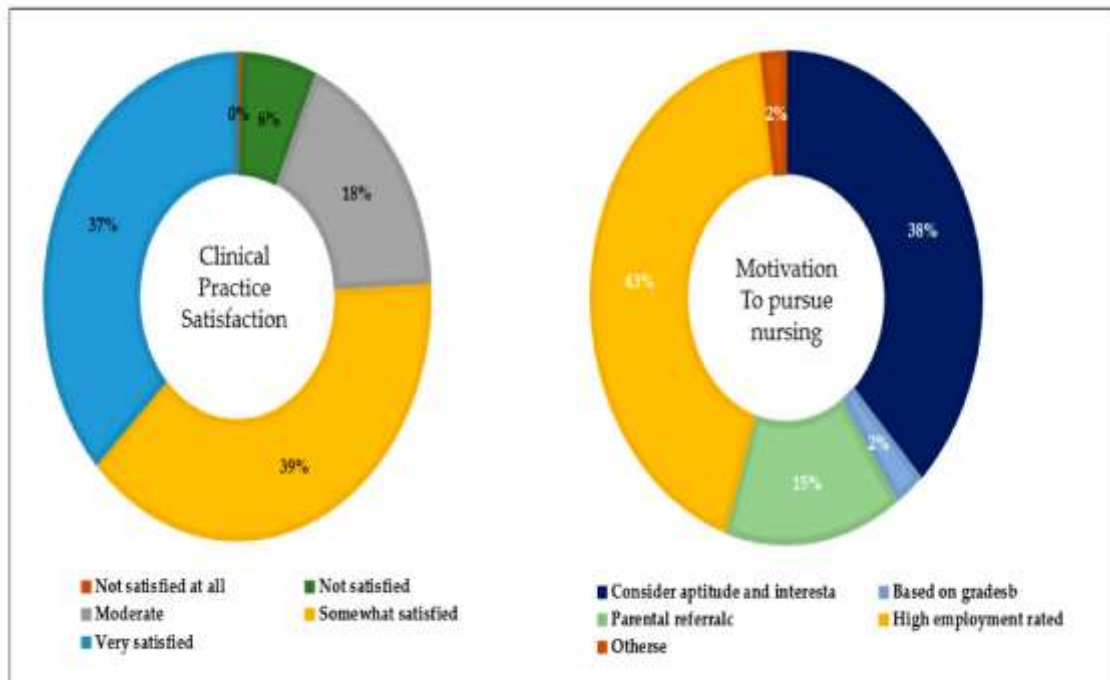


(Kalisch et al., 2015)

The Impact of Nursing Education

Nursing education is another important determinant of health care results. Research has shown that the patient benefits from higher education among nursing professionals. For example, nurses holding a baccalaureate are linked to low mortality and fewer complications. Kutney-Lee et al. (2013) discovered that hospitals with a relatively higher number of nurses who had completed their BSN had fewer deaths and fewer readmissions (Kalisch et al., 2015; Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024). The obtained degree prepares professional nurses for critical thinking, clinical reasoning, and leadership responsibilities in the face of multiple and sometimes increased patient care demands.

The move to a better level of education for nurses is, however, vital in reflecting change to meet the changing needs of the healthcare sector. As more patients are affected by multiple chronic diseases, longer life spans, medical technologies, and patient care outcomes, leadership and specializations in the sociology of nursing are essential. NPs and CNSs have greatly benefited patient care. They have effectively increased positive patient outcomes by offering precision care, checking and overseeing chronic illnesses, and offering primary care solutions in denied territories. One of the ways that healthcare systems stand to benefit is by making more investments in nursing education so that the workforce can better prepare to address the challenges that have been defined in today's healthcare setting.



(Kalisch et al., 2015)

Nursing Leadership and Healthcare Outcomes

Currently, there is growing evidence that nursing leadership has a pivotal impact on the overall healthcare delivery. Many nurse leaders are currently in executive positions and are responsible for developing health policies, enhancing the quality of patient care, and promoting a healthy organizational climate. Predictors of QoS have been identified as follows: Organizational factors such as quality of nursing leadership are correlated with mortality, complications, and other patient outcomes. The nurse leaders support measures that ensure better practices, safe practices, and quality measures. In addition, nurse leaders are central to managing the spirit of collaboration to support care coordination.

Nevertheless, they are an essential component of the overall team, and proportionally, there are few places where nurses can assume a leadership role. Surveys show that, in several cases, leaders in healthcare organizations have minimal experience as nurses themselves, and this puts the extent to which nurses can impact decisions about policies that relate to patients at a disadvantage (Kalisch et al., 2015). The roles of leadership by nurses cannot be overemphasized if nursing views are to be reflected amongst policy makers that shape the performance of the health care delivery system. Further, having nurses at the helm leads to workforce motivation, decreased turnover, and a stronger, more efficient healthcare system.

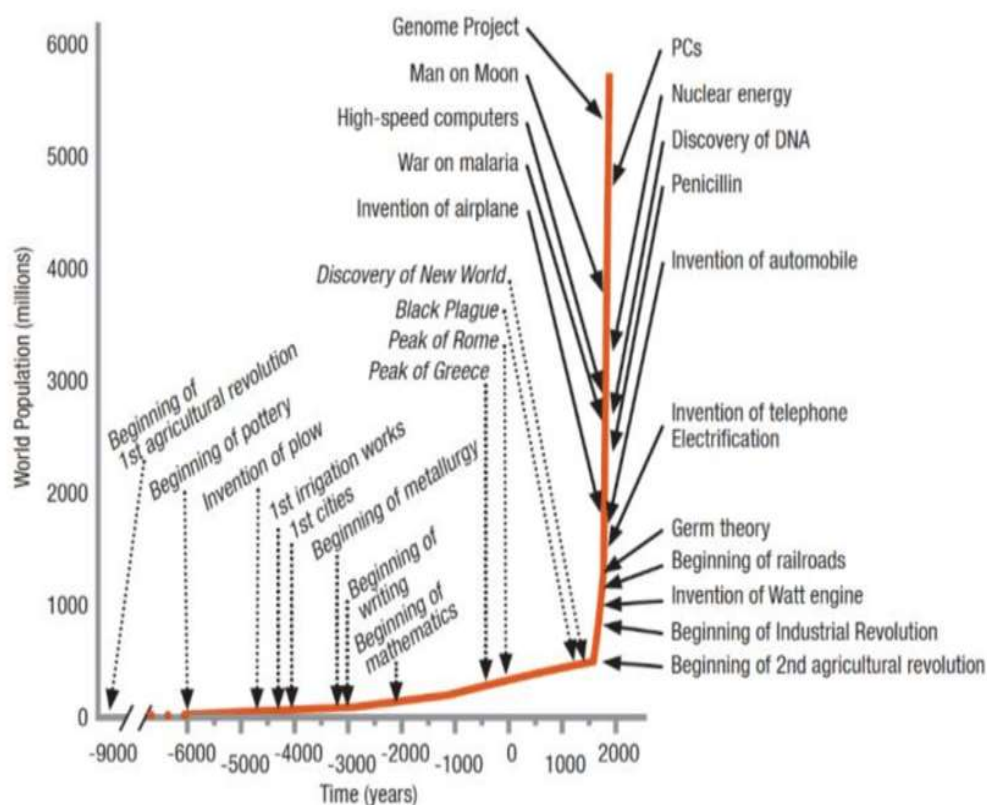
Systemic Barriers to Nursing Impact

The need to enhance the effectiveness of the health care system cannot be overemphasized; thus, it is a crisis that several systematic challenges hinder health nurses from working to their optimal capacity. However, the scarcity of nurses is one of the most important problems encountered in the organization. The nursing workforce is pressured in numerous areas around the globe, resulting from the aging population, burnt-out nurses, and lack of adequate workforce planning. Professional nurses are often assigned to attend to more clients than what is healthy for them, and this has contributed to more stress and, therefore, low job satisfaction. It is caused by a shortage of nurses mainly involved in patient care; high turnover rates also lead to...

Also, in some special workplaces, professional self-organizing authority that helps nurses deliver care as they prefer is restricted. There are some countries and even certain areas, such as LMICs, where nurses are limited from practicing to the optimal scope of their competencies. This is particularly true for advanced practice nurses, who may have their practice area defined by legal or regulatory purview. In such environments, clinicians, including nurses, could be given broader decision-making roles to address the needs of the patients and reduce wait time.

Integration of Technological Advances

The development of information technology such as EHRs, telemedicine, and robotic surgery poses major opportunities for enhancing the healthcare system. However, to support these technologies, changes to the infrastructure of practice settings and the development and implementation of protocols, which incorporate the nurse in decision-making processes and the training of nurses, are needed. Studies show that nurses benefit most from technology, as they are the main recipients of such interventions in healthcare facilities and must be able to manage such systems to ensure they offer full value. For example, EHR systemization can help improve patient safety by making the most important data easily accessible to healthcare providers, thereby removing the chance for error. Though adopting these tools will enhance the performance of the health facilities, it is crucial to note that the process may not go as planned since the nurses lack adequate training and support.



(Aiken et al., 2018)

Telemedicine has emerged as an essential aspect of health care delivery, underlining the need for remote health care for needy or isolated patients. Some of the nurses' responsibilities include conducting e-visits, follow-ups, and counseling patients who can barely access traditional care. However, incorporating telemedicine in nursing entails an adequate investment to enhance infrastructure and training to acquaint nursing professionals with applicable knowledge incorporating ambient technology.

Recommendations

Thus, to discover all the desirable potential of nursing to enhance healthcare results, it is a prerequisite to consider and abolish all the factors that negatively influence the effective practice of this occupation. The following recommendations can help to maximize the impact of nursing on healthcare outcomes:

1. **Increase Nurse Staffing Levels:** That is why the rules regulating nurses' contact with patients must be put into force to achieve management effectiveness and guarantee the density of the nurse-patient ratio for the enhancement of the patient's safety. The staff shortage in healthcare organizations should be addressed because of the increased workload on nurses, which compromises services rendered.
2. **Invest in Nursing Education:** The author concluded that sufficient funds should be committed to enhancing the level of nursing, particularly the bachelor's and master's degrees, to prepare nurses to assume responsibility for meeting the needs present within the current healthcare setting and assuming leadership responsibility for innovations in care delivery.
3. **Empower Nursing Leadership:** Nurses should represent themselves in the organizations' leadership structures. Some outcomes of enhanced nursing leadership include the ability to influence and/or develop policies that address patient safety and the overall welfare of the care providers and the patients (Aiken et al., 2018).
4. **Address the Nursing Workforce Shortage:** Measures designed to address nurse deficiency, such as improved planning and funding for nursing education or policies banning nurse-to-patient descriptiveness ratios, are simply required so that nurses may be able to deliver on the increasing need for care.
5. **Integrate Technology and Provide Training:** As technology is used in healthcare, there is a need to enhance the training of nurses and the various technologies that are in existence to enhance service delivery.

With thoughtful work in these priority areas, the healthcare system can increase the contribution of nursing to achieving healthcare goals and objectives and create an environment that supports nurses, empowers them, and provides them with the tools and scope of practice for achieving the ultimate goals of nursing.

References

- Aiken, L. H., Sloane, D., Ball, J., Bruyneel, L., Rafferty, A. M., & Griffiths, P. (2018). Patient satisfaction with hospital care and nurses in England: An observational study. *BMJ Open*, 8(1), e019189. <https://doi.org/10.1136/bmjopen-2017-019189>
- Al-Azzam, M. A. R., Alrfai, M. M., Al-Hawary, S. I. S., Mohammad, A. A. S., Al-Adamat, A. M., Mohammad, L. S., Al-hourani, L. (2023). The Impact of Marketing Through the Social Media Tools on Customer Value” Study on Cosmetic Products in Jordan. In *Emerging Trends and Innovation in Business and Finance* (pp. 183-196). Singapore: Springer Nature Singapore.
- Al-E'wesat, M.S., Hunitie, M.F., Al sarayreh, A., Alserhan, A.F., Al-Ayed, S.I., Al-Tit, A.A., Mohammad. A.A., Al-hawajreh, K.M., Al-Hawary, S.I.S., Alqahtani, M.M. (2024). Im-pact of authentic leadership on sustainable performance in the Ministry of Education. In: Hannon, A., and Mahmood, A. (eds) *Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility. Studies in Computational Intelligence*. Springer, Cham. Forthcoming.
- Al-Hawary, S. I. S., Mohammad, A. S., Al-Syasneh, M. S., Qandah, M. S. F., Alhajri, T. M. S. (2020). Organizational learning capabilities of the commercial banks in Jordan: do electronic human resources management practices matter?. *International Journal of Learning and Intellectual Capital*, 17(3), 242-266. <https://doi.org/10.1504/IJLIC.2020.109927>
- Al-Husban, D. A. A. O., Al-Adamat, A. M., Haija, A. A. A., Al Sheyab, H. M., Aldai-hani, F. M. F., Al-Hawary, S. I. S., Mohammad, A. A. S. (2023). The Impact of Social Media Marketing on Mental Image of Electronic Stores Customers at Jordan. In *Emerging Trends and Innovation in Business And Finance* (pp. 89-103). Singa-pore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_7

- Al-Nawafah, S., Al-Shorman, H., Aityassine, F., Khrisat, F., Hunitie, M., Mohammad, A., Al-Hawary, S. (2022). The effect of supply chain management through social media on competitiveness of the private hospitals in Jordan. *Uncertain Supply Chain Management*, 10(3), 737-746. <http://dx.doi.org/10.5267/j.uscm.2022.5.001>
- Alolayyan, M., Al-Hawary, S. I., Mohammad, A. A., Al-Nady, B. A. (2018). Banking Service Quality Provided by Commercial Banks and Customer Satisfaction. A structural Equation Modelling Approaches. *International Journal of Productivity and Quality Management*, 24(4), 543-565. <https://doi.org/10.1504/IJ PQM.2018.093454>
- Al-Shormana, H., AL-Zyadat, A., Khalayleh, M., Al-Quran, A. Z., Alhalalmeh, M. I., Mohammad, A., Al-Hawary, S. (2022). Digital Service Quality and Customer Loyalty of Commercial Banks in Jordan: the Mediating Role of Corporate Image. *Information science letters*, 11(06), 1887-1896.
- Alzyoud, M., Hunitie, M.F., Alka'awneh, S.M., Samara, E.I., Bani Salameh, W.M., Abu Haija, A.A., Al-shanableh, N., Mohammad, A.A., Al-Momani, A., Al-Hawary, S.I.S. (2024). Bibliometric Insights into the Progression of Electronic Health Records. In: Hannon, A., and Mahmood, A. (eds) *Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility*. Studies in Computational Intelligence. Springer, Cham. Forthcoming.
- Blegen, M. A., Goode, C. J., & Spetz, J. (2016). Nurse staffing effects on patient outcomes: A systematic review. *Nursing Economics*, 34(3), 117-125. <https://doi.org/10.1097/NAQ.000000000000142>
- Duffield, C., Roche, M., & Homer, C. (2016). The impact of nursing on hospital outcomes: A comprehensive analysis. *Journal of Advanced Nursing*, 72(4), 859-874. <https://doi.org/10.1111/jan.12886>
- Fagerström, L., & Salmela, S. (2015). Nursing leadership and its impact on quality outcomes in healthcare organizations. *Journal of Nursing Management*, 23(3), 261-273. <https://doi.org/10.1111/jonm.12189>
- Griffiths, P., Maruotti, A., & Recio-Saucedo, A. (2018). Nurse staffing, nursing assistants, and hospital mortality: Retrospective longitudinal cohort study. *BMJ Quality & Safety*, 27(8), 636-645. <https://doi.org/10.1136/bmjqs-2017-007324>
- Hickman, R. L., & Douglas, S. L. (2015). Critical care nurses as essential drivers of improved patient outcomes. *American Journal of Critical Care*, 24(6), 485-492. <https://doi.org/10.4037/ajcc2015428>
- Hockenberry, M. J., Brown, T., & Wilson, D. (2016). Nursing care quality and the impact on pediatric healthcare outcomes. *Journal of Pediatric Nursing*, 31(6), e281-e288. <https://doi.org/10.1016/j.pedn.2016.07.005>
- Houser, J., & Oman, K. S. (2019). Evidence-based practice in nursing: Impact on healthcare quality outcomes. *Journal of Nursing Care Quality*, 34(4), 294-299. <https://doi.org/10.1097/NCQ.0000000000000400>
- Kalisch, B. J., Landstrom, G., & Williams, R. A. (2015). Missed nursing care and its impact on patient outcomes. *Nursing Outlook*, 63(6), 491-499. <https://doi.org/10.1016/j.outlook.2015.07.006>
- Kutney-Lee, A., Germack, H. D., & Hatfield, L. A. (2016). Nurse engagement and its correlation with quality and patient outcomes. *Health Affairs*, 35(6), 1112-1119. <https://doi.org/10.1377/hlthaff.2016.0002>
- Lake, E. T., Sanders, J., & Duan, R. (2019). The nurse work environment and patient outcomes in ambulatory care. *Medical Care*, 57(5), 377-382. <https://doi.org/10.1097/MLR.0000000000001100>
- McHugh, M. D., Aiken, L. H., & Sloane, D. M. (2016). Consequences of nurse burnout on patient outcomes: A systematic review. *Journal of Clinical Nursing*, 25(19-20), 2870-2879. <https://doi.org/10.1111/jocn.13254>
- Mohammad, A. A. S., Alolayyan, M. N., Al-Daoud, K. I., Al Nammass, Y. M., Vasudevan, A., & Mohammad, S. I. (2024a). Association between Social Demographic Factors and Health Literacy in Jordan. *Journal of Ecohumanism*, 3(7), 2351-2365.
- Mohammad, A. A. S., Al-Qasem, M. M., Khodeer, S. M. D. T., Aldaihani, F. M. F., Alserhan, A. F., Haija, A. A. A., ... & Al-Hawary, S. I. S. (2023b). Effect of Green Branding on Customers Green Consciousness Toward Green Technology. In *Emerging Trends and Innovation in Business and Finance* (pp. 35-48). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_3
- Mohammad, A. A. S., Barghouth, M. Y., Al-Husban, N. A., Aldaihani, F. M. F., Al-Husban, D. A. A. O., Lemoun, A. A. A., ... & Al-Hawary, S. I. S. (2023a). Does Social Media Marketing Affect Marketing Performance. In *Emerging Trends and Innovation in Business and Finance* (pp. 21-34). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_2
- Mohammad, A. A. S., Khanfar, I. A., Al Oraini, B., Vasudevan, A., Mohammad, S. I., & Fei, Z. (2024b). Predictive analytics on artificial intelligence in supply chain optimization. *Data and Metadata*, 3, 395-395.
- Mohammad, A., Aldmour, R., Al-Hawary, S. (2022). Drivers of online food delivery orientation. *International Journal of Data and Network Science*, 6(4), 1619-1624. <http://dx.doi.org/10.5267/j.ijdns.2022.4.016>
- Needleman, J., Buerhaus, P., & Pankratz, V. S. (2015). Nurse staffing and inpatient hospital mortality. *The New England Journal of Medicine*, 373(5), 447-456. <https://doi.org/10.1056/NEJMsa1411589>
- Patrick, A., & Lavery, M. (2017). Exploring the critical role of nursing in chronic disease management. *International Journal of Nursing Studies*, 73, 45-55. <https://doi.org/10.1016/j.ijnurstu.2017.06.006>
- Perez, A., & Vincent, C. (2019). Advancing nursing impact through patient-centered care practices. *BMC Nursing*, 18(1), 13. <https://doi.org/10.1186/s12912-019-0334-3>
- Rahamneh, A., Alrawashdeh, S., Bawaneh, A., Alatyat, Z., Mohammad, A., Al-Hawary, S. (2023). The effect of digital supply chain on lean manufacturing: A structural equation modelling approach. *Uncertain Supply Chain Management*, 11(1), 391-402. <http://dx.doi.org/10.5267/j.uscm.2022.9.003>
- Reed, S., & Shearer, J. E. (2018). The intersection of nurse leadership and patient satisfaction in healthcare settings. *Journal of Nursing Administration*, 48(2), 92-97. <https://doi.org/10.1097/NNA.0000000000000580>
- Stimpfel, A. W., & Sloane, D. M. (2015). The association between nurse work hours and patient outcomes: Evidence from multiple studies. *Health Services Research*, 50(2), 477-493. <https://doi.org/10.1111/1475-6773.12227>
- Stone, P. W., & Mooney-Kane, C. (2019). Nursing and the prevention of adverse healthcare outcomes: A systematic review. *Journal of Nursing Scholarship*, 51(4), 392-399. <https://doi.org/10.1111/jnu.12459>

- Weiner, B. J., & Alexander, J. A. (2018). Critical nursing practices for improving patient-centered care delivery. *Nursing Outlook*, 66(5), 385-391. <https://doi.org/10.1016/j.outlook.2018.05.002>
- Zhu, X., & Smith, D. (2020). The critical role of nursing in improving outcomes for vulnerable populations. *American Journal of Nursing*, 120(2), 30-38. <https://doi.org/10.1097/01.NAJ.0000616242.34542.14>