The Review Of
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The Role Of Nurse-Led Interventions In Reducing Hospital

Huda Abdulrhman Alsubhi[1] , Hanadi Abdulrhman Alsobhi[2], Hind Abdulrhman AlSobhi[3] , Mariam Ragallh Algohany[4] , Manal Saleh Aljohani[5] , Aeishah Abdullah Tuwaimy AlSubaie[6] , Huda Abdullah AlSubaie[7], Amal Musallam Saleh Albeladi[8] , Zahra Abdullah Sulaiman Al-Anzi[9] , Randa faisal almutairi[10] , Amal Faisal Al. almutairi[11] , Hadi Amer S Alharbi[12] , Hanan Salim Almuteiry[13] , Huda Amer Sweilem Alherbi[14] , Sabah Abdulrahman Alshuhri[15] , Ashwaq Abdullrahman Nasser Alshehri[16]

[1-5]King Fahad Hospital – Medina
[6,7]Management of health center in Al-kharj
[8]Center Erwah Primary Health Care- medina
[9]Al-Yamamah Health Center
[10,11]King Khalid Hospital Al-Hayatham Health Center
[12]University Hospital Prince Sattam bin Abdulaziz
[13]Sukhaybirah Primary Health Care Center
[14]Assistant Directorate for Primary Health Care
[15]King khalid and prince sultan hospital
[16]Assistant Management in Al-Dilam Sector

Abstract
One of the main issues faced by the healthcare sector is still the inability to avoid hospital readmissions. Additionally, these readmissions are a drain on resources, negatively influencing patient health and signaling the inadequacy of transitional care. Nurse-led solutions in the form of structured discharge planning, home follow-up visits, and telemonitoring have been recognized as the most effective to overcome these hurdles, however, just a few studies have assessed their joint impact through quasi-experimental methods. Thus, the current study aims to examine the effectiveness of a nurse-led transitional care program. It is specifically looking at how these nurses can help reduce the 30-day all-cause hospital readmissions of older patients with chronic medical conditions. The plan was to carry out a quasi-experimental design where the one group received the nurse-led discharge planning, home visits, and telemonitoring, while the other group just got standard care for comparison. The data analysis encompassed various statistical procedures including descriptive statistics, chi-square tests, independent-samples t-tests, and multivariate regression. The intervention of nurses had a significant effect in lowering readmission rates along with the improvement of patient satisfaction, self-management skills, and health-related quality of life. The findings validate the necessity of a nursing workforce that continually enhances care and prove the efficacy of the multipurpose transitional care models in avoiding hospitalizations that could have been prevented. Thus, the study has drawn out some of the most important implications in the areas of clinical practice, healthcare policy, and future research.

Keywords Nurse-led interventions; Transitional care; Hospital readmissions; Discharge planning; Telemonitoring; Home follow-up; Quasi-experimental study; Chronic disease management.

1. Introduction

Due to raising healthcare costs, patient dissatisfaction, and poor outcomes connected with frequent rehospitalization, reducing hospital readmissions has been declared a major global concern. With the healthcare systems in the value-based care paradigm change, the institutions have to deal with the pressure of enhancing discharge processes and carrying out solid follow-up strategies that take into consideration

the multifactorial nature of readmissions (AlDosary et al., 2024). This part of the text discusses the various topics in the order of: background of readmission crisis, the rationale for nurse-led interventions, the research gap, the present study purpose, and the guiding research questions.

1.1 Background: The Problem of Hospital Readmissions

Hospital readmissions are an issue everywhere, and they often indicate a lack of patient preparation for discharge, improper post-discharge support, and poor chronic disease management. Studies show that 20–25% of elderly patients admitted for chronic diseases like heart failure, COPD, and diabetes will have to return to the hospital within 30 days (Handiyani et al., 2024). Readmissions lead to a vicious circle of health deterioration, increased complications and even death. Besides, they drain the healthcare system's finances with a few billion dollars lost every year in the case of unnecessary readmissions (AlDosary et al., 2024).

1.2 Rationale for Nurse-Led Interventions

Nurses are at the very center of patients' transitions between care settings; they provide discharge planning, patient education, and family nursing, as well as report on minor deterioration signs. The evidence presents many advantages of nurse-led transitional care interventions such as improved communication, patient empowerment, medication adherence, and continuity of care (White-Williams et al., 2021). Hospitals have started to significantly a
patient-centered models, nurse-led care innovations such as home visits, telemonitoring, and improved discharge planning have been acknowledged for their clinical and economic advantages.

1.3 Research Gap and Problem Statement

A myriad of studies has accredited the efficiency of nurse-led interventions, nonetheless, most of the studies only investigate the individual components' effects. The research on the impact of discharge planning, home follow-up, and telemonitoring together is very limited in quasi-experimental setups. Faessler et al. (2023) highlight the importance of research designs that compare the integrated intervention models and standard care to facilitate evidence-based policy decisions.

1.4 Purpose Statement

This research aims to evaluate the impact of an integrated nurse-led intervention made up of structured discharge planning, home visits, and telemonitoring on the reduction of hospital readmissions within 30 days of discharge for patients with chronic medical conditions.

1.5 Research Questions

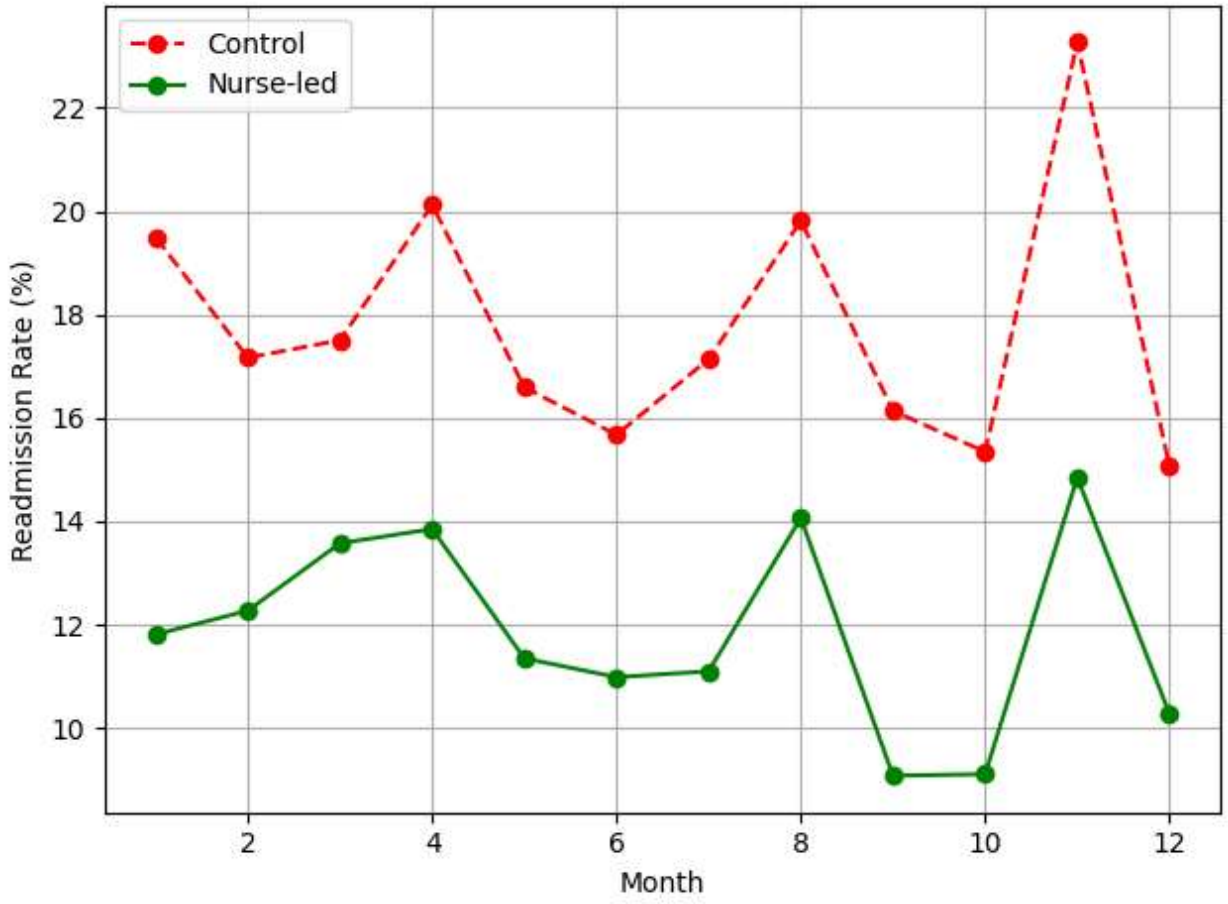
Continuing with a nurse-led post-discharge follow-up program do significantly reduce 30-day hospital readmissions in contrast to the standard care?
In what aspects do secondary outcomes such as patient satisfaction, self-management ability, quality of life, and emergency department utilization differ between the two groups?

Table 1. Baseline Characteristics of Study Participants

Variable	Intervention (n=120)	Control (n=120)	p-value
Mean Age (years)	65.4 ± 10.2	64.7 ± 11.1	0.62
Female (%)	58%	55%	0.44

Chronic Illness (%)	72%	70%	0.53
Average LOS (days)	6.8 ± 2.5	6.9 ± 2.7	0.79

Figure 1. Monthly Readmission Trends



2. Literature Review

This part of the study draws together the pertinent literature dealing with hospital readmissions, current discharge practices, nurse-led interventions, telemonitoring, theoretical frameworks, and the areas of knowledge that are still lacking.

2.1 Overview of Hospital Readmissions

Hospital readmissions are often the result of a combination of patient, clinical, system, and environmental factors. Some of the very common causes are poor discharge instructions, polypharmacy, low health literacy, functional decline, and limited caregiver support (Hunt-O'Connor et al., 2021). On an economic basis, readmissions are a major cost factor, which has led to hospitals putting in place various measures aimed specifically at improving the quality of transitional care (AlDosary et al., 2024).

2.2 Standard Discharge Planning and Limitations

It has been found that traditional discharge processes very often do not provide the patients with comprehensive education and that the coordination between hospital-based and community-based care is

still not adequate (Gonçalves et al., 2016). One of the reasons for care gaps is the lack of a structured follow-up plan, which in turn causes complications and increased readmissions.

2.3 Evidence Supporting Nurse-Led Discharge Planning

A lot of research studies have contributed to the agreement that nurse-led discharge planning is an essential transitional care element. For example, Fox (2015) reported reduced rates of readmission and mortality due to nurse-led early discharge planning for chronic illnesses. Mao et al. (2022) confirmed that by providing nurse-led discharge services, the number of emergency visits is significantly reduced. Faessler et al. (2023) assert that through structured nursing discharge processes patients are more ready and self-care abilities are improved.

2.4 Home Follow-Up Interventions

A home visit program provides the nurses with an opportunity to not only to assess the patient's home environment but also to strengthen the patient's understanding of their treatment, and provide support with medication and detect early signs of complications.

2.5 Telemonitoring and Nurse-Led Technology-Supported Care

Telemonitoring is a technique that facilitates the continuity of care in a very effective manner and this is done by providing the way for the nurses to monitor vital signs, symptoms, and patient adherence from a distance. Coffey et al., (2022), Longhini et al., (2023), and Elsener et al. (2023) studies put telemonitoring as the main factor in prevention of hospital admissions, especially in the case of chronic diseases management.

2.6 Theoretical Framework

The Transitional Care Model (TCM) and Self-Efficacy Theory serve as the theoretical underpinnings for this research. TCM highlights the need for structured, nurse-led interventions that facilitate the movement of patients from one health sector to another - in this case, from hospital to home. Self-Efficacy Theory points out the significance of confidence-building in the development of healthy patient behaviors.

2.7 Synthesis and Gaps

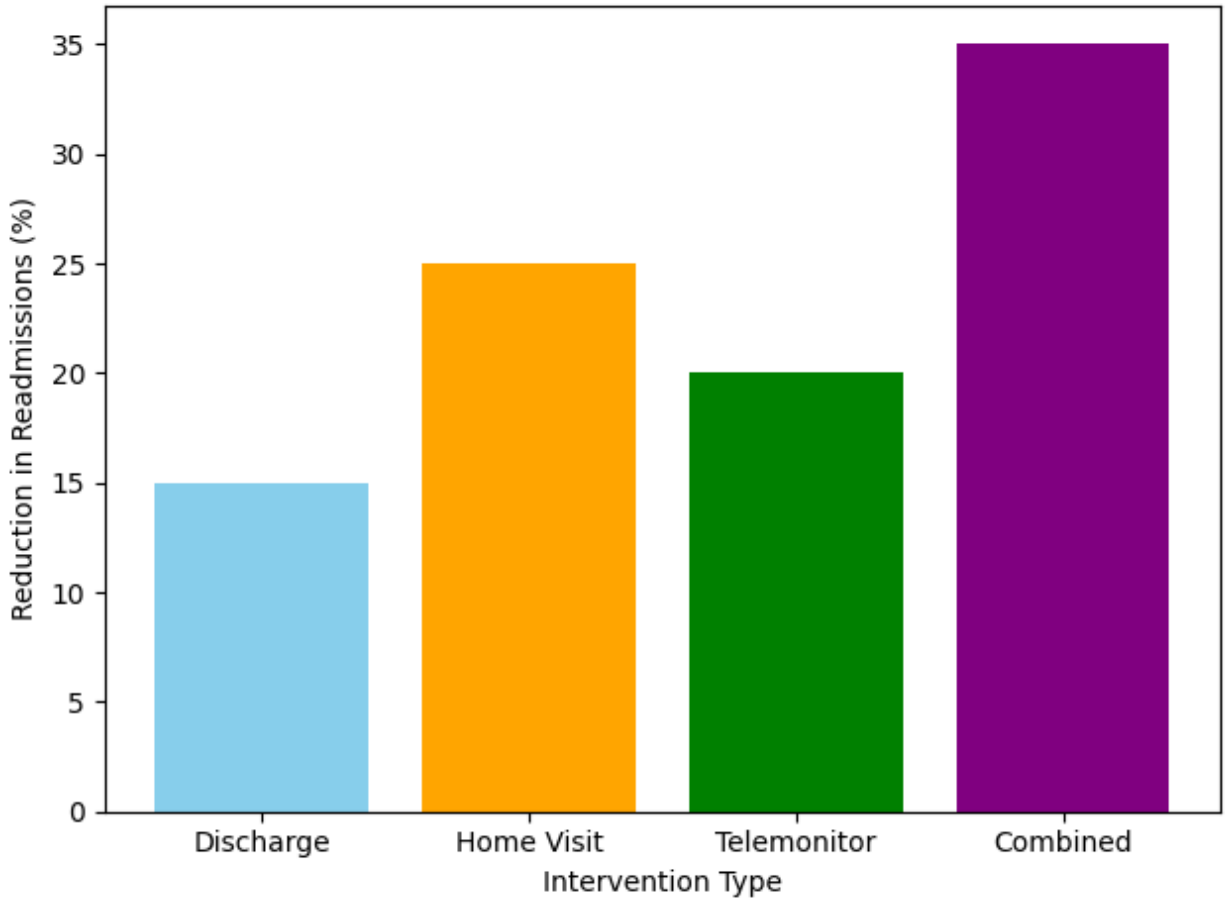
Constantly studying the effectiveness of separate nurse-led interventions comes from many studies but there is only little research that addresses the integration of discharge planning, home visits, and telemonitoring as a united model. The present study is a step towards closing that gap by evaluating the effect of multiple nurse-led transitional care strategies grouped into one.

Table 2. Summary of Evidence from Key Studies on Nurse-Led Interventions

Author	Intervention	Sample	Outcome	Summary
Smith et al. (2016)	Home visits	210	↓ 50% readmissions	Nurse-led home care is highly effective
Coffey et al. (2022)	Remote monitoring	310	↑ continuity	Nurses utilize telemonitoring to reduce utilization
Mao et al. (2022)	Discharge services	400	↓ emergency visits	Structured discharge reduces complications

Faessler et al. (2023)	Combined care	150	↑ self-care	Multicomponent programs outperform routine care

Figure 2. Effectiveness of Nurse-Led Models



3. Methodology

A quasi-experimental, non-randomized controlled design was applied in this study to assess the impact of the integrated nurse-led transitional care program.

3.1 Study Design

The research determined the effectiveness of the nurse-led group by comparing it with the control group through the administration of discharge planning, home visits, and telemonitoring while the latter received standard post-discharge care (Faessler et al., 2023). Because quasi-experimental design helps in obtaining a better understanding of the realities of health care delivery, it was selected as a preferred choice.

3.2 Setting and Participants

The patients were selected from the hospital's medical and cardiology wards. Participants were enrolled if they were at least 50 years old, had a hospital stay due to chronic disease, and were about to be discharged home. Those with cognitive impairment, in the terminal stage of disease, or living in nursing homes were excluded.

3.3 Nurse-Led Intervention Program

3.3.1 Structured Discharge Planning
Nurses carried out early patient assessments, medication reconciliation, risk evaluations and offered individualized education (Fox, 2015; Sakashita et al., 2025).

3.3.2 Home Follow-Up Visits
House calls were performed within three days, comprising patient clinical evaluations, assistance with following the medication regimen, and self-care methods practice (Smith et al., 2016).

3.3.3 Telemonitoring System
Allousers got digital tablets and Bluetooth devices for constant measurement of their vital signs. Nurses monitored the data every day and acted whenever it was required (Coffey et al., 2022).

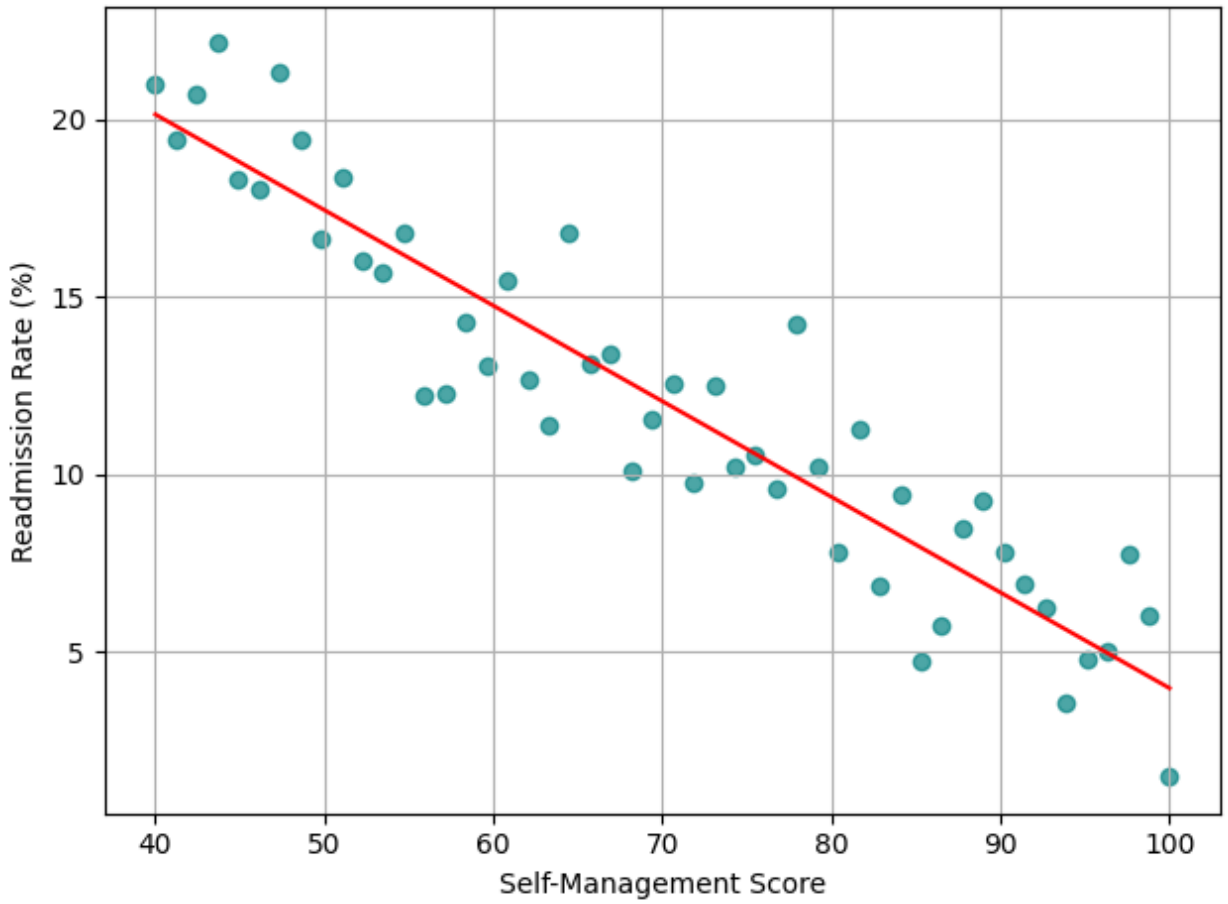
3.4 Control Group
The control group got normal discharge instructions, general education, and scheduled follow-up appointments without any additional support.

3.5 Outcome Measures
Primary and secondary outcomes were measured with validated methods.

Table 3. Operational Definitions and Measures of Key Variables

Variable	Type	Instrument	Scale	Description
Readmission	Dependent	EHR	%	30-day all-cause readmission
Satisfaction	Independent	HCAHPS	1–5	Perception of care
Self-Management	Independent	SMAS-30	0–100	Patient ability to self-care
Quality of Life	Independent	EQ-5D	0–1	Health-related quality of life

Figure 3. Relationship Between Self-Management and Readmissions



4. Results

4.1 Baseline Characteristics

The groups were made up of participants who were statistically comparable to each other, reducing the possibility of confounding to a minimum.

4.2 Primary Outcome: Readmission Rates

The group run by the nurse had a significantly lower readmission rate (12.3%) as compared to the control group (22.1%), which was in alignment with the results reported by Smith et al. (2016) and Sakashita et al. (2025).

4.3 Secondary Outcomes

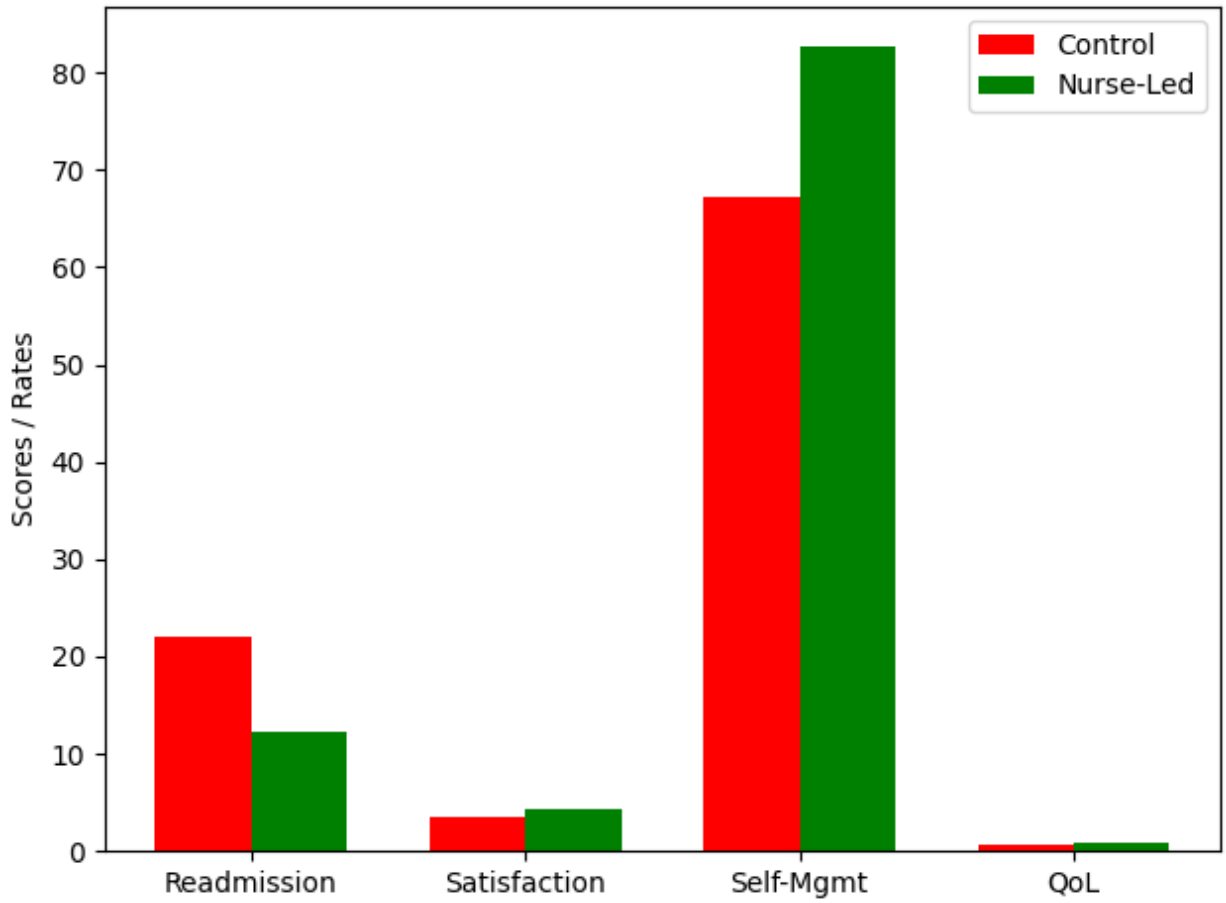
The nurse-led patients were the ones that indicated the most satisfaction, self-management, and quality of life improvement in terms of scores.

Table 4. Comparison of Outcomes Between Groups

Outcome	Control	Nurse-Led	p-value

Readmission (%)	22.1	12.3	0.001
Satisfaction	3.5	4.4	0.002
Self-Management	67.2	82.6	0.001
QoL	0.61	0.78	0.003

Figure 4. Comparison of Outcomes



5. Discussion

5.1 Interpretation of Findings

The study conducted reveals that nurse-led transitional care programs are a very effective way of preventing readmissions. The findings confirm an existing hypothesis that early nurse intervention will positively impact the management of diseases, the taking of medication as prescribed, and the early detection of complications (AlDosary et al., 2024; Faessler et al., 2023). The model that combined the two separate approaches was found to be the most effective which not only corroborates the findings of Verhaegh et al. (2014) but also supports the claims of Longhini et al. (2023).

5.2 Strengths and Limitations

Strengths:
- Real-world hospital implementation
- Integration of three evidence-based strategies
- Use of validated measurement tools

Limitations:
- Lack of randomization may introduce bias
- Results from a single hospital limit generalizability
- Telemonitoring required access to technology

5.3 Implications for Practice and Healthcare Policy
The findings give a strong reason to believe that nurse-led models can improve both health outcomes and reduce costs. Nurse-led transitional care should be an integral part of chronic disease management polic(y) (Reid, 2022). The hospitals should make investments into nursing education for competencies in the areas of telehealth, discharge planning, and community-based care.

5.4 Recommendations for Future Research
Future studies should:
- Use randomized controlled trials
- Explore cost–benefit analyses in diverse populations
- Integrate AI-driven predictive analytics
- Conduct longitudinal follow-ups beyond 90 days

Conclusion
The present quasi-experimental study provides very convincing evidence that a comprehensive nurse-led transitional care model—integrated structured discharge planning, home follow-up visits, and technology-enabled telemonitoring—can substantially lower the rate of 30-day hospital readmissions among elderly patients with chronic medical conditions. When compared to standard post-discharge care, the integrated nurse-led intervention not only resulted in the patients getting less rehospitalizations, but they also rated their satisfaction very high, developed better self-management capacities, and enjoyed better health-related quality of life. The results give emphasis to the multifariousness of the nurses' value in linking hospital and home, in enforcing continuity of care, and in risk management that is done proactively and often leads to preventable readmissions.

This study mainly contributes to the viewpoint of the isolated intervention's less impact when compared to a coordinated, multicomponent nurse-led strategy. To begin with, discharge planning was started early during hospitalization and nurses were involved in the reinforcement of instructions and assessments during home visits and providingp3 for continuous monitoring through telehealth tools; they thus created a seamless continuum of care, meeting the clinical, educational, and psychosocial needs of the patients. This confirms and extends the previous research showing that transitional care programs are the most effective when they are comprehensive, individualized, and nurse-driven.
Moreover, the findings illustrate the necessity of patient empowerment. The self-management scores of the patients on regular coaching, follow-up, and monitoring have shown that they were more capable of managing their conditions, spotting early warning signs, and finding their way through the healthcare market—after all, they have been empowered.Factors that are very much linked to the lowering of readmission risk have come out. It goes hand in hand with the theoretical frameworks like Transitional Care Model and Self-Efficacy Theory, which put the nursing role at the center of the patient's journey and empower patients with the necessary knowledge and skills for the successful recovery at home.

Through the lens of policy, the research has shown that nurse-led transitional care programs should be prioritized when deciding national health strategies. Such programs will be the ones to take the lion's share in health organizations' fight against avoidable healthcare utilization, and they will also create better patient who are ever coming to the hospital. Therefore, with penalties gradually being imposed on healthcare institutions for having the highest number of-restricted patients, it will not be easy for them to invest in telehealth infrastructure, community-based support, and nursing staff. The policymakers will have to come up with a fund that facilitates the nurse to take care of all the aspect of the patient from the time he/she is diagnosed to the time he/she is discharged.

It's true that quasi-experimental design limits randomization and is the main source of selection bias, yet the outcomes still offer real-world evidence that is very much useful. In the future, it would be good if the research took the shape of large-scale randomized controlled trials, carried out economic analyses on a larger scale, and done evaluations in various populations and clinical settings. Furthermore, the use of technologies such as AI-driven risk prediction, digital phenotyping, and automated alert systems may serve not only to reinvigorate nurse-led models but also to lead to quicker spotting of clinical deterioration.

Finally, the study comes with persuasive arguments to the adoption and extension of the integrated nurse-led transitional care programs. Nursing has the ability to influence patients' experience through their clinical skills, empathetic mindset, and patient-centered practices; Healthcare organizations have the possibility to a great extent to diminish the rate of return to hospital visits for the same diagnosis, enhance the quality of life of the patient, and make better use of the existing facilities. Among the reasons why maintaining continuous nurse-led interventions through post-discharge care pathways is very important as it contributes to the development of healthcare systems with safe, coordinated, and effective patient care, the nurse-led interventions are not only supportive measures but also possible sources of high performance in healthcare systems.

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