

Nurses' Role in Enhancing Medication Adherence in Hospitalized Elderly Patients

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Abstract

Medication adherence is crucial for achieving positive health outcomes, especially among elderly patients with complex medication regimens. This study explored the role of nurses in enhancing medication adherence among hospitalized elderly patients, using a mixed-methods approach in a tertiary hospital. The quantitative findings indicated that individualized nurse-led education significantly improved adherence rates, while the qualitative analysis revealed barriers such as cognitive impairment, complex medication regimens, time constraints, and high patient loads. Strategies like patient education, family involvement, and multidisciplinary collaboration were found effective in improving adherence. Addressing systemic barriers, such as staffing shortages and promoting collaboration, can further enhance the role of nurses in medication adherence support.

Keywords: Medication Adherence, Elderly Patients, Nurses, Patient Education, Tertiary Hospital, Multidisciplinary Collaboration, Barriers To Adherence

Introduction

Medication adherence is a critical factor in achieving positive health outcomes, particularly among elderly patients who often have complex medication regimens due to multiple comorbidities (Dunbar-Jacob & Mortimer-Stephens, 2001). Non-adherence to prescribed medications can lead to adverse events, increased hospital readmissions, and higher healthcare costs (DiMatteo, Giordani, Lepper, & Croghan, 2002; Vik, Maxwell, & Hogan, 2004). This issue is especially significant in hospitalized elderly patients, who may face numerous barriers to medication adherence, such as cognitive impairment, polypharmacy, and limited understanding of their treatment plan (Wroth & Pathman, 2006).

Nurses play a pivotal role in enhancing medication adherence by providing education, counseling, and ensuring that patients understand the purpose, dosage, and potential side effects of their medications (Miller & DiMatteo, 2013). Through patient-centered care and effective communication, nurses can address individual barriers to adherence and foster a trusting relationship that encourages patients to follow their prescribed regimens (Yehle & Plake, 2010). Research has shown that when nurses actively engage in medication management and patient education, adherence rates improve, leading to better health outcomes and reduced hospital readmissions (Hugtenburg et al., 2013; Kvarnström, Airaksinen, & Liira, 2018).

Despite the critical role nurses play, challenges such as time constraints, high patient-to-nurse ratios, and the complexity of patient needs can hinder their ability to provide comprehensive medication adherence support (Kalogianni, 2011). Understanding the strategies that nurses use to overcome these challenges, as well as the

barriers they face, is essential for developing effective interventions to enhance medication adherence among hospitalized elderly patients. This paper aims to explore the role of nurses in promoting medication adherence, identify the challenges they encounter, and highlight strategies that can be implemented to improve adherence in this vulnerable population.

Literature Review

Medication adherence among elderly patients remains a significant concern due to the increased prevalence of chronic illnesses and the complexity of medication regimens (Dunbar-Jacob & Mortimer-Stephens, 2001). The elderly population is particularly vulnerable to non-adherence, which can lead to deteriorating health outcomes, increased hospital readmissions, and higher healthcare costs (DiMatteo et al., 2002). Studies have shown that barriers such as cognitive decline, lack of understanding of treatment plans, and the burden of polypharmacy are major contributors to non-adherence in this group (Wroth & Pathman, 2006; Vik et al., 2004).

Nurses play a vital role in addressing these barriers by providing individualized patient education and medication counseling, which are crucial components in promoting adherence (Miller & DiMatteo, 2013). Yehle and Plake (2010) emphasized that effective communication between nurses and patients helps build trust, thereby encouraging adherence. Similarly, Hugtenburg et al. (2013) highlighted that personalized interventions led by nurses are associated with improved adherence rates and reduced readmission rates.

However, despite their pivotal role, nurses often face several challenges that limit their ability to effectively support medication adherence. High patient-to-nurse ratios, time constraints, and the need to address multiple patient needs simultaneously are significant obstacles (Kalogianni, 2011). These challenges often lead to reduced time available for patient education and medication management, which can negatively impact adherence. Kvarnström, Airaksinen, and Liira (2018) conducted a qualitative study that identified the barriers faced by healthcare providers, including nurses, in promoting adherence, and suggested that structured interventions and adequate staffing could help mitigate these challenges.

Furthermore, the importance of social support systems in enhancing adherence cannot be overstated. Miller and DiMatteo (2013) found that family involvement and social support are critical in ensuring adherence to medication regimens, particularly in elderly patients. Nurses, therefore, must also work collaboratively with patients' families to ensure adherence through comprehensive education and support mechanisms (Yehle & Plake, 2010).

The literature also suggests that nursing interventions tailored to the specific needs of elderly patients can significantly improve adherence outcomes. For instance, individualized medication plans, simplified dosing schedules, and the use of reminder tools have been found to be effective strategies (Hugtenburg et al., 2013). Moreover, incorporating multidisciplinary approaches involving pharmacists, social workers, and family members may enhance the effectiveness of interventions aimed at improving adherence (Kvarnström et al., 2018).

This literature review demonstrates that nurses have a crucial role in enhancing medication adherence among elderly patients through education, personalized care, and collaboration with other healthcare providers. However, systemic challenges such as high workloads and inadequate staffing remain significant

barriers. Addressing these issues through targeted interventions and organizational support is essential for improving adherence and ultimately enhancing patient outcomes.

Methodology

This study was conducted in a tertiary hospital setting, focusing on the role of nurses in enhancing medication adherence among elderly patients. The study employed a mixed-methods approach, combining both quantitative and qualitative data collection methods to gain a comprehensive understanding of the factors influencing medication adherence.

The quantitative component involved a retrospective review of patient records over a six-month period. Data were collected on medication adherence rates, hospital readmissions, and nursing interventions documented in patient charts. A total of 200 elderly patients (aged 65 and above) with chronic conditions and complex medication regimens were included in the analysis. Adherence was assessed using the Medication Adherence Report Scale (MARS), which was completed by nurses during patient follow-up visits.

For the qualitative component, semi-structured interviews were conducted with 15 nurses working in medical and surgical wards. The nurses were selected through purposive sampling to ensure representation of those with experience in managing elderly patients. The interviews focused on exploring nurses' experiences, challenges, and strategies in promoting medication adherence. The interview guide included questions about barriers to adherence, the role of communication and education, and suggestions for improving adherence support. Interviews were audio-recorded, transcribed verbatim, and analyzed thematically using NVivo software.

Data triangulation was used to validate the findings, with the quantitative data providing an overview of adherence trends and the qualitative data offering in-depth insights into the experiences of nurses. Ethical approval for the study was obtained from the hospital's ethics committee, and informed consent was obtained from all participants prior to data collection.

The findings from the quantitative analysis were used to identify patterns in adherence rates and associated factors, while the qualitative analysis provided a deeper understanding of the challenges nurses face and the strategies they employ to promote adherence. The integration of both data sources allowed for a comprehensive exploration of the role of nurses in enhancing medication adherence in a tertiary hospital setting.

Findings

Quantitative Findings

The quantitative findings revealed that the overall medication adherence rate among the elderly patients was 68%. Table 1 presents a summary of the adherence rates and hospital readmission rates among the study population.

Table 1: Medication Adherence and Hospital Readmission Rates

Variable	Percentage (%)
Medication Adherence Rate	68
Hospital Readmission Rate	35

A further breakdown of the data indicated that adherence rates were higher among patients who received individualized medication education from nurses compared to those who did not. Table 2 illustrates the differences in adherence rates based on the nursing interventions provided.

Table 2: Adherence Rates Based on Nursing Interventions

Nursing Intervention	Adherence Rate (%)
Individualized Education Provided	75
No Individualized Education	55

The findings indicated that patients who received individualized education had significantly higher adherence rates, suggesting the importance of personalized nurse-led interventions in enhancing medication adherence.

Qualitative Findings

The qualitative analysis identified three major themes and several sub-themes related to the challenges and strategies for promoting medication adherence.

Theme 1: Barriers to Medication Adherence

- Sub-theme 1.1: Cognitive Impairment

- Participant A: "Many of our elderly patients have memory issues, which makes it hard for them to remember to take their medications on time."

- Participant B: "Cognitive decline is a significant barrier, and we often need to find ways to work around this, like involving family members."

- Sub-theme 1.2: Complexity of Medication Regimen

- Participant C: "Some patients are on more than ten medications, and it gets overwhelming for them. Simplifying their schedule helps, but it's not always possible."

Theme 2: Strategies for Enhancing Adherence

- Sub-theme 2.1: Patient Education

- Participant D: "Education is key. When we take the time to explain why the medication is important, patients are more likely to adhere."

- Participant E: "We use visual aids and simple language to make sure the patient understands their medications."

- Sub-theme 2.2: Family Involvement

- Participant F: "Involving family members has been very helpful. They can remind the patient and help manage their medication schedule."

Theme 3: Challenges Faced by Nurses

- Sub-theme 3.1: Time Constraints

- Participant G: "There are days when we simply don't have enough time to sit down with each patient and discuss their medications in detail."

- Participant H: "High patient loads make it difficult to provide individualized care for everyone."

- Sub-theme 3.2: Need for Multidisciplinary Collaboration

- Participant I: "Working with pharmacists and social workers can help, but coordinating everyone is often challenging."

The qualitative findings highlighted the importance of addressing cognitive barriers, providing education, involving family members, and the challenges faced by nurses, such as time constraints and the need for collaboration.

Discussion

The findings from this study highlight the crucial role of nurses in enhancing medication adherence among elderly patients in a tertiary hospital setting. The quantitative data showed that patients who received individualized education from nurses had significantly higher adherence rates compared to those who did not. This underscores the importance of personalized nurse-led interventions in improving adherence outcomes. Providing individualized education appears to be an effective strategy, as it addresses specific patient needs, improves understanding of the medication regimen, and ultimately leads to better health outcomes. These findings are consistent with prior studies that have demonstrated the effectiveness of patient-centered nursing interventions in promoting medication adherence (Hugtenburg et al., 2013; Yehle & Plake, 2010).

The qualitative findings provided additional context to these quantitative results by revealing the barriers nurses face in promoting adherence, as well as the strategies they employ to overcome these challenges. Cognitive impairment and complex medication regimens were identified as significant barriers to adherence among elderly patients, echoing findings from previous research (Wroth & Pathman, 2006; Vik et al., 2004). Nurses emphasized the importance of patient education and family involvement as key strategies to enhance adherence. By simplifying medication instructions, using visual aids, and involving family members, nurses were able to mitigate some of the challenges posed by cognitive decline and polypharmacy.

However, the study also highlighted significant challenges faced by nurses, such as time constraints and high patient loads. These systemic issues limited the ability of nurses to provide comprehensive adherence support, which is crucial for improving patient outcomes. The need for adequate staffing and better time management was evident, as nurses often struggled to balance multiple responsibilities while providing individualized patient care. These findings are in line with previous studies that have identified high patient-to-nurse ratios as a major barrier to effective medication management (Kalogianni, 2011; Kvarnström et al., 2018).

The qualitative analysis also pointed to the need for multidisciplinary collaboration, involving pharmacists, social workers, and family members, to optimize adherence interventions. Nurses noted that effective collaboration with other healthcare professionals can enhance the overall quality of care and improve adherence rates. This suggests that hospitals should consider implementing structured multidisciplinary programs that facilitate better communication and coordination among healthcare providers. By addressing

the systemic barriers identified in this study, such as inadequate staffing and lack of coordination, healthcare facilities can create an environment that supports nurses in providing high-quality medication adherence interventions.

Overall, the findings from this study emphasize the critical role of nurses in promoting medication adherence through patient education, family involvement, and personalized interventions. To further improve adherence rates, healthcare systems must address the barriers that limit nurses' ability to provide effective adherence support. Organizational changes, such as increasing staffing levels, providing additional training for nurses, and promoting multidisciplinary collaboration, could significantly enhance the capacity of nurses to support medication adherence in elderly patients.

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خلاصة

يعد الالتزام بالأدوية أمرًا بالغ الأهمية لتحقيق نتائج صحية إيجابية، خاصة بين المرضى المسنين الذين يتبعون أنظمة دوائية معقدة. استكشفت هذه الدراسة دور الممرضات في تعزيز الالتزام بالدواء بين المرضى المسنين في المستشفى، وذلك باستخدام نهج الأساليب

المختلطة في مستشفى التعليم العالي. أشارت النتائج الكمية إلى أن التعليم الفردي الذي تقوده الممرضات أدى إلى تحسن كبير في معدلات الالتزام، في حين كشف التحليل النوعي عن عوائق مثل الضعف الإدراكي، وأنظمة الدواء المعقدة، وقيود الوقت، وارتفاع أعباء المرضى. تم العثور على استراتيجيات مثل تثقيف المريض، ومشاركة الأسرة، والتعاون متعدد التخصصات فعالة في تحسين الالتزام. إن معالجة العوائق النظامية، مثل نقص الموظفين وتعزيز التعاون، يمكن أن تزيد من تعزيز دور الممرضات في دعم الالتزام بالأدوية.

الكلمات المفتاحية: الالتزام بتناول الدواء، المرضى المسنين، الممرضات، تثقيف المرضى، المستشفى الثالث، التعاون متعدد التخصصات، العوائق التي تحول دون الالتزام.