

The Impact of Nurse-led Interventions on Patient Outcomes

Xu Ping^{1*}, Datin Hafizah Che Hassan²

^{1&2} School of Nursing & Applied Science, Lincoln University College, Malaysia

*Corresponding author: xuping.phdscholar@lincoln.edu.my

Abstract

Nurse-led interventions help to enhance self-administration proficiency and enhance their quality of life, which is advantageous for facilitating health outcomes and curing diseases in primary health institutions in China. Nevertheless, there is still a deficiency of awareness and understanding about the importance of nurse-directed intervention approaches to improve patient health outcomes. Therefore, the current research sought to examine the implications of nurse-guided intervention strategies in enhancing possible patient healthcare outcomes. The current research used a cross-sectional, quantitative research design to gather primary data in a particular time structure. The study employed a survey method by distributing structured questionnaires to the selected participants and collecting data from those respondents. This study utilised the purposive sampling technique to select 778 nurses from primary hospitals in Beijing, China. The researchers employed descriptive analysis to define the essential elements of data, while the connection between nurse-directed intervention approaches and health outcomes of patients was examined by employing Analysis of Variance (ANOVA). The primary results of the research indicated that nursing care strategies impacted the advancement of patient outcomes by early detection of complications and ensuring consistent monitoring. The research also highlighted that nurse-directed interventions played a significant part in patient outcomes, through qualification of nurses and nurse-patient interaction. In conclusion, it can be indicated that adequate knowledge about efficient nurse-driven intervention strategies in improving patient outcomes is essential to minimise the frequency of hospital visits. Furthermore, the study concluded that effective nurse-led intervention techniques help in supporting modifications to a healthy lifestyle, such as an appropriate dietary plan and exercise, eventually facilitating patient health outcomes.

Keywords: *Ethical Standards, Nurse-Led Interventions, Nurse-Patient Communication, Nurse Qualification, Patient Outcomes*

Introduction

According to the A nurse-led intervention can be defined as the approach of delivering healthcare in which an expert nurse manages planning, leading, and maintaining a vision on different aspects of providing caregiving and treating patients. Nurse-led interventions can transpire in a spectrum of healthcare institutions, including clinics, healthcare establishments such as hospitals, community health centres and even patients' residences. Nurse-led self-administration initiatives have evolved as an advantageous approach, highlighting patient knowledge and the active involvement of nurses in providing care services (McParland et al., 2022). A previous research of Berardinelli et al. (2024) demonstrated that nursing care strategies play an important function in increasing

medication compliance among patients suffering from chronic diseases. This also found that personalised knowledge, proper counselling, and adequate behavioural assistance provided by expert nurses invariably led to more satisfactory allegiance outcomes, corresponding to standard healthcare services. In addition, the employment of multidisciplinary practices, where qualified nurses cooperate with expert physicians and additional healthcare professionals, further reinforces adherence results (Berardinelli et al., 2024). Patient outcomes are the measurement of the efficacy and the rate of success of healthcare services and required interventions. As mentioned by Bhati et al. (2023), patient health outcomes encompass a broad range of characteristics, which include health and patient well-being, care satisfaction, speedy recovery, and treatment-condition-specific adverse event prevention. Enhancing health outcomes of patients is an ethical imperative and a crucial element of providing quality healthcare and evaluation of performance. The research findings indicated that clinics and other healthcare organisations are constantly functioning to improve patient healthcare outcomes. Improved health outcomes acknowledge that they are inherently associated with the prominence and success rate of the healthcare organisation (Bhati et al., 2023).

There are several influencing factors of nurse-led interventions that directly impact the overall healthcare outcomes among patients. The qualification of nurses is an important element in improving overall patient outcomes, as higher nurse qualifications are strongly related to better patient outcomes. Skilled and competent nurses are additionally qualified for early detection of patient complications, lowering errors of medication, and enhancing rates of patient recovery. In addition, nurse-patient communication has a substantial influence on the overall patient outcomes, as adequate communication approaches enhance acquaintance, belief, and association between patients and nurses. Adequate communication between patients and nurses additionally improves patient safety by decreasing misinterpretations and indecisiveness in treatment procedures and eventually promotes patient-centred healthcare outcomes (Lukewich et al., 2022). Similarly, interprofessional collaboration is regarded as another important factor that improves patient outcomes by encouraging interaction and teamwork between nursing staff and other healthcare specialists, which renders patient-centred care more integrated, reliable, and productive. Strong interprofessional cooperation greatly contributes to higher-quality services to the patients and effective patient outcomes by improving patient satisfaction. Consequently, ethical standards have a substantial effect on comprehensive patient health outcomes as the guidelines recommend professionals in healthcare institutions to provide secure, compliant, unbiased, and patient-centred healthcare services. Additionally, ethical practices encourage honesty, propriety, and regard for patient privileges and refinement, which boosts trust among patients and nurses (Kaiser et al., 2022).

Review of Related Literature

Nurse-led interventions are considered effective healthcare approaches designed and operated by skilled nurses to enhance patient health, well-being, and comprehensive quality of care services. According to Qiu (2024), expert nurses help patients with existing diseases, observing treatment strategies, and embracing healthy behavioural patterns. Skilled nursing professionals also monitor the health progress of patients and help in the early detection of health-related risk factors. The results revealed that nurse-led care services increase the relationship between provided healthcare services and ensure consistency of treatment for patients. In addition, patients usually feel more satisfied discussing health-related situations with nurses, which boosts belief and healthcare experiences and eventually improves potential patient healthcare outcomes. In

the settings of critical care, nurse-led intervention approaches assist in timely decision-making aspects and maintenance of patient safety (Qiu, 2024). Additionally, another prior research of Ruksakulpiwat et al. (2025) identified that care interventions provided by nurses have attained significant attention as an advantageous strategy to improve the standard of delivery of healthcare services for patients with multimorbidity. The interventions provided by nurses are often represented in progressive approaches or professional functions, considering the primary obligation for coordination of care services, healthcare education, counselling related to lifestyle changes, and administration of symptoms. The resilience of nurse-guided measures relies on their patient-focused philosophical approaches, which significantly parallel the requirements of individuals with factors of multimorbidity. Further, nursing professionals are exceptionally positioned to deliver consistency of care services, facilitate patient autonomy, and assist self-administration through recurring communication and authorised curative connections (Ruksakulpiwat et al., 2025).

There are some influencing factors associated with nurse-led interventions that directly or indirectly influence patient outcomes. The qualification of nurses is considered one of the most influential elements that impact the comprehensive healthcare outcomes of patients. A study by Dall'Ora et al. (2022) has investigated that the effective expertise of nurses delivers more satisfactory monitoring of patients, appropriate documentation of patient information, and effective collaboration with healthcare teams to provide better healthcare outcomes to the patients. The study findings indicated that increased levels of skilled registered nurses were related to reduced mortality rates of patients, lower unfavourable incidents, and more satisfactory patients' health-related safety outcomes. In addition, in primary healthcare settings, nurses who are both qualified and registered facilitated appropriate management of chronic diseases, improved satisfaction among patients, and delivery of premium quality healthcare services (Dall'Ora et al., 2022).

Communication is considered a prior characteristic in the development of the nurse-patient connection and comprises the techniques used to treat patients and the outcomes of their care service planning. According to Alshalawi et al. (2025), communication is considered one of the most crucial elements of providing patient care as it constructs a favourable and health-focused environment between patients and nurses. The study discovered that sufficient nurse-patient communication boosted satisfaction among patients, improved trust, emotional assistance, and the overall quality of care provided. Consequently, effective communication between patient and nurse also lowered anxiety and stress levels of patients and improved healthcare experiences. Additionally, the quality of communication approaches facilitated patient-centred health outcomes, self-administration, understanding of treatment strategies, and decision-making among patients (Alshalawi et al., 2025).

Interprofessional collaboration is another important factor in the context of providing quality care services to patients, as the approach creates required coordination among healthcare professionals, which improves patient healthcare outcomes. Prior research conducted by Bouton et al. (2023) determined that active interprofessional collaboration directly impacted satisfaction among patients and the overall healthcare outcomes of patients. Additionally, collaborative teams in healthcare settings helped the appropriate administration of chronic diseases and ensured patient safety and accessibility of healthcare services. The study findings indicated that effective interprofessional collaboration favourably affected patient-focused outcomes, which included patient

satisfaction, increased trust in care services and quality of communication approaches. In addition, the results revealed that interprofessional understanding and teamwork among healthcare specialists lowered patients' rates of mortality and boosted patient health-focused safety outcomes (Bouton et al., 2023).

Ethical standards play an essential function in healthcare settings and have a substantial influence on patient healthcare outcomes. Ethical norms are considered the honourable regulations and professional policies that lead healthcare professionals to deliver secure, compliant, genuine, and appropriate care services to patients. Prior research by Cruz Rivera et al. (2022) identified that nurses often experience moral dilemmas, leading nurses in navigating intricate alternatives between conflicting directions. However, the study reported that moral nursing practice helped in the appropriate maintenance of patient safety, regard for patient independence, build trust, and more satisfactory nurse-patient connections. The findings of the study indicated that ethical health specialists involve patients in decision-making and respect their choices, opinions, and values. In addition, through informed approval, patients acquire thorough details about their treatment procedures, advantages, and potential risks, which in turn boosts patient satisfaction and acquires the required cooperation for treatment (Cruz Rivera et al., 2022). Watson's Theory of Human Caring is considered an appropriate theory to describe nurse-led interventions implemented to emphasise the supply of patient-centred and empathetic care services for patients and enhance patient healthcare outcomes. The theory was developed to highlight the significance of care service associations in effective nurse-directed practices. According to Watson (1979), the theory explained that nursing practice not only concentrates on treating sickness but also on fostering recovery through empathy, consideration, and emotional assistance. The theory also acknowledged that providing care is the establishment of nurse-directed practices and assists patients in achieving more satisfactory physical and psychological well-being. According to the theory, a healthy nurse-patient relationship within the healthcare settings adequately enhances appropriate patient satisfaction and speedy recovery. In addition, maintenance of effective communication, improved empathy, and sincere care help patients feel respected and assisted during the period of treatment. The distinct theory also underlined acquiring self-directed care approaches for nursing professionals, considering that providing care enhances the capacity to deliver care services for others (Watson, 1979). Several studies have used the mentioned theory to establish the significance of effective nurse-guided practices in providing patient-focused healthcare assistance. Previous research by Gunawan et al. (2022) aimed to highlight the way the respective theory can be implemented in nursing management and leadership approaches. The distinct research concentrated on incorporating appropriate care service regulations into nursing administration, favourable healthcare systems, and patient care approaches to improve healthcare outcomes among patients. The findings of this study demonstrated that the respective theory enhanced empathetic nursing care services, maintaining effective communication and relationships among patients and nurses. The study determined that implementing the mentioned theory in maintaining nurse-led interventions can facilitate high-quality healthcare services, improve patient satisfaction, and comprehensive patient health outcomes by supplying empathetic nursing care (Gunawan et al., 2022). In summary, the discussion demonstrated that nurse-led interventions based on the mentioned theory improved satisfaction and recovery rates of patients, fostered patient-focused care services, and strengthened nurse-patient relationships.

Objective

- To evaluate the influence of nurse-led interventions on patient outcomes.

Methodology

Research Design and Procedure

A quantitative, cross-sectional study design was used in the current research to evaluate the influence of nurse-directed intervention approaches on comprehensive health outcomes of patients. The specific study design highlighted the practical collection of numerical data from nurses from primary hospitals in Beijing, China, within a distinctive time frame. The design also estimated intricacies while assessing the relationship among identified research variables. The collection of quantitative data was conducted through the allocation of both online and offline structured questionnaires to the selected study participants. The present study approach included the development of tools associated with the survey based on identified research variables and related factors. A pilot test confirmed the validity of the collected data, while Cronbach's Alpha was employed for the proper estimation of reliability. Correspondingly, satisfactory distribution of the structured survey questionnaire to the selected study respondents, along with appropriate statistical analysis by using SPSS 25, helped to demonstrate a quantifiable association between nurse-directed interventions and probable patient outcomes. The direct principles and size of the statistical connection were indicated employing a confidence interval at 95%. The statistical significance threshold had been set at a p-value < 0.05. The researcher employed the descriptive analysis method to determine the important elements of the collected quantitative data, while the collected data was assessed using the ANOVA approach.

Operational Framework



Subjects or Data Sources

A survey approach was utilised to collect primary data to complete the present study. The study participants were primary hospital nurses in Beijing, China, from whom the primary information for the research was collected. There were two different parts to the survey: (a) information concerning demographic data of the chosen research participants, and (b) a 5-point Likert scale with questions concerning the influence of nurse-directed intervention strategies on patient health outcomes.

Analysis

Instrumentation and Data Analysis

The present research used a purposive sampling technique to select valid and relevant study respondents in the research context. Raosoft tool recommended the optimal sample size of 713 for the data collection for the study. Therefore, 850 survey questionnaires were distributed to the respondents. Research participants returned 823 questionnaires to the researchers, from which 45 questionnaires were discarded because of inappropriate or incomplete responses. Henceforth, the final sample size was 778. Microsoft Excel and SPSS version 25 were utilised for performing statistical analysis for the research study. The

researcher employed a descriptive analysis technique to understand the essential elements of the gathered data, while ANOVA was used to assist in evaluating the data collected.

Limitations

The present research study encountered different limitations, specifically intrinsic in quantitative research. The employment of closed-ended survey questionnaires limited research participants from providing thorough interpretations, which restricted the ability to summarise different perspectives or contextual components influencing their views regarding nurse-guided interventions and patient outcomes. Quantitative data oversimplified the effect of effective nurse-guided intervention approaches on probable healthcare outcomes among patients. In addition to this, data collection from only primary hospitals in Beijing, China, developed issues related to the appropriate representation of more comprehensive findings on the selected study topic. The cross-sectional research design restricted the study's capability to develop causality, as the quantitative data revealed relationships at a particular time frame rather than transformations over a period. Finally, the results of the current research study were not completely generalisable beyond the target population, as the findings were influenced by additional demographic characteristics and communication strategy exposure standards of the study respondents included only in this research.

Findings and Discussion

• Factor Analysis

Factor Analysis (FA) is used to confirm the influencing element structure of the measurement dataset. It is thought that factors that are not immediately apparent have an impact on the scores of the observable variables. This study's primary focus is on creating pathways of causality that link hidden causes, measurement errors, and observable events. The Kaiser-Meyer-Olkin (KMO) Method may be used to determine if the data is suitable for FA. The sampling adequacy of each individual model variable and the overall model variable is evaluated. The degree of potential shared variation across several variables is quantified by the statistics. FA is often more appropriate for data with smaller percentages. The values that KMO returns range from 0 to 1. Sampling is considered sufficient when the KMO value is between 0.8 and 1.

According to Kaiser, these are the permissible limits: The following criteria have been set by Kaiser for approval:

A pitiful 0.050 to 0.059, below average 0.60 to 0.69. Middle grades often fall within the range of 0.70-0.79.

With a quality point score ranging from 0.80 to 0.89. They excel in the range of 0.90 to 1.00.

Table 1: KMO and Bartlett's Test

Testing for KMO and Bartlett's Sampling Adequacy: 0.863

The results of Bartlett's Test of Sphericity are as follows:

Approx. chi-square = 5876.745

df =190; sig = 0.000

Table 1. KMO and Bartlett's Test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.863
Bartlett's Test of Sphericity	Approx. Chi-Square	5876.745
	df	190
	Sig.	0.000

Bartlett's Test of Sphericity was used to further verify the correlation matrices' comprehensive relevance. The value of KMO sampling adequacy was 0.863. Researchers identified a p-value of 0.00 employing Bartlett's Test of Sphericity. Thus, the correlation matrix was not an identity matrix, as shown by an important test outcome from Bartlett's Sphericity Test.

Independent Variable

- **Nurse-led interventions**

Nurse-led interventions can be defined as effective healthcare-related operations organised and performed by nurses to improve the health and wellness of patients. Nurses assist patients in clinics, hospitals, social centres, and residences. Nurses aid in illness avoidance, management, rehabilitation, and health improvement through appropriate intervention strategies. Training patients, pharmacological assistance, health evaluations, counselling, and follow-ups are included in nurse-led interventions. Nurses assist patients in comprehending their ailment and options for treatment. Healthy living and self-care approaches among patients are also promoted through the intervention strategies. Both satisfaction for patients and overall patient outcomes are enhanced by these interventions through maintaining adequate communication strategies between nurses and patients (Bulto et al., 2024). Appropriate nurse-led intervention approaches may lessen the risk factors associated with health-related problems and hospital readmissions. Interaction between patients and nurses is also enhanced by nurse-led care services. Patients frequently feel better at comfortable talking to nurses about their issues. This promotes confidence and trust in medical treatments. In addition, interprofessional collaboration between nurses and other healthcare professionals and ethical practices also improve patient outcomes by providing patient-centred care services and emotional assistance (Dailah, 2024).

Dependent Variable

- **Patient outcomes**

Patient outcomes can be defined as the effects of medical treatments and services on a patient's well-being and health. The efficacy and quality of the provided healthcare services are evaluated using patient outcomes. Effective patient outcomes aid nursing staff and other health experts in determining the effectiveness of implemented interventions and therapies. In some situations, patient satisfaction and trust during therapy are also considered patient outcomes. Accurate diagnosis approach implementation, acquiring timely treatment practices and maintaining good communication with patients often lead to positive patient outcomes (Dixon et al., 2024). Conversely, therapeutic failure, onset of frequent infections, errors in medicinal treatment, or deteriorating health problems are examples of negative patient outcomes. In both healthcare studies and applications, patient

outcomes are crucial indicators to understand the efficacy of provided care services to the patients. Possible patient outcomes are used by hospitals and other healthcare organisations to assess the efficacy of treatment and locate areas that may be significantly improved. In addition, researchers investigate different dimensions of patient outcomes to get an understanding of the effects that various therapies and healthcare interventions have on patients (Ezeamii et al., 2024).

- **Relationship between nurse-led interventions and patient outcomes**

Patient healthcare outcomes and nurse-led interventions are closely related, as it is mostly nurses who are responsible for planning and implementing these interventions to promote the good health and well-being of patients. The provision of immediate care services, the monitoring of patient health conditions, the supply of appropriate education to patients, and the promotion of rehabilitation are significant roles that nurses perform. The participation and effective qualification of nurses in delivering patient-centred care services have a significant effect on the comprehensive patient health outcomes, as well as improving the standard of medical care services that are provided. One significant connection that is found between nurse-led interventions and health outcomes of patients is the enhancement of disease management measures. Qualified nurses conduct routine assessments of their patients and conduct early detection of any health issues. In addition to monitoring the advancement of therapy, nursing professionals provide appropriate emotional assistance and comfort to the patients. Patients can more successfully manage chronic conditions because of the supply of required care service assistance. Patients experience fewer health-related problems and improved health progress as a direct consequence of providing effective nurse-led interventions (Yu et al., 2024).

Nurse-directed intervention approaches are being used in hospitals and public healthcare settings to assist in lowering the costs of healthcare and the length of hospital stays. Furthermore, interaction between nurses and patients has an impact on the overall health outcomes for patients. A patient's anxiety and fear may be reduced by effective communication, which also helps to create trust. Interprofessional collaboration among healthcare professionals helps by providing patients with psychological assistance, which may enhance their mental well-being and help them recover more comfortably. Continuous monitoring and appropriate follow-up treatment are essential to avoid subsequent readmissions to hospitals. When nurses maintain ethical practices while giving personalised care, patients often report feeling more supported and valued. When patients have positive experiences, they are more satisfied with the services provided by healthcare providers and are more likely to cooperate throughout treatment. Both patient satisfaction and the value of life have been proven to increase when nurse-led treatments are implemented (Almutairi et al., 2025).

According to the mentioned discussion, researchers developed the hypothesis intending to investigate the significant relationship between nurse-led interventions and patient outcomes:

- “H01: There is no significant relationship between nurse-led interventions and patient outcomes.”
- “H1: There is a significant relationship between nurse-led interventions and patient outcomes.”

Table 2: H1 ANOVA Test

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	83,746.439	250	8439.743	1131.636	0.000
Within Groups	837.894	527	7.458		
Total	84,584.333	777			

The current research study determined substantial results. Statistical significance was accomplished with a p-value of 0.000, which indicated an alpha level less than 0.05 and an F-value of 1131.636. This indicated that the null hypothesis was rejected; on the other hand, the alternative hypothesis, “H1: There is a significant relationship between nurse-led interventions and patient outcomes”, was accepted.

The findings of the study determined that nurse-directed intervention approaches and patient outcomes had a statistically significant connection. The dataset was discovered to be adequate for FA, and the research variables demonstrated acceptable interrelationships. The interrelationship was established through the distinct value of KMO of 0.863, which showed adequate sampling adequacy. Further, Bartlett’s Test of Sphericity provided a significance value of 0.000, demonstrating that significant connections existed among the identified research variables and helping the practicality and reliability of the analytical model. Additionally, the results of the ANOVA test displayed a significantly favourable finding, with a distinct p-value < 0.05 and an F-value of 1131.636. The null hypothesis had been rejected; however, the alternative hypothesis had been accepted based on the acquired statistical findings. The statistical findings substantiated that effective nursing practices, including early detection of complications, regrading patients’ needs and preserving confidentiality of patients’ information, helped in the betterment of patient outcomes. The higher F-value additionally demonstrated a substantially predictive connection between the identified independent variable, nurse-led interventions, and the recognised dependent variable, patient outcomes. The study also discovered that sufficient nurse-led intervention strategies contributed to enhanced rates of patient recovery, more suitable treatment administration, boosted patient satisfaction, and comprehensive quality of delivered patient-focused healthcare services. Nursing practices which include patient instruction, continued monitoring, psychological assistance, and blended care services positively impact patient well-being and overall healthcare experiences for patients.

The findings of the study investigated the influential connection between nurse-led interventions and patient health outcomes and showed that intervention approaches implemented by nurses critically improved the overall standard of patient healthcare outcomes. The research also revealed that nurse-led intervention strategies contributed to more satisfactory patient recovery rates, boosted patient satisfaction, enhanced treatment compliance, and lowered rates of hospital readmission. Nurses played an essential role in helping patients throughout the process of treatment by providing health-related education, scrutinising disease symptoms at an initial stage, and showing emotional support. These effective nursing practices assisted patients in better understanding their health-focused needs and facilitated them to pursue clinical advice and treatment planning more

effectively provided by nurses. As a result, patients encountered enhanced biological and emotional well-being and more favourable healthcare experiences. The current research also emphasised that nurse-led intervention approaches encouraged continuity of provided care services and amplified interaction among nurses, other healthcare professionals and patients. The results of the research also determined that nurse-directed intervention techniques facilitated patient faith and confidence in the delivered healthcare services, as patients obtained personalised care and continued assistance from nursing professionals.

According to the study, several factors associated with nurse-led interventions significantly influenced patient healthcare outcomes. Nurse qualification emerged as one of the most significant elements because positively educated, qualified, and skilled nurses showed more robust medical competence, ability to think critically, and decision-making agility. Qualified and skilled nurses were more competent in incorporating practical treatment techniques, handling patient health-related complications, and providing evidence-focused care services. Their skilled understanding contributed to facilitating healthcare efficacy and more satisfactory patient health outcomes. The study also determined maintenance of nurse-patient communication as a significant element affecting patient healthcare outcomes. Adequate communication approaches promoted nurses to comprehend patient problems, identify patients' healthcare requirements, and deliver patient-centred healthcare services. Transparent and empathetic communication approaches decreased patient anxiety and disorder while promoting patient involvement in healthcare decision-making approaches. Similarly, interprofessional collaboration was discovered to strengthen favourable patient health outcomes by boosting cooperation between nurses and other healthcare professionals. Collaboration enabled proper decision-making, consistency of care services, and decreased the probability of clinical mistakes. The current research underscored the significance of the implementation of ethical standards in effective nursing practices. Ethical nursing conduct elevated patient satisfaction, confidentiality and security standards during the process of treatment. By upholding professional standards and appreciating patient privileges, nurses contributed to more significant patient trust, dignity, and delivery of quality healthcare services.

Implications

The research results may harbour significant implications for the fields of nursing practices, delivery of effective patient healthcare, different healthcare institutions, and future studies. The study may also help emphasise the significance of boosting clinical skills of nurses and proficiency in decision-making. Hospitals and other healthcare associations may utilise the findings of the research to create effective training programmes that can promote nurses' acquaintance and appropriate communication skills. In addition, the research may assist policymakers in identifying the significance of nurse-led healthcare models in health settings. Therefore, guidelines may be designed to improve nurse involvement in patient administration and appropriate healthcare planning to boost patient outcomes. The present study findings may also encourage improvement in nursing education. Henceforth, nursing students may become more composed to manage complicated patient conditions in medical settings. In the context of future research, the research may facilitate further exploration into various kinds of nurse-led intervention strategies across healthcare settings and patient populations. Future researchers may also investigate strategies to promote long-term patient healthcare outcomes and evaluate the efficacy of diverse nursing techniques.

Conclusion

The present research concluded that nurse-led interventions played an important function in boosting patient outcomes across healthcare settings. The findings of the research revealed that nurse-directed interventions helped in delivering better patient care, enhancing recovery rates, and increasing patient satisfaction. The research also discovered that intervention approaches provided by nurses decreased health-associated problems and encouraged convenient identification of patient requirements. Further, the study emphasised that adequate nurse-patient communication positively influenced the development of patient trust and active involvement during treatment processes. Adequate communication approaches allowed nurses to clearly and understandably clarify clinical situations, treatment planning, and care education to patients. This motivated patients to convey their references, ask questions, and be involved in healthcare decision-making approaches. The results also presented that those qualified and skilled nurses supplied more convincing intervention techniques because of their medical knowledge, applicable understanding, and skilled competence. The distinct capacities contributed to enhanced rates of patient recovery, decreased complications, and more satisfactory comprehensive medical outcomes. Further, interprofessional collaboration boosted patient healthcare services by fostering teamwork between nurses and other healthcare professionals. Such an association assisted in correct decision-making aspects, corresponded to care plans, and ensured continuity of provided healthcare services. The study also highlighted that ethical nurse-led practices played an influential role in securing patient security, confidentiality and dignity while assuring the support of high-quality and patient-centred healthcare services. Despite the favourable findings, the current study determined that deviations in healthcare settings and patient conditions may have adversely impacted the significance of nurse-directed interventions. The study findings indicated the significance of reinforcing nursing practices that can be improved through providing proper education, proficient training, adequate communication approaches, teamwork, and maintenance of ethical criteria.

References

- Almutairi, M., Almutairi, A. A., & Alodhialah, A. M. (2025). A cross-sectional study on the impact of nurse-led health coaching on oncology patient outcomes. *Journal of Multidisciplinary Healthcare*, 3933-3949.
- Alshalawi, S., Aljedaani, S., Fintyanh, D., Salim, S., Fairaq, W., & Refaei, S. (2025). The Effect of Nurse-Patient Communication on Patient Satisfaction in the Emergency Department. *Journal of Nursing & Midwifery Sciences*, 12(1).
- Berardinelli, D., Conti, A., Hasnaoui, A., Casabona, E., Martin, B., Campagna, S., & Dimonte, V. (2024, November). Nurse-led interventions for improving medication adherence in chronic diseases: A systematic review. In *Healthcare* (Vol. 12, No. 23, p. 2337). MDPI.
- Bhati, D., Deogade, M. S., & Kanyal, D. (2023). Improving patient outcomes through effective hospital administration: a comprehensive review. *Cureus*, 15(10), e47731.

- Bouton, C., Journeaux, M., Jourdain, M., Angibaud, M., Huon, J. F., & Rat, C. (2023). Interprofessional collaboration in primary care: what effect on patient health? A systematic literature review. *BMC Primary Care*, 24(1), 253.
- Bulto, L. N., Roseleur, J., Noonan, S., Pinero de Plaza, M. A., Champion, S., Dafny, H. A., ... & Hendriks, J. M. (2024). Effectiveness of nurse-led interventions versus usual care to manage hypertension and lifestyle behaviour: a systematic review and meta-analysis. *European Journal of Cardiovascular Nursing*, 23(1), 21-32.
- Cruz Rivera, S., Aiyegbusi, O. L., Ives, J., Draper, H., Mercieca-Bebber, R., Ells, C., ... & Calvert, M. J. (2022). Ethical considerations for the inclusion of patient-reported outcomes in clinical research: the PRO ethics guidelines. *Jama*, 327(19), 1910-1919.
- Dailah, H. G. (2024, January). The influence of nurse-led interventions on diseases management in patients with diabetes mellitus: a narrative review. In *Healthcare* (Vol. 12, No. 3, p. 352). MDPI.
- Dall'Ora, C., Saville, C., Rubbo, B., Turner, L., Jones, J., & Griffiths, P. (2022). Nurse staffing levels and patient outcomes: a systematic review of longitudinal studies. *International journal of nursing studies*, 134, 104311.
- Dixon, D., Sattar, H., Moros, N., Kesireddy, S. R., Ahsan, H., Lakkimsetti, M., ... & Doshi, D. (2024). Unveiling the influence of AI predictive analytics on patient outcomes: a comprehensive narrative review. *Cureus*, 16(5).
- Ezeamii, V. C., Okobi, O. E., Wambai-Sani, H., Perera, G. S., Zaynieva, S., Okonkwo, C. C., ... & Obiefuna, N. G. (2024). Revolutionizing healthcare: how telemedicine is improving patient outcomes and expanding access to care. *Cureus*, 16(7).
- Gunawan, J., Aunguroch, Y., Watson, J., & Marzilli, C. (2022). Nursing administration: Watson's theory of human caring. *Nursing science quarterly*, 35(2), 235-243.
- Kaiser, L., Conrad, S., Neugebauer, E. A., Pietsch, B., & Pieper, D. (2022). Interprofessional collaboration and patient-reported outcomes in inpatient care: a systematic review. *Systematic reviews*, 11(1), 169.
- Lukewich, J., Martin-Misener, R., Norful, A. A., Poitras, M. E., Bryant-Lukosius, D., Asghari, S., ... & Tranmer, J. (2022). Effectiveness of registered nurses on patient outcomes in primary care: a systematic review. *BMC health services research*, 22(1), 740.
- McParland, C., Johnston, B., & Cooper, M. (2022). A mixed-methods systematic review of nurse-led interventions for people with multimorbidity. *Journal of Advanced Nursing*, 3930-3951.
- Qiu, X. (2024). Nurse-led intervention in the management of patients with cardiovascular diseases: a brief literature review. *BMC nursing*, 23(1), 6.
- Ruksakulpiwat, S., Pongsuwun, K., Junphongsri, P., Preeprem, C., Nguantad, S., & Samart, B. (2025). Nurse-led interventions to improve health, adherence, and functional outcomes in adults and older adults with multimorbidity: A systematic review of randomized and quasiexperimental studies. *Journal of nursing management*, 2025(1), 6252049.

- Watson, J. (1979). Nursing: The philosophy and science of caring. *Caring Nurs Class An Essent Resour*, 79(11), 2040.
- Yu, X., Xu, J., & Lei, M. (2024). Does a nurse-led interventional program improve clinical outcomes in patients with atrial fibrillation? A meta-analysis. *BMC Cardiovascular Disorders*, 24(1), 39.