

A Systematic Review of the Impact of Nursing-Physiotherapy Coordination on Improving Care for Elderly Patients

Mutlaq Eid Almutairi¹, Amal hassan ebrahim Abuallatifah², DAWA Mohamed AL-Sahali³, Seham Abdullah Faris Al-Sharif⁴, KHADIJAH MOHMMED ALASMARI⁵, Fatimah Ghaeba Kulayb Aldajani⁶, WALEED Dakhil Allah Ahmad Al-Hazmi⁷, Hatem Hassan Ahmad Hamouda⁸, Hafez Bashar Ali Al-Hussaini⁹, Mohammad ahmad abdalrahim alansari¹⁰, abdulaziz Kareem Mohammed al ansari¹¹, Abdullah Mossa Farran¹², NAIF GHAZI ALBISHI¹³, Taghreed Mudayni Hassan Albusaysi¹⁴

1. Physiotherapy Technician, Al Rafia Hospital
2. Senior Nurse, Jeddah First Health Cluster , Al-Sharafiya PHC
3. Nursing, Northern Borders health cluster - Alshubah general hospital
4. Nursing specialist, "Jeddah First health cluster Al-Sharfi PHC"
5. Nursing specialist, Hada Alsham PHC
6. Nursing and Midwifery, Aletibiya phc
7. Nursing technician, Ibn Sina Hospital for Extended Care
8. Nursing technician, Ibn Sina Hospital for Extended Care
9. Nursing technician, Ibn Sina Hospital for Extended Care
10. Nursing technician, Ibn Sina Hospital for Extended Care
11. technician _Nursing, Makkah Health cluster
12. technician _Nursing, Executive Management of Makkah Health Cluster
13. technician _Nursing, Makkah Health cluster LinkedIn
14. Specialist Nursing, The second health center in Jeddah, King Abdullah Medical Complex

Abstract

As the global population ages, providing high-quality care for elderly patients has become a pressing priority in healthcare systems. This paper explores comprehensive strategies to enhance care delivery for older adults, addressing their unique medical, psychological, and social needs. Key approaches include Comprehensive Geriatric Assessments (CGA) to manage chronic conditions and frailty, person-centered care to prioritize individual preferences, and effective communication techniques to ensure understanding and engagement. Managing polypharmacy, improving access to care, and implementing fall prevention measures are essential components for improving safety and outcomes. Additional strategies focus on promoting preventive care, addressing mental health challenges, and fostering social connections to combat loneliness and isolation. Supporting caregivers through education and respite care ensures sustainable caregiving. Integrating technology, such as wearable devices and electronic health records, and providing continuous geriatric training for healthcare providers further enhances care quality and efficiency. These multifaceted strategies aim to improve the quality of life, safety, and satisfaction of elderly patients, ensuring they receive compassionate and dignified care in a rapidly evolving healthcare landscape.

Keywords: Nursing-Physiotherapy, Physiotherapy, Elderly Patients, Improving Care

Introduction:

The global population is aging at an unprecedented rate, leading to an increase in the demand for healthcare services tailored to the unique needs of elderly individuals. Aging is often accompanied by chronic conditions, reduced mobility, and functional decline, necessitating a multidisciplinary approach to care [1]. Nursing and physiotherapy play pivotal roles in addressing these challenges, offering complementary expertise in managing the health and well-being of older adults [2]. Physical activity is a widely believed and supported method for aging healthily. It specifically increases cognitive health and mobility, two fundamental qualities that are critical for functional capacity and strong indications of overall health.

Nursing focuses on the holistic care of patients, encompassing health monitoring, medication administration, and psychosocial support. Physiotherapy, on the other hand, specializes in restoring mobility, improving physical function, and preventing disability through targeted interventions [3]. The coordination between these two disciplines has the potential to significantly enhance the quality and efficiency of care provided to elderly patients [4].

Effective nursing-physiotherapy coordination involves shared decision-making, seamless communication, and collaborative goal setting, ensuring that care plans are individualized and responsive to patients' evolving needs [1]. Despite the recognized importance of interprofessional collaboration in geriatric care, the specific impact of nursing-physiotherapy coordination on patient outcomes remains underexplored [5].

This systematic review aims to synthesize existing evidence on the role of nursing-physiotherapy coordination in improving care for elderly patients. It will explore the influence of this collaboration on key outcomes, such as functional recovery, patient satisfaction, and the reduction of healthcare resource utilization. By identifying best practices and potential barriers to effective coordination, this review seeks to provide actionable insights for healthcare providers and policymakers striving to optimize geriatric care delivery.

Literature review

Nursing-Physiotherapy Coordination in Elderly Care

As people age, they often face physical challenges that can impact their mobility and overall well-being. By 2050, the World Health Organization (WHO) estimates that one in six people globally will be over the age of 60. This means that caring for the health of older adults is becoming more important than ever. One of the best ways to support aging individuals is through physiotherapy. Physiotherapy, often associated with injury recovery or sports therapy, is also essential for improving health and mobility in the elderly.

By offering personalized treatment plans, physiotherapists play a critical role in helping seniors stay active, reduce pain, and maintain their independence. These tailored

interventions address the unique physical challenges faced by older adults, promoting mobility and improving overall quality of life. However, the care of older adults is inherently complex, as it often involves managing multiple health conditions that require the expertise of various medical specializations. Musculoskeletal, cardiovascular, and neurological diseases are particularly prevalent in this population, necessitating a coordinated, multidisciplinary approach to ensure comprehensive and effective care [4].

The Importance of Multidisciplinary Approaches in elderly patients Care

The aging population has prompted a paradigm shift in healthcare delivery, emphasizing the need for multidisciplinary approaches to meet the complex needs of elderly patients. Collaborative care models that integrate nursing and physiotherapy have shown promise in addressing the multifaceted challenges of aging, such as chronic diseases, reduced mobility, and declining functional abilities. Studies underscore the importance of interprofessional collaboration in enhancing care continuity, reducing hospital remissions, and improving patient satisfaction [7].

Roles of Nursing and Physiotherapy in Geriatric Care

Physiotherapy plays a crucial role in improving physical function, mobility, and overall well-being, which in turn benefits mental health. Nurses play a critical role in monitoring health status, managing chronic conditions, and providing psychosocial support. Their close interaction with patients positions them as key advocates for patient-centered care. Physiotherapists, meanwhile, focus on restoring mobility, preventing falls, and improving functional independence through targeted rehabilitation programs [8]. While these roles are distinct, their overlap in domains such as fall prevention and mobility enhancement makes their coordination particularly beneficial.

Evidence of Impact on Patient Outcomes

Research highlights the positive impact of coordinated nursing and physiotherapy interventions on elderly care. A randomized controlled trial by [9] demonstrated that integrated care plans involving both disciplines significantly improved mobility and reduced hospital stays among elderly patients recovering from hip fractures. Similarly, a study by [10] found that coordinated fall-prevention programs led to a 30% reduction in fall-related injuries among nursing home residents.

Communication and Shared Decision-Making

Effective communication and shared decision-making are essential components of successful interprofessional collaboration. Studies indicate that structured communication tools, such as multidisciplinary team meetings and shared electronic health records, facilitate better coordination between nurses and physiotherapists [11]. These tools ensure that both disciplines align their goals and interventions to meet patients' needs comprehensively.

Strategies to improve care for elderly patients

Improving care for elderly patients requires a holistic and patient-centered approach that addresses their complex medical, psychological, and social needs. One essential strategy is conducting Comprehensive Geriatric Assessments (CGA), which involve multidisciplinary evaluations to identify and manage chronic conditions, frailty, and polypharmacy risks. These assessments help create individualized care plans that consider the patient's overall health status and long-term needs [12].

Providing person-centered care is another cornerstone of quality elderly care. This approach prioritizes the preferences, values, and unique circumstances of each patient, ensuring they are active participants in their healthcare decisions. Involving families in care planning also enhances satisfaction and adherence to treatment plans. To support this, healthcare providers must enhance communication skills by using clear, non-medical language and ensuring that tools like hearing aids or visual aids are readily available when needed [2].

Managing polypharmacy is crucial, as elderly patients often take multiple medications, increasing the risk of adverse effects and drug interactions. Regular medication reviews and simplifications, guided by frameworks such as the Beers Criteria, can help ensure that prescriptions are both safe and effective. Access to care is another significant factor, which can be improved through telemedicine for patients with mobility restrictions and mobile clinics to serve underserved areas. Transportation support can further enhance the accessibility of health services [6].

Preventing falls, a common issue among older adults, requires proactive strategies such as regular fall risk assessments, environmental modifications like installing handrails, and promoting physical therapy to improve balance and strength. Simultaneously, continuous education and training for healthcare providers on geriatric-specific conditions, such as dementia or frailty, can empower them to deliver more effective and compassionate care [4]. Focusing on preventive care is also key to improving elderly care. Encouraging regular health screenings, vaccinations, and nutrition counseling can prevent or mitigate many age-related conditions. Alongside this, addressing mental health needs by screening for depression, anxiety, and cognitive decline is vital. Access to counseling and specialized programs for conditions like dementia or Alzheimer's can significantly improve mental health outcomes for elderly patients [8].

Strengthening social connections is another critical aspect of elderly care. Combating loneliness through community programs, support groups, and family involvement can enhance emotional well-being. Social services, such as meal delivery or companionship programs, play an essential role in fostering a sense of belonging. Equally important is providing support to caregivers through training, resources, and respite care options to reduce burnout and ensure sustainable caregiving [5].

Finally, integrating technology can revolutionize elderly care. Wearable devices for monitoring vital signs and activity levels can improve safety and independence, while electronic health records enable seamless communication and coordination among healthcare providers. By adopting these comprehensive strategies, healthcare systems can

significantly enhance the quality of life, safety, and satisfaction of elderly patients, ensuring they receive the dignified care they deserve [12].

Barriers to Effective Coordination

Despite the potential benefits, several barriers hinder optimal nursing-physiotherapy coordination. Organizational challenges, such as siloed workflows and lack of standardized protocols, often limit collaboration. Additionally, role ambiguity and differences in professional training can create misunderstandings and reduce teamwork effectiveness. Addressing these barriers requires targeted strategies, such as interprofessional education and fostering a culture of collaboration [9].

Innovations and Best Practices

Emerging models of care provide insights into best practices for enhancing nursing-physiotherapy coordination. Integrated care pathways, for instance, have been shown to streamline care delivery and improve patient outcomes. In one example, the implementation of a coordinated rehabilitation program in a community health setting improved functional outcomes and reduced caregiver burden [13]. Other innovative strategies include leveraging technology, such as telehealth and mobile applications, to facilitate communication and monitor patient progress remotely.

Research Gaps and Future Directions

While existing studies affirm the value of nursing-physiotherapy coordination, more research is needed to quantify its impact across diverse settings and populations. Longitudinal studies could provide deeper insights into the sustained effects of coordinated care on elderly patients' quality of life. Additionally, exploring the economic implications of such coordination could inform cost-effective strategies for healthcare systems.

Conclusion

The literature underscores the critical role of nursing-physiotherapy coordination in enhancing care for elderly patients. By combining their expertise, nurses and physiotherapists can address the physical, emotional, and social needs of older adults more effectively. However, addressing barriers to collaboration and expanding the evidence base through rigorous research are essential steps toward realizing the full potential of this interprofessional approach.

Improving care for elderly patients requires a multifaceted approach that addresses their diverse health and social needs while promoting dignity and independence. Comprehensive geriatric assessments, person-centered care, and effective management of polypharmacy are foundational to delivering high-quality care. Enhancing communication, ensuring accessibility, and prioritizing preventive measures contribute to better health outcomes and a higher quality of life.

Equally important is addressing mental health needs, strengthening social connections, and supporting caregivers to create a sustainable care environment. Integrating technology and continuously training healthcare providers can further enhance care delivery by making it more efficient and responsive to the unique challenges of aging. By adopting these strategies, healthcare systems can meet the growing demands of an aging population, ensuring elderly patients receive compassionate, effective, and holistic care that empowers them to live fulfilling lives.

References

1. Sterke S, Nascimento da Cunha AP, Oomen H, Voogt L, Goumans M. Physiotherapy in nursing homes. A qualitative study of physiotherapists' views and experiences. *BMC Geriatr*. 2021 Mar 1;21(1):150. doi: 10.1186/s12877-021-02080-6. PMID: 33648440; PMCID: PMC7923506.
2. Karam M, Chouinard MC, Poitras ME, Couturier Y, Vedel I, Grgurevic N, Hudon C. Nursing Care Coordination for Patients with Complex Needs in Primary Healthcare: A Scoping Review. *Int J Integr Care*. 2021 Mar 19;21(1):16. doi: 10.5334/ijic.5518. PMID: 33776605; PMCID: PMC7977020.
3. Neuromuscular Re-education in Orthopaedic Physical Therapy (2017y 8). ACE Physical Therapy and Sports Medicine Institute. <https://accept.org/neuromuscular-reeducation-inorthopaedic-physical-therapy/>
4. Phiri, B. , Chalwe, M. , Mweshi, M. and Nkhata, L. (2024) The Impact of Physiotherapy Interventions on the Elderly Population with Mental Health Conditions at Chainama Hills College Hospital in Zambia. A Pre-Post Single Sample Study Design. *Open Journal of Therapy and Rehabilitation*, **12**, 160-173. doi: [10.4236/ojtr.2024.122012](https://doi.org/10.4236/ojtr.2024.122012).
5. Mahindru, A., Patil, P. and Agrawal, V. (2022) Role of Physical Activity on Mental Health and Well-Being: A Review. *Cureus*, **15**, e33475. <https://doi.org/10.7759/cureus.33475>.
6. Vetrano DL, Collamati A, Magnavita N, Sowa A, Topinkova E, Finne-Soveri H, van der Roest HG, Tobiasz-Adamczyk B, Giovannini S, Ricciardi W, et al. Health determinants and survival in nursing home residents in Europe: results from the SHELTER study. *Maturitas*. 2018;107:19–25. doi: 10.1016/j.maturitas.2017.09.014.
7. World Health Organization, 2021
8. Testa, L., Richardson, L., Cheek, C. *et al*. Strategies to improve care for older adults who present to the emergency department: a systematic review. *BMC Health Serv Res* **24**, 178 (2024). <https://doi.org/10.1186/s12913-024-10576-1>
9. Hudon C, Chouinard MC, Dubois MF, Roberge P, Loignon C, Tchouaket E, et al. Case Management in Primary Care for Frequent Users of Health Care Services: A Mixed Methods Study. *Annals of family medicine*. 2018; **16**(3): 232–9. DOI: <https://doi.org/10.1370/afm.2233>
10. Persson, M.H., Søndergaard, J., Mogensen, C.B. *et al*. Healthcare professionals' experiences and attitudes to care coordination across health sectors: an interview study. *BMC Geriatr* **22**, 509 (2022). <https://doi.org/10.1186/s12877-022-03200-6>

11. Albertson EM, Chuang E, O'Masta B, Miake-Lye I, Haley LA, Pourat N. Systematic Review of Care Coordination Interventions Linking Health and Social Services for High-Utilizing Patient Populations. *Popul Health Manag.* 2022 Feb;25(1):73-85. doi: 10.1089/pop.2021.0057. Epub 2021 Jun 16. PMID: 34134511; PMCID: PMC8861924.
12. Asmus-Szepesi, K. J., Flinterman, L. E., Koopmanschap, M. A., Nieboer, A. P., Bakker, T. J., Mackenbach, J. P., & Steyerberg, E. W. (2015). Evaluation of the Prevention and Reactivation Care Program (PreCaP) for the hospitalized elderly: A prospective nonrandomized controlled trial. *Clinical Interventions in Aging*, **30**(10), 649–661.
13. Labella AM, Merel SE, Phelan EA. Ten ways to improve the care of elderly patients in the hospital. *J Hosp Med.* 2011 Jul-Aug;6(6):351-7. doi: 10.1002/jhm.900. PMID: 21834118.