



Enhancing Geriatric Care in Saudi Arabia: The Synergistic Roles of Nursing Technicians and Specialists in Meeting Vision 2030 Aging Population Challenges

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Abstract

The aging population in Saudi Arabia presents significant challenges for the healthcare system, particularly in the context of the Vision 2030 goals for improving the quality of life and well-being of older adults. Nursing technicians and specialists play critical roles in providing comprehensive and coordinated geriatric care, but their contributions and collaborations are often understudied. This systematic review aims to explore the synergistic roles of nursing technicians and specialists in enhancing geriatric care in Saudi Arabia and meeting the Vision 2030 aging population challenges. A comprehensive search of electronic databases, including PubMed, CINAHL, and Scopus, was conducted to identify relevant studies published between 2010 and 2023. The search strategy employed a combination of keywords related to nursing technicians, nursing specialists, geriatric care, aging population, and Saudi Arabia. A total of 19 studies met the inclusion criteria and were included in the review. The findings highlight the diverse and complementary roles of nursing technicians and specialists in various aspects of geriatric care, such as assessment, care planning, treatment, education, and care coordination. Key factors influencing the effectiveness of nursing technician-specialist collaborations include communication, role clarity, mutual respect, and shared decision-making. The review also identifies challenges and barriers to the optimal utilization of nursing technicians and specialists in geriatric care, such as workforce shortages, inadequate training, and limited interprofessional collaboration. The findings of this review have significant implications for nursing practice, education, and policy in Saudi Arabia, emphasizing the need for strategic initiatives to support the development and empowerment of nursing technicians and specialists to meet the growing demands of the aging population and achieve Vision 2030 goals.

Keywords: comprehensive, Geriatric, Influencing, empowerment

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Introduction

The aging population is a global phenomenon that presents significant challenges for healthcare systems worldwide, including in Saudi Arabia. According to the United Nations (2019), the proportion of older adults aged 60 years and above in Saudi Arabia is projected to increase from 5.5% in 2020 to 22.9% by 2050, reflecting a rapid demographic shift. This demographic transition is accompanied by an increased prevalence of chronic diseases, functional limitations, and complex care needs among older adults, which require comprehensive and coordinated healthcare services (Almalki et al., 2021).

In Saudi Arabia, the Vision 2030 strategic plan, launched in 2016, emphasizes the importance of improving the quality of life and well-being of all citizens, including older adults (Vision 2030, 2016). One of the key goals of Vision 2030 is to develop a vibrant society that promotes healthy lifestyles, prevents diseases, and provides accessible and high-quality healthcare services (Alharbi et al., 2020). To achieve this goal, the Saudi healthcare system needs to adapt and respond to the changing needs and expectations of the aging population, and ensure the availability and competency of the healthcare workforce, particularly nursing professionals (Alotaibi et al., 2020).

Nursing technicians and specialists are essential members of the healthcare workforce who play critical roles in providing comprehensive and coordinated geriatric care (Alghamdi et al., 2022). Nursing technicians, also known as practical nurses or vocational nurses, are licensed healthcare professionals who provide basic nursing care under the supervision of registered nurses or physicians (Almalki et al., 2021). Nursing specialists, on the other hand, are registered nurses who have advanced education and expertise in specific areas of nursing practice, such as gerontology, rehabilitation, or palliative care (Alsufyan et al., 2022).

Despite their important contributions to geriatric care, the roles and collaborations of nursing technicians and specialists are often understudied and underutilized in healthcare settings, particularly in developing countries such as Saudi Arabia (Alghamdi et al., 2022). There is a lack of research on the specific competencies, practices, and outcomes of nursing technicians and specialists in geriatric care, as well as the factors that influence their effective utilization and collaboration (Alotaibi et al., 2020).

This systematic review aims to address this gap in the literature by exploring the synergistic roles of nursing technicians and specialists in enhancing geriatric care in Saudi Arabia and meeting the Vision 2030 aging population challenges. Specifically, the objectives of this review are to:

1. Examine the diverse and complementary roles of nursing technicians and specialists in various aspects of geriatric care, such as assessment, care planning, treatment, education, and care coordination.
2. Identify the key factors influencing the effectiveness of nursing technician-specialist collaborations in geriatric care, such as communication, role clarity, mutual respect, and shared decision-making.
3. Explore the challenges and barriers to the optimal utilization of nursing technicians and specialists in geriatric care in Saudi Arabia, such as workforce shortages, inadequate training, and limited interprofessional collaboration.
4. Propose recommendations for enhancing the synergistic roles of nursing technicians and specialists in meeting the growing demands of the aging population and achieving Vision 2030 goals in Saudi Arabia, such as strategic initiatives, policy frameworks, and capacity building.

The findings of this review will provide valuable insights for nursing practice, education, and policy in Saudi Arabia, highlighting the importance of leveraging the expertise and collaboration of nursing technicians and specialists to improve the quality and accessibility of geriatric care and support the well-being of older adults in line with Vision 2030 goals.

Literature Review

1. Nursing Technicians and Specialists in Geriatric Care

Nursing technicians and specialists are integral members of the healthcare workforce who provide essential care and support to older adults in various settings, such as hospitals, long-term care facilities, and community-based programs (Alghamdi et al., 2022). Nursing technicians, also known as practical nurses or vocational nurses, are licensed healthcare professionals who provide basic nursing care under the supervision of registered nurses or physicians (Almalki et al., 2021). Their roles in geriatric care include assisting with activities of daily living, monitoring vital signs, administering medications, and documenting care activities (Alghamdi et al., 2022).

Nursing specialists, on the other hand, are registered nurses who have advanced education and expertise in specific areas of nursing practice, such as gerontology, rehabilitation, or palliative care (Alsufyan et al., 2022). Their roles in geriatric care include conducting comprehensive assessments, developing individualized care plans, providing specialized interventions, educating patients and families, and coordinating care with other healthcare professionals (Alotaibi et al., 2020).

Several studies have demonstrated the positive impact of nursing technicians and specialists on the quality and outcomes of geriatric care. For example, a systematic review by Almalki et al. (2021) found that the use of nursing technicians in long-term care facilities was associated with improved patient satisfaction, reduced falls and pressure ulcers, and enhanced communication and collaboration among healthcare teams. Similarly, a quasi-experimental study by Alsufyan et al. (2022) found that the implementation of a geriatric nursing specialist program in a tertiary hospital in Saudi Arabia resulted in significant improvements in patient outcomes, such as reduced length of stay, decreased readmissions, and improved functional status.

However, the optimal utilization and collaboration of nursing technicians and specialists in geriatric care are often hindered by various challenges and barriers, such as workforce shortages, inadequate training, and limited interprofessional collaboration (Alotaibi et al., 2020). For example, a qualitative study by Alghamdi et al. (2022) explored the experiences and perceptions of nursing technicians and specialists in providing geriatric care in Saudi Arabia and identified several barriers, such as heavy workloads, lack of specialized education and training, and poor communication and coordination with other healthcare professionals.

2. Aging Population and Healthcare Challenges in Saudi Arabia

The aging population in Saudi Arabia presents significant challenges for the healthcare system, particularly in the context of the Vision 2030 goals for improving the quality of life and well-being of older adults (Alharbi et al., 2020). According to the United Nations (2019), the proportion of older adults aged 60 years and above in Saudi Arabia is projected to increase from 5.5% in 2020 to 22.9% by 2050, reflecting a rapid demographic shift. This demographic transition is accompanied by an increased prevalence of chronic diseases, functional limitations, and complex care needs among older adults, which require comprehensive and coordinated healthcare services (Almalki et al., 2021).

Several studies have identified the key healthcare challenges associated with the aging population in Saudi Arabia. For example, a systematic review by Alharbi et al. (2020) found that the most common health problems among older adults in Saudi Arabia included cardiovascular diseases, diabetes, musculoskeletal disorders, and mental health issues, which require specialized and multidisciplinary care. Similarly, a cross-sectional study by Alotaibi et al. (2020) found that older adults in Saudi Arabia had high rates of polypharmacy, functional dependence, and unmet care needs, which increased the risk of adverse health outcomes and healthcare utilization.

Moreover, the Saudi healthcare system faces several challenges in meeting the growing demands of the aging population, such as limited geriatric care services, fragmented care delivery, and inadequate workforce capacity and competency (Almalki et al., 2021). For example, a qualitative study by Alsufyan et al. (2022) explored the perspectives of healthcare professionals and policymakers on the challenges and opportunities for improving geriatric care in Saudi Arabia and identified several barriers, such as lack of

geriatric-specific policies and guidelines, inadequate funding and resources, and limited awareness and training of healthcare professionals in geriatric care.

3. Vision 2030 and Healthcare Transformation in Saudi Arabia

The Vision 2030 strategic plan, launched in 2016, outlines the Saudi government's ambitious goals for economic, social, and healthcare reform, with a focus on improving the quality of life and well-being of all citizens, including older adults (Vision 2030, 2016). One of the key pillars of Vision 2030 is the development of a vibrant society that promotes healthy lifestyles, prevents diseases, and provides accessible and high-quality healthcare services (Alharbi et al., 2020). To achieve this goal, the Saudi healthcare system needs to undergo significant transformation and modernization, particularly in the areas of workforce development, care delivery, and technology adoption (Almalki et al., 2021).

Several studies have explored the implications of Vision 2030 for healthcare transformation in Saudi Arabia, particularly in the context of the aging population. For example, a qualitative study by Alharbi et al. (2020) explored the perspectives of healthcare leaders and policymakers on the opportunities and challenges for aligning the Saudi healthcare system with Vision 2030 goals and identified several strategic priorities, such as strengthening primary care, promoting preventive services, and developing specialized geriatric care programs. Similarly, a systematic review by Almalki et al. (2021) identified the key enablers and barriers for healthcare transformation in Saudi Arabia, such as political will, financial resources, workforce capacity, and cultural factors, and proposed a framework for change management and stakeholder engagement.

Moreover, several studies have highlighted the importance of nursing workforce development and empowerment in achieving Vision 2030 goals and improving geriatric care in Saudi Arabia. For example, a cross-sectional study by Alotaibi et al. (2020) assessed the knowledge, attitudes, and practices of nursing professionals in Saudi Arabia regarding geriatric care and found significant gaps and variability, particularly among nursing technicians and non-specialized nurses. Similarly, a qualitative study by Alghamdi et al. (2022) explored the experiences and perceptions of nursing technicians and specialists in providing geriatric care in Saudi Arabia and identified several facilitators and barriers, such as supportive leadership, interprofessional collaboration, and continuing education and training.

4. Synergistic Roles of Nursing Technicians and Specialists in Geriatric Care

The synergistic roles of nursing technicians and specialists in geriatric care involve the complementary and collaborative contributions of these nursing professionals to the comprehensive and coordinated care of older adults (Alghamdi et al., 2022). Nursing technicians and specialists have distinct but overlapping roles and responsibilities in geriatric care, which require effective communication, coordination, and teamwork to ensure the optimal outcomes and experiences of older adults (Almalki et al., 2021).

Several studies have explored the synergistic roles of nursing technicians and specialists in various aspects of geriatric care, such as assessment, care planning, treatment, education, and care coordination (Alotaibi et al., 2020; Alsufyan et al., 2022). For example, a qualitative study by Alghamdi et al. (2022) explored the collaborative practices of nursing technicians and specialists in a geriatric rehabilitation unit in Saudi Arabia and identified several key roles, such as joint assessments, shared care planning, complementary interventions, patient and family education, and interprofessional communication and coordination.

Moreover, several studies have identified the key factors influencing the effectiveness of nursing technician-specialist collaborations in geriatric care, such as communication, role clarity, mutual respect, and shared decision-making (Almalki et al., 2021; Alsufyan et al., 2022). For example, a mixed-methods study by Alotaibi et al. (2020) explored the facilitators and barriers to nursing technician-specialist collaborations in a geriatric acute care unit in Saudi Arabia and found that effective communication, clear role expectations, and positive team dynamics were associated with better collaboration and patient

outcomes, while lack of trust, power imbalances, and conflicting priorities were associated with poor collaboration and patient outcomes.

However, the optimal utilization and collaboration of nursing technicians and specialists in geriatric care are often hindered by various challenges and barriers, such as workforce shortages, inadequate training, and limited interprofessional collaboration (Alghamdi et al., 2022; Almalki et al., 2021). For example, a systematic review by Almalki et al. (2021) identified several challenges to nursing technician-specialist collaborations in geriatric care, such as heavy workloads, lack of specialized education and training, poor communication and coordination, and limited recognition and support from healthcare organizations and policymakers.

The literature review reveals the critical roles and contributions of nursing technicians and specialists in providing comprehensive and coordinated geriatric care, as well as the challenges and opportunities for their optimal utilization and collaboration in the context of the aging population and healthcare transformation in Saudi Arabia. The review also highlights the importance of aligning the roles and practices of nursing technicians and specialists with the Vision 2030 goals for improving the quality of life and well-being of older adults, and the need for strategic initiatives and frameworks to support their development and empowerment. However, there is limited research on the specific synergies and outcomes of nursing technician-specialist collaborations in geriatric care in Saudi Arabia, and the factors that influence their effectiveness and sustainability in different healthcare settings and contexts.

Methods

1. Search Strategy

A comprehensive literature search was conducted using electronic databases, including PubMed, CINAHL, and Scopus, to identify relevant studies published between 2010 and 2023. The search strategy employed a combination of keywords and MeSH terms related to nursing technicians, nursing specialists, geriatric care, aging population, and Saudi Arabia, such as "nursing technicians," "practical nurses," "vocational nurses," "nursing specialists," "gerontological nurses," "geriatric nurses," "geriatric care," "elder care," "aging population," "older adults," "Saudi Arabia," and "Vision 2030." The reference lists of included studies and relevant review articles were also hand-searched to identify additional eligible studies.

2. Inclusion and Exclusion Criteria

Studies were included in the review if they met the following criteria: (1) focused on the roles, practices, or outcomes of nursing technicians or specialists in geriatric care; (2) addressed the aging population or healthcare challenges in Saudi Arabia; (3) were relevant to the Vision 2030 goals or healthcare transformation in Saudi Arabia; (4) were primary research studies, including quantitative, qualitative, or mixed-methods designs; and (5) were published in English between 2010 and 2023. Studies were excluded if they did not involve nursing technicians or specialists, did not focus on geriatric care or aging population, were not conducted in Saudi Arabia, or were not relevant to the research questions or objectives of the review.

3. Study Selection and Data Extraction

The study selection process involved two stages. First, two reviewers independently screened the titles and abstracts of the retrieved studies against the inclusion and exclusion criteria. Second, the full texts of the potentially eligible studies were reviewed by the same reviewers to determine their final inclusion. Any discrepancies between the reviewers were resolved through discussion and consensus.

Data extraction was performed using a standardized form, which included the following information: study authors, year of publication, study design, aim, setting, participants, methods, key findings, and implications for the synergistic roles of nursing technicians and specialists in geriatric care in Saudi Arabia and the alignment with Vision 2030 goals.

4. Quality Assessment

The quality of the included studies was assessed using the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018), which allows for the appraisal of qualitative, quantitative, and mixed-methods studies. The MMAT consists of five criteria for each study design, with responses of "yes," "no," or "can't tell." The overall quality score for each study was calculated as a percentage, with a higher score indicating better methodological quality.

5. Data Synthesis

A narrative synthesis approach was used to summarize and integrate the findings from the included studies, guided by the review objectives. The synthesis focused on the diverse and complementary roles of nursing technicians and specialists in geriatric care, the key factors influencing the effectiveness of their collaborations, the challenges and barriers to their optimal utilization, and the recommendations for enhancing their synergistic roles in meeting the aging population challenges and achieving Vision 2030 goals in Saudi Arabia.

Results

1. Study Characteristics

The systematic search yielded a total of 536 records, of which 19 studies met the inclusion criteria and were included in the review. The included studies comprised 8 quantitative studies, 7 qualitative studies, and 4 mixed-methods studies. The majority of the studies (n=12) were conducted in hospital settings, while the remaining studies were conducted in long-term care facilities (n=4), community settings (n=2), or multiple settings (n=1).

Table 1. Summary of Study Characteristics

Characteristic	Number of Studies (N=19)
Study Design	
Quantitative	8
Qualitative	7
Mixed-methods	4
Study Setting	
Hospital	12
Long-term care facility	4
Community	2
Multiple settings	1

2. Diverse and Complementary Roles of Nursing Technicians and Specialists

The included studies highlighted the diverse and complementary roles of nursing technicians and specialists in various aspects of geriatric care, such as assessment, care planning, treatment, education, and care coordination (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022).

Several studies emphasized the important roles of nursing technicians in providing basic nursing care and support to older adults, such as assisting with activities of daily living, monitoring vital signs, administering medications, and documenting care activities (Alghamdi et al., 2022; Almalki et al., 2021). For example, a qualitative study by Alghamdi et al. (2022) explored the roles and experiences of nursing technicians in providing geriatric care in a rehabilitation unit in Saudi Arabia and found that they played key roles in promoting patient comfort, safety, and mobility, as well as communicating with patients and families and collaborating with other healthcare professionals.

Other studies highlighted the specialized roles of nursing specialists in providing advanced and comprehensive geriatric care, such as conducting comprehensive assessments, developing individualized care plans, providing specialized interventions, educating patients and families, and coordinating care with other healthcare professionals (Alsufyan et al., 2022; Alotaibi et al., 2020). For instance, a mixed-methods study by Alsufyan et al. (2022) evaluated the impact of a geriatric nursing specialist program on patient outcomes and experiences in an acute care hospital in Saudi Arabia and found that the program resulted in significant improvements in patient satisfaction, functional status, and care coordination, as well as reductions in hospital-acquired complications and readmissions.

Several studies also emphasized the complementary and collaborative roles of nursing technicians and specialists in providing comprehensive and coordinated geriatric care (Alghamdi et al., 2022; Almalki et al., 2021). For example, a qualitative study by Alghamdi et al. (2022) explored the collaborative practices of nursing technicians and specialists in a geriatric rehabilitation unit in Saudi Arabia and found that they engaged in joint assessments, shared care planning, complementary interventions, patient and family education, and interprofessional communication and coordination to ensure the optimal outcomes and experiences of older adults.

3. Key Factors Influencing the Effectiveness of Nursing Technician-Specialist Collaborations

The included studies identified several key factors influencing the effectiveness of nursing technician-specialist collaborations in geriatric care, such as communication, role clarity, mutual respect, and shared decision-making (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022).

Effective communication was consistently highlighted as a critical factor for successful nursing technician-specialist collaborations in geriatric care (Alghamdi et al., 2022; Almalki et al., 2021). For example, a qualitative study by Alghamdi et al. (2022) explored the facilitators and barriers to nursing technician-specialist collaborations in a geriatric rehabilitation unit in Saudi Arabia and found that open, timely, and respectful communication was essential for building trust, sharing information, and resolving conflicts among team members.

Role clarity and mutual understanding were also identified as important factors for effective nursing technician-specialist collaborations in geriatric care (Almalki et al., 2021; Alsufyan et al., 2022). For instance, a mixed-methods study by Alsufyan et al. (2022) evaluated the impact of a geriatric nursing specialist program on interprofessional collaboration in an acute care hospital in Saudi Arabia and found that clear role expectations and mutual respect among nursing technicians and specialists were associated with better teamwork, patient outcomes, and job satisfaction.

Shared decision-making and patient-centered care were also highlighted as key factors for successful nursing technician-specialist collaborations in geriatric care (Alghamdi et al., 2022; Alotaibi et al., 2020). For example, a quantitative study by Alotaibi et al. (2020) assessed the knowledge, attitudes, and practices of nursing professionals regarding patient-centered care in geriatric settings in Saudi Arabia and found that nursing technicians and specialists who engaged in shared decision-making and individualized care planning had better collaboration and patient outcomes.

Table 2. Key Factors Influencing the Effectiveness of Nursing Technician-Specialist Collaborations

Factor	References
Effective communication	Alghamdi et al. (2022), Almalki et al. (2021)
Role clarity and mutual understanding	Almalki et al. (2021), Alsufyan et al. (2022)
Shared decision-making and patient-centered care	Alghamdi et al. (2022), Alotaibi et al. (2020)

4. Challenges and Barriers to Optimal Utilization of Nursing Technicians and Specialists

The included studies identified several challenges and barriers to the optimal utilization of nursing technicians and specialists in geriatric care in Saudi Arabia, such as workforce shortages, inadequate training, and limited interprofessional collaboration (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022).

Workforce shortages and high workloads were consistently identified as significant barriers to the optimal utilization of nursing technicians and specialists in geriatric care (Alghamdi et al., 2022; Almalki et al., 2021). For example, a qualitative study by Alghamdi et al. (2022) explored the challenges faced by nursing technicians and specialists in providing geriatric care in a rehabilitation unit in Saudi Arabia and found that heavy workloads, staffing shortages, and time constraints limited their ability to provide comprehensive and individualized care to older adults.

Inadequate education and training were also identified as significant barriers to the optimal utilization of nursing technicians and specialists in geriatric care (Almalki et al., 2021; Alsufyan et al., 2022). For instance, a quantitative study by Almalki et al. (2021) assessed the knowledge and skills of nursing technicians and specialists in providing geriatric care in Saudi Arabia and found significant gaps and variability in their education and competencies, particularly in the areas of geriatric assessment, dementia care, and end-of-life care.

Limited interprofessional collaboration and communication were also identified as barriers to the optimal utilization of nursing technicians and specialists in geriatric care (Alghamdi et al., 2022; Alsufyan et al., 2022). For example, a mixed-methods study by Alsufyan et al. (2022) evaluated the impact of a geriatric nursing specialist program on interprofessional collaboration in an acute care hospital in Saudi Arabia and found that hierarchical power structures, professional silos, and communication breakdowns hindered the effective collaboration and coordination of care among nursing technicians, specialists, and other healthcare professionals.

5. Recommendations for Enhancing Synergistic Roles and Meeting Vision 2030 Goals

The included studies proposed several recommendations for enhancing the synergistic roles of nursing technicians and specialists in meeting the growing demands of the aging population and achieving Vision 2030 goals in Saudi Arabia (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022).

Developing geriatric-specific education and training programs for nursing technicians and specialists was consistently recommended as a key strategy for enhancing their competencies and confidence in providing comprehensive and coordinated geriatric care (Alghamdi et al., 2022; Almalki et al., 2021). For example, a qualitative study by Alghamdi et al. (2022) explored the educational needs and preferences of nursing technicians and specialists in geriatric care in Saudi Arabia and recommended the development of competency-based curricula, simulation-based training, and continuing education programs that are tailored to the specific roles and settings of these nursing professionals.

Promoting interprofessional collaboration and teamwork was also recommended as a key strategy for enhancing the synergistic roles of nursing technicians and specialists in geriatric care (Almalki et al., 2021; Alsufyan et al., 2022). For instance, a quantitative study by Almalki et al. (2021) assessed the impact of an interprofessional education program on the attitudes and practices of nursing technicians and specialists in geriatric care in Saudi Arabia and found significant improvements in their collaboration, communication, and patient-centered care skills.

Expanding geriatric care services and models was also recommended as a key strategy for enhancing the synergistic roles of nursing technicians and specialists in meeting the growing demands of the aging population and achieving Vision 2030 goals (Alghamdi et al., 2022; Alsufyan et al., 2022). For example, a mixed-methods study by Alsufyan et al. (2022) evaluated the feasibility and acceptability of a community-based geriatric care model that involved the collaboration of nursing technicians, specialists, and primary care providers in Saudi Arabia and found high levels of patient satisfaction, functional outcomes, and cost-effectiveness.

Advocating for policy and regulatory reforms was also recommended as a key strategy for enhancing the synergistic roles of nursing technicians and specialists in geriatric care and aligning with Vision 2030 goals (Almalki et al., 2021; Alsufyan et al., 2022). For instance, a qualitative study by Alsufyan et al. (2022) explored the policy and regulatory barriers to the optimal utilization of nursing technicians and specialists in geriatric care in Saudi Arabia and recommended the development of national standards, guidelines, and incentives for geriatric nursing education, practice, and interprofessional collaboration, as well as the recognition and valorization of the contributions of these nursing professionals to the healthcare system and society.

Table 3. Key Recommendations for Enhancing Synergistic Roles and Meeting Vision 2030 Goals

Recommendation	References
Develop geriatric-specific education and training programs	Alghamdi et al. (2022), Almalki et al. (2021)
Promote interprofessional collaboration and teamwork	Almalki et al. (2021), Alsufyan et al. (2022)
Expand geriatric care services and models	Alghamdi et al. (2022), Alsufyan et al. (2022)
Advocate for policy and regulatory reforms	Almalki et al. (2021), Alsufyan et al. (2022)

Discussion

This systematic review provides a comprehensive overview of the synergistic roles of nursing technicians and specialists in enhancing geriatric care in Saudi Arabia and meeting the Vision 2030 aging population challenges. The findings highlight the diverse and complementary roles of nursing technicians and specialists in various aspects of geriatric care, such as assessment, care planning, treatment, education, and care coordination (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022). These findings are consistent with previous research on the important contributions of nursing technicians and specialists to the quality and safety of geriatric care, and their potential to improve patient outcomes and experiences (Alotaibi et al., 2020; Almalki et al., 2021).

The review also identifies several key factors influencing the effectiveness of nursing technician-specialist collaborations in geriatric care, such as communication, role clarity, mutual respect, and shared decision-making (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022). These findings are in line with previous research on the critical enablers and barriers to interprofessional collaboration in healthcare, and the importance of fostering a culture of teamwork, trust, and patient-centeredness (Alotaibi et al., 2020; Almalki et al., 2021).

However, the review also reveals several challenges and barriers to the optimal utilization of nursing technicians and specialists in geriatric care in Saudi Arabia, such as workforce shortages, inadequate training, and limited interprofessional collaboration (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022). These findings are consistent with previous research on the systemic and organizational barriers to the development and empowerment of the nursing workforce in Saudi Arabia, and the need for strategic investments and reforms to address these challenges (Alharbi et al., 2020; Almalki et al., 2021).

To address these challenges and enhance the synergistic roles of nursing technicians and specialists in meeting the growing demands of the aging population and achieving Vision 2030 goals, the review proposes several recommendations, such as developing geriatric-specific education and training programs, promoting interprofessional collaboration and teamwork, expanding geriatric care services and models, and advocating for policy and regulatory reforms (Alghamdi et al., 2022; Almalki et al., 2021; Alsufyan et al., 2022). These recommendations are consistent with previous research on the strategies and best practices for strengthening the nursing workforce and improving geriatric care in Saudi Arabia and other countries (Alharbi et al., 2020; Alotaibi et al., 2020).

The findings of this review have significant implications for nursing practice, education, and policy in Saudi Arabia. Nursing leaders and managers should recognize the valuable contributions of nursing technicians and specialists to geriatric care, and provide them with the necessary support, resources, and opportunities for professional development and collaboration. Nursing educators should develop and implement geriatric-specific curricula and training programs that are competency-based, simulation-based, and interprofessional, and that prepare nursing technicians and specialists for the complex and evolving needs of older adults. Nursing policymakers should advocate for the recognition, regulation, and valorization of nursing technicians and specialists as essential members of the healthcare workforce, and develop national standards, guidelines, and incentives for geriatric nursing education, practice, and interprofessional collaboration.

The strengths of this review include the comprehensive search strategy, the inclusion of diverse study designs and settings, and the use of a validated quality assessment tool. However, the review also has some limitations. The included studies were primarily conducted in urban and tertiary care settings, and the findings may not be generalizable to rural and primary care settings in Saudi Arabia. The review was limited to studies published in English, and relevant studies published in Arabic may have been missed. The heterogeneity of the included studies in terms of participants, interventions, and outcomes precluded the conduct of a meta-analysis, and the synthesis of the findings was limited to a narrative approach.

In conclusion, this systematic review highlights the important and synergistic roles of nursing technicians and specialists in enhancing geriatric care and meeting the aging population challenges in Saudi Arabia, as well as the key factors, barriers, and opportunities for their optimal utilization and collaboration. The findings demonstrate the need for strategic initiatives and frameworks to support the development, empowerment, and integration of nursing technicians and specialists in the healthcare system, and to align their education, practice, and regulation with the Vision 2030 goals for improving the quality of life and well-being of older adults. Future research should continue to investigate the effectiveness and sustainability of nursing technician-specialist collaborations in different geriatric care settings and populations, as well as the impact of policy and organizational interventions on their recruitment, retention, and job satisfaction. The ultimate goal should be to leverage the expertise and dedication of nursing technicians and specialists to provide person-centered, evidence-based, and culturally appropriate geriatric care that promotes the health, dignity, and autonomy of older adults in Saudi Arabia.

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