



The Role of Nurse Practitioners in Primary Care Settings: A Comprehensive Review

Afnan Khalid Zakary¹, Rahaf Khalid Zakari², Ameera Mohammed Modawi², Safiya Ahmad Alnajei², Kholoud Ahmed Ghazwani², Jamila Ahmed Yahya Garadi², Elham Ali Hmlan³, Hussain Mohammed Najmi⁴, Edress Ahmad Masrahi⁵, Hassan Ali Otaif⁵

¹Nursing Specialist, Alreath General Hospital, Alraith 87654, Al Baha, Kingdom of Saudi Arabia

²Nursing Specialist, King Fahad Central Hospital in Jazan, Kingdom of Saudi Arabia

³Nursing Technician, Southern Bish Primary Healthcare Center Jazan, Kingdom of Saudi Arabia

⁴Nursing Specialist, - Jazan Specialized Hospital, Kingdom of Saudi Arabia

⁵Nursing Specialist, Altuwat General Hospital, Jazan, Blessed 86751, Kingdom of Saudi Arabia



In Loving Memory of Late Professor Doctor "Mohamed Refaat Hussein Mahran"

Abstract

The healthcare industry worldwide is seeing a growing need for primary care services that are both easily accessible and efficient. This need is primarily driven by a scarcity of healthcare professionals and the rising number of elderly individuals in the population. Nurse Practitioners (NPs), equipped with their extensive clinical expertise and patient-focused methodology, provide a viable way to tackle these difficulties. This extensive analysis evaluates the incorporation of NP positions in primary care environments, scrutinizing the elements that support and impede their integration. The research shows that NPs achieve similar patient outcomes and satisfaction levels as doctors, but their acceptance is hindered by considerable barriers. Uncertainty about the duties and responsibilities of NPs in companies causes confusion and conflict. The fee-for-service payment model, which is prevalent in several healthcare systems, has the potential to impede the integration of nurse practitioners due to financial obstacles. Moreover, opposition from other healthcare practitioners, motivated by apprehensions over job stability and independence, might impede the acceptance and cooperation of nurse practitioners. Nevertheless, the research also emphasizes many factors that contribute to the effective integration of nurse practitioners. Role clarity, comprehensive training initiatives, and substantial organizational backing are essential. Establishing a productive partnership between NPs and doctors is crucial, as it cultivates an environment characterized by mutual respect and collaborative decision-making. The research highlights the need of acknowledging the distinctive abilities and expertise of NPs, enabling them to effectively use their advanced clinical knowledge. This study offers significant insights into the intricacies of incorporating NPs into primary care settings. To fully harness the potential of NPs in enhancing patient care, improving workforce efficiency, and meeting the increasing demand for primary care services, it is essential to tackle the obstacles of job ambiguity, financial incentives, and professional reluctance.

Keywords: Nurse Practitioners, Healthcare Integration, Primary Care, Workforce Shortages, Collaboration, Role Ambiguity

Introduction

The combination of global labor as well as capacity difficulties, together with an aging patient demography, has increased the need of providing services within primary care environments (Hampson and Ruane, 2019). As a result, there is a revived global interest in examining and redefining the responsibilities of all frontline workers in order to address staffing shortages. Nurses are well-

positioned to provide adaptable and prompt healthcare, given that they are one of the biggest cohorts of professionals that provide direct care (Porta et al., 2019).

Broadening the range of nursing practices isn't a novel remedy. The advanced nursing position was implemented in the early 1960s in the United States as a means to address the workforce difficulties (Miller et al., 2024). Since then, this advanced

*Corresponding author e-mail: afnankhalid@gmail.com (Afnan Khalid Zakary).

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position has been growing worldwide, but at varying speeds, sometimes because to the perceived need of increasing the number of professionals in places that lack sufficient physicians (Cruz Neto et al., 2023).

An Advanced Nursing Practitioner (ANP) is a broad term that encompasses several specialized nursing positions. These roles are often performed by nurses who possess advanced credentials and experience beyond their bachelor's degree. Nevertheless, there is a wide range of advanced nursing titles, including advanced practice nurse (APN), nursing practitioner (NP), nurse expert, certified nurse specialist (CNS), skilled nurse, nurse consultant, specialist nurse, and advanced medical practitioner (ACP) (Hampson and Ruane, 2019). Consequently, it can be challenging to recognize the specific roles, scope of practice, and regulatory requirements associated with these titles. To ensure clarity, we will use the term "Advanced Nurse Practitioner" as a reference to the different advanced level nursing titles, as defined by the Royal colleges of Nurses (Royal College of Nursing, 2018) and the International Committee of Nurses (Stewart et al., 2020), as well as previous studies in this area (El Hussein and Ha, 2022).

Nurses at an advanced level are required to exhibit proficiency in four domains: medical care, management and leadership, education, and research (England, 2017). This encompasses the ability to work independently, make informed decisions based on expertise, collaborate effectively with professionals from other fields and organizations, as well as assess and manage potential risks and evaluate the results of one's actions (Cooper et al., 2019; Carman, 2020).

Empirical research has shown that Advanced Nursing Practitioners may achieve comparable patient outcomes when they serve as substitutes for physicians in primary care settings (Lovink, 2019). These findings also indicate that patients in primary care may have higher levels of satisfaction with healthcare delivered by nurses in expanded responsibilities (Barratt and Thomas, 2019).

Although there are potential advantages to expanding the accessibility of the Advanced Nursing Practitioner position, our understanding of the specific range of responsibilities and the present implementation of this function in primary care settings remains restricted. A recent study conducted by Faraz (2019) presented evidence of the obstacles and factors that aid in transitioning recently certified or inexperienced Advanced Nursing Practitioners to primary care settings. The researchers discovered numerous recurring themes throughout the first transition into a healthcare job. These themes included uncertainty about one's role, the quality of work, personal relationships, and encountering internal and external challenges.

A further evaluation examined the adoption of the Advanced Nurse Practitioner position in different medical settings in Canada (El Hussein and Ha, 2022). Reviewers identified obstacles to the adoption of Advanced Nurse Practitioners at the systems, organizational, and practice setting levels. These obstacles include issues related to laws, unclear roles and autonomy, and hostility towards the role. The adoption of Advanced Nurse Practitioner was influenced by prior preparation and the stakeholders' awareness of, and support for, the job. In order to have a deeper comprehension of the implementation process, three broad ideas were also formulated. These factors included engagement (active participation in the first phase of role implementation), endorsement (acknowledgment of the role and readiness to collaborate with the Advanced Nurse Practitioner), and intention (defining and elucidating the Advanced Nurse Practitioner position).

In order to gain a thorough understanding of the challenges and factors that support the establishment of the Advanced Nursing Practitioner position in primary care, it is crucial to identify the factors that contribute to this role being fulfilled by all Advanced Nurse Practitioners, regardless of their period of service and experience. Additionally, it is important to consider the implementation of this role from a global perspective. It is important to acknowledge the distinctive features of implementation that are special to primary care in order to comprehend and resolve them in future modifications to the service. This study seeks to analyze, evaluate, and combine the obstacles and factors that influence the deployment of advanced practitioner positions in health care settings.

Methods

We conducted a search in a variety of online databases such as Cochrane Library, CINAHL (EBSCO), Health Business Elite (EBSCO), Kings Fund Library, Healthcare Management Information Consortium (Ovid), Medline (Ovid), SCOPUS, and Web of Science. A research specialist (RP) devised a thorough search strategy that used a combination of key phrases, including free text words as well as MESH terms, to focus on the intersection of advanced nursing practice as well as primary healthcare. Boolean operators and suitable "wild cards" were used to accommodate plural forms and differences in databases and language. The searches were restricted to articles written only in the English language, and only research published between 2010 and 2024 were considered. A total of 3983 full-text sources underwent evaluation based on the specified eligibility criteria, resulting in the inclusion of 33 articles that met the requirements in the final review. Figure 1 displays the flowchart, which provides a

concise overview of the search and source selection

procedure (Tricco et al., 2018).

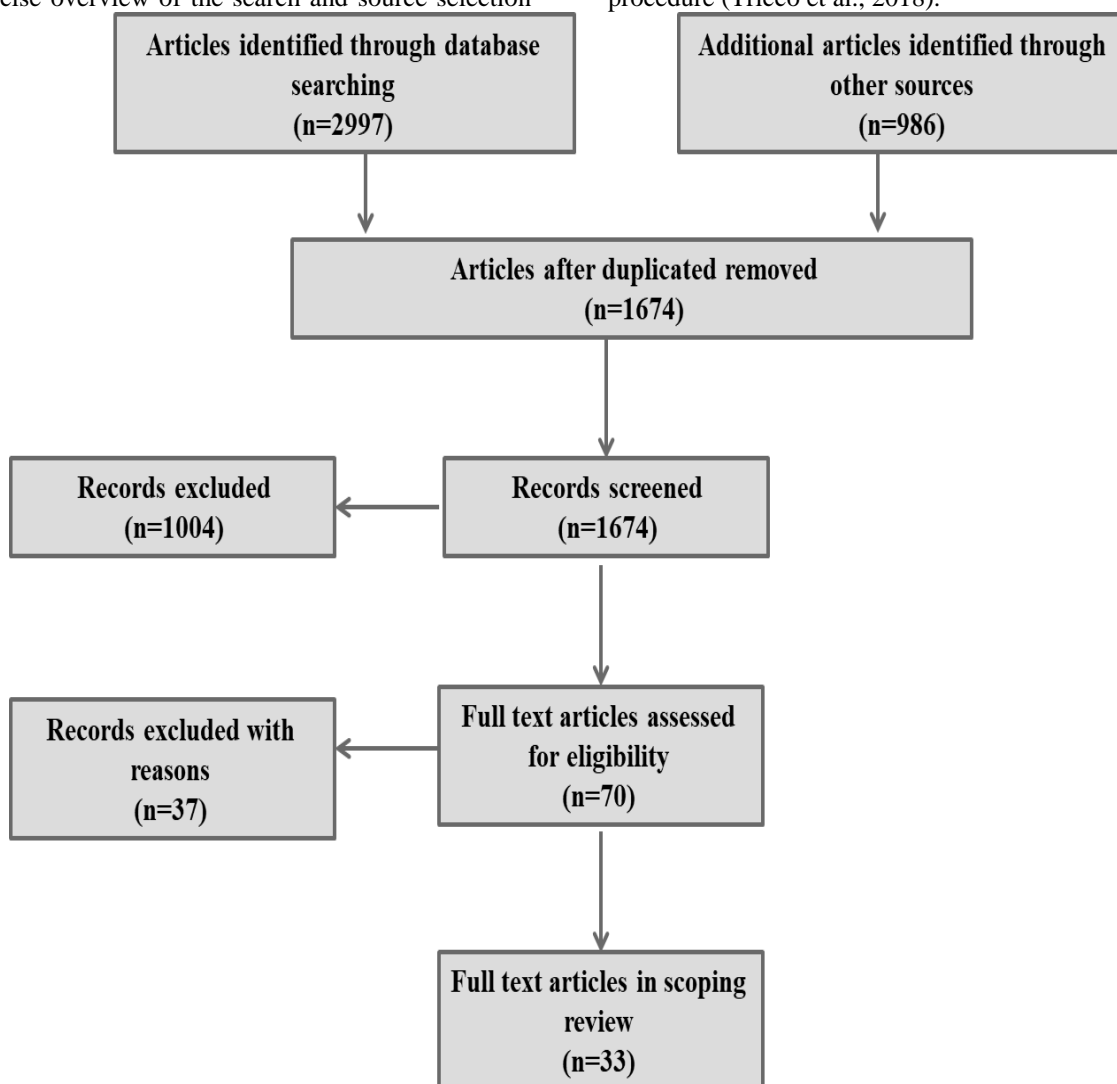


Figure 1. Flowchart of studies used.

The Role of NPs

Nurse practitioners are gaining popularity worldwide. The prevalence of nurse practitioners is increasing, and the effective execution of their responsibilities relies on several aspects (Jennings and Tori, 2023). Implementation refers to the period of time that follows the decision to embrace innovations, during which the transmission of these innovations takes place. Various factors might either hinder or support the implementation process (Gysin et al., 2019). Consequently, healthcare institutions must make necessary arrangements and foster a supportive atmosphere prior to introducing and executing a new position, such as that of nurse practitioners. Introducing a new function into an organization is a complex process that may be influenced by several factors, including hurdles (Al Soqair, 2020). Introducing and implementing the nurse practitioner position in primary care proved to be arduous and posed a significant barrier in many nations' primary health care systems. In order to

guarantee effective implementation, it is crucial to have a clear understanding of the function of nurse practitioners in primary care and to identify any potential changes that may emerge as a consequence of adopting this position (Roots and MacDonald, 2014).

Effective physician- Nurse practitioners (NP)' cooperation and NP authority

Efficient cooperation in the primary care context leads to a rise in liberty (Poghosyan et al., 2020). The study revealed that teamwork significantly improved cooperation between physicians and nurse practitioners. Existing data suggests that cooperation between physicians and NPs might be crucial in fully using the potential of NPs, reinforcing their distinct role in healthcare, and positively impacting patient outcomes (Liang et al., 2019). Additional categories that were found to have a positive impact include skills related to direct patient practice, expertise, decision-making, accountability, responsibility, fulfillment, accomplishment, and encouragement and support

from physicians (Germack et al., 2020; Harrison et al., 2021).

Nurse practitioners (NPs) in the present workforce provide essential primary care services, which are compensated at a lesser rate compared to the similar services given by doctors (Liang et al., 2019). Despite facing reduced compensation and restricted prescriptive power, NPs have frequently proved their cost-effectiveness as primary care physicians, even though they have not been able to fully use their advanced clinical expertise (Black et al., 2020; Carranza et al., 2021). The need for physicians to supervise NPs has been shown to have a detrimental effect due to the increased burden associated with this supervision (Germack et al., 2020). NPs are often not fully used in clinical settings due to their restricted rights compared to doctors. This leads to delays in processing and longer waiting times for patients (Poghosyan et al., 2020). Several gaps have been highlighted, including the influence of compulsory physician supervision on the autonomy of nurse practitioners in patient care, the contrast between states that have full practice authority (FPA) and those that do not, and the effect of state-specific scope of practice requirements on nurse practitioner work satisfaction (Kandrack et al., 2021).

Therapeutic Context and NP Expertise

The research incorporated into this review involved the participation of NPs in various healthcare settings, such as general care, private practice, and memory clinics. Within these specific contexts, nurse practitioners function as independent primary healthcare providers, using their expertise and understanding to provide comprehensive care (Barratt and Thomas, 2019). Within these particular situations, customers placed their faith in the expertise of NPs (Kushner, 2017; Clibbens et al., 2019). Key characteristics of the therapeutic interactions that showcased the proficiency of NPs were the exchange of information, both in terms of dispensing biological knowledge, treatments, and alternates, as well as delving into the psychosocial dimensions of clients' lives.

NPs also take the necessary time to thoroughly discuss and resolve issues (Gorman and Wholihan, 2016). However, the inclusion of more time seems to be in line with the nature of the therapeutic engagement. Recall clinics, women's health centers, and nurse practitioners addressing sexual dysfunction are situations where a greater amount of discourse and involvement would be anticipated. Contrarily, Mysen et al. (2016) discovered that the typical interaction with a patient lasted around 18 minutes, during which all individuals were present for regular follow-up or monitoring purposes. Consultations with elderly patients had a longer duration, with an average visit length of twenty-three minutes (Clibbens et al.,

2019). Within the context of general practice, NPs allocated a shorter amount of time to clients, with an average of 10 minutes, which is twice the duration of General Practitioners (GPs) who spent an average of 5 minutes (Hall, 2016). These current circumstances resemble the research conducted by Gorman and Wholihan (2016), in which NPs allocated 10-15 minutes of their time to customers, but GPs only spent 4-6 minutes. It is suitable to provide solely biological information during short interactions when the customer already has an established connection with the NP (Kushner, 2017; Mysen et al., 2016). NPs were able to interact with patients in an additional biopsychosocial manner even in the primary healthcare context, where consultation durations are relatively brief.

Enhancing Communication in The Interaction Between Nurse Practitioners and Clients

Eight articles emphasized the significance of affirming exchanges in NP therapeutic sessions. Affirming a client involves providing emotional support or encouragement. Kushner (2017) paper explicitly recognizes affirmation as a crucial aspect of interaction. Other papers, such as those discussing biopsychosocial communication styles, imply affirmation through positive language, increased trust and openness, and the establishment of rapport (Clibbens et al., 2019). Nevertheless, the emphasis on addressing psychological issues and fostering partnerships with patients was not consistently seen in the interactions examined by Mysen et al. (2016). It is worth mentioning that the clients included in this research were mostly seeking regular follow-up or monitoring. The synthesis of findings from all articles indicates that the use of patient-centered relationship building and psychosocial interaction with the client may vary depending on the goal of the therapeutic encounter. However, affirming forms of communication were consistently employed regardless of the specific situation. NPs who display openness and respect, actively encourage patients to provide more details about their lives and medical condition and are seen by clients as empathic are effectively offering validation to their clients (Kushner, 2017; Barratt and Thomas, 2019).

NPs are inclined to address the social and emotional elements of patients' life and show interest in the suitability and affordability of treatments when the therapeutic situation calls for it (Hall, 2016). In the study conducted at the memory clinic by Barratt and Thomas (2019), NPs expanded the patient-centred communication approach to include family caregivers. The NPs acknowledged and appreciated the contributions, identities, wider responsibilities, and knowledge and psychological requirements of the caregivers.

Customer Involvement

The use of the biopsychosocial approach by NPs offers validation to the client, as mentioned

before. Barratt and Thomas (2019) found that NPs were more inclined than GPs to inquire about the client's circumstances, a conclusion that was corroborated by Hall (2016). According to Johnson (2018), young adults expressed lower levels of satisfaction with NP treatment. It is worth noting that a significant number of these patients were sent to school-based healthcare facilities by their parents or instructors, which might indicate a hesitancy to seek medical assistance.

The duration of interactions between NPs and clients had an impact on the level of client involvement and satisfaction. The amount of time NPs spend with clients is highly appreciated by them (Barratt and Thomas, 2019). The connection between the duration of the consultation and the manner in which it is conducted plays a significant role in understanding why patients seem to be content with NP appointments (Hall, 2016; Clibbens et al., 2019). Patients consider time to be a valuable resource in their life, as emphasized by Hall (2016). Patients value time, whether it is the time to thoroughly address their difficulties, or the time saved by resolving issues to limit future visits' (Clibbens et al., 2019). Johnson (2018) established a connection between the caring actions of nurses and patient satisfaction. However, they also discovered that the background of the clients, including their age, socio-demographic factors, and health features, had an impact on how they saw healthcare professionals.

The evidence on patient outcomes was inconclusive. According to Hall (2016), there is little evidence to support the idea that following treatment plans leads to better patient health. They also raise concerns about the large number of treatment suggestions made by nurse practitioners and how this may hinder compliance for each of them.

However, these outcomes may once again indicate the varying objectives of the therapeutic interaction. The results of Flückiger et al. (2018) align with this study, since they discovered that empathic and warm interpersonal connections played a crucial role in the effectiveness of psychotherapy. When comparing NP to psychotherapists, it is feasible that establishing positive connections between NPs and clients might enhance therapeutic results.

This analysis corroborates findings from previous relevant studies (Jakimowicz et al., 2015; Ashenfelter, 2017; Byrne et al., 2020) on the significance of patient-centred care in the therapeutic interaction, which may result in improved outcomes for the patient. This research demonstrates that NPs has the ability to use effective communication skills, such as actively listening to clients and treating them with respect, in order to provide a positive and validating therapeutic experience for patients. This encounter leverages the enhanced professional competencies of NPs to evaluate clients, promoting patients to communicate more and offering more

extensive deliberation on treatment alternatives compared to medical practitioners.

When appropriate, NPs use their positive approach by adopting a patient-centered method that includes addressing psychological issues during therapy sessions. By using this method, clients exhibit higher levels of engagement, satisfaction, and adherence to treatment regimens (Ashenfelter, 2017; Clibbens et al., 2019). Due to the allocation of money for NPs and the establishment of their function, NPs often have sufficient time to do this task. NPs provide longer appointments and deliver additional details to clients (Robbins, 2016).

Challenges Faced by NPs

The primary obstacle to adoption, as identified in the reviewed research, is the lack of clarity about the function of nurse practitioners within the organization (Doetzel et al., 2016; Smigorski, 2019; Marceau, 2020; Rietze, 2022). Additional problems may arise due to the ambiguous responsibilities of nurse practitioners inside the organization, such as "role conflict" and "role overload". Furthermore, the acceptability of the nurse practitioners' job may also be influenced by the stakeholders. Physicians often misconstrue the nature and scope of practice of nurse practitioners, leading to challenges in collaborating with them. The lack of doctors' understanding of the function of nurse practitioners affects their acceptance of nurse practitioner practice, as shown by studies (Al Soqair, 2020; Porat-Dahlerbruch et al., 2022). The lack of clarity on the job of nurse practitioners might hinder their ability to meet the expectations of their role within organizations (Gysin et al., 2019). Furthermore, a lack of clarity on the role of nurse practitioners by doctors might result in interprofessional conflict or confusion, particularly in relation to comprehending the prescribing power and limitations for nurse practitioners in their practice (Van den Brink et al., 2019; Holm Hansen et al., 2020).

In primary healthcare, nurse practitioners have comparable duties as primary care doctors in delivering treatment to their patient group. The capacity of nurse practitioners to effectively carry out their responsibilities inside organizations might be hindered by the doctors and administration stakeholders' lack of comprehension (Holm Hansen et al., 2020). However, both investigations were done with a small sample size and the participants were practicing nurse practitioners in varying statuses and regulations, which might result in distinct obstacles and organizational circumstances. The integration of nurse practitioners into the business may be achieved by establishing clear standards and certifications for their position. This can help alleviate the uncertainty that often arises among other healthcare professionals (Holm Hansen et al., 2020).

Role confusion is a substantial obstacle to the implementation of nurse practitioners' roles in healthcare settings. Confusion between customers and colleagues about the scope of practice, aim, responsibility, and anticipated outcome of a function leads to this occurrence. The nurse practitioners' role ambiguity arises at the start of their function and persists when they are introduced into various healthcare settings, particularly those where other healthcare professionals or administrations have not had prior exposure to nurse practitioners (Faraz, 2017).

Role duplication and role ambiguity can result from a lack of clarification about the responsibilities of nurse practitioners, which may have an influence on the quality of treatment and its consequences (Bryant-Lukosius et al., 2020). Lowe et al. (2013) found that healthcare practitioners often lack support and acceptance from their peers due to a lack of understanding about their position. Nurse practitioners may have a sense of isolation as a result of their colleagues and staff nurses misunderstanding their function. Additionally, some nurses can experience professional jealousy owing to the ambiguity surrounding this new role within the company. Several studies have shown a lack of clarity on the role of nurse practitioners in healthcare settings, which leads to misunderstanding. The lack of clarity around the function of nurse practitioners in healthcare might hinder the advancement of their job and limit their potential contribution to patient care (Gysin et al., 2019; Rietze, 2022). The function of nurse practitioners has a significant influence on healthcare service. Therefore, it is crucial to have clear understanding and definition of their profession. The overlapping of nurse practitioners' roles within the organization can lead to confusion among staff nurses regarding the specific responsibilities and requirements of nursing professionals in healthcare settings. This can result in staff nurses mistakenly believing that nurse practitioners are responsible for providing their own treatments (Porat-Dahlerbruch et al., 2022).

Insufficient job definition among managers and/or administration may hinder the creation of an effective atmosphere for nursing professionals to fulfill their function within businesses (Abraham et al., 2021). However, it should be noted that this research collected data using a mixed mode approach, which may have influenced the findings. Additionally, the survey did not capture the variations in nurse practitioner work environments across various states. Prior research has shown that the overlap of responsibilities among nurse practitioners may have an influence on how they carry out their duties in emergency rooms (Doetzel et al., 2016).

Role overlap arises when personnel perceive a duplication of responsibilities between nurses as well

as nurse practitioners for the evaluation and supervision of patients in healthcare environments. Moreover, there is a possibility of shared responsibilities amongst nursing practitioners and physiotherapists when it comes to tasks involving the examination of the lungs and evaluation of the chest (Kilpatrick et al., 2012). According to healthcare professionals, there is a conflict in the authority to prescribe medications among nurse practitioners, doctors, and pharmacists, which is referred to as role overlap. In addition, there is overlap in the work share related to patients' release plans and family meeting. The job overlap in these organizations mostly arises from the absence of clear delineation of responsibilities between nurse practitioners and doctors in regard to patients' medical data and prescription privileges (Kilpatrick et al., 2012). The majority of physicians and healthcare providers, including staff nurses in healthcare settings, hold the belief that the role of nurse practitioners is equivalent to that of new residents. They perceive nurse practitioners as having a combined role that encompasses both nursing and medical responsibilities. However, there are some physicians who argue that the role of nurse practitioners does not involve a combination of nursing and medical duties. These conflicts and misconceptions arise due to the ambiguous function of nurse practitioners inside these organizations (Kilpatrick et al., 2012; Lehwaldt et al., 2024).

The compensation of physicians based on a fee-for-service model is the second obstacle that affects the adoption of nurse practitioners' function. This is a reimbursement mechanism for doctors based on the specific services they give to patients, including physical examinations, immunizations, and prescriptions (Wranik et al., 2017). This payment approach has been used in Canada since 1966, coinciding with the establishment of Medicare. Most Canadian family doctors are compensated using a fee-for-service payment model. This technique is used to guarantee the provision of outstanding treatment for patients. The majority of doctors want to maximize the number of patients they can treat and increase their working hours in order to get compensation based on the quantity of services they offer to their patients (Childerhose et al., 2019). The majority of nations use a fee-for-service system in primary healthcare and community centers for general professionals (Roots and MacDonald, 2014). Physicians see nurse practitioners as a danger to their income. Nurse practitioners have the ability to provide patient care via physical examinations, referrals, test requests, and medicine prescriptions. This may have an effect on the compensation of doctors. All doctors in businesses that receive payment via the fee-for-service model are impacted by the employment of nurse practitioners (Porat-Dahlerbruch et al., 2022).

Multiple studies have shown that nurse practitioners are capable of providing treatment that is comparable to that of doctors. Additionally, nurse practitioners get lesser remuneration than physicians when using fee-for-service payment schemes. In addition, nurse practitioners dedicate a greater amount of time to their patients compared to doctors and provide more comprehensive care. The fee-for-service model incentivizes healthcare practitioners to prioritize quantity over quality of treatment, rewarding them with higher payments for seeing more patients and spending less time with each patient. This approach may have a negative influence on patients' satisfaction with the level of care they get. Physicians conducted a rapid evaluation of the patient, which led to an increased number of diagnostic tests and recommended medications due to an effective clinical diagnosis and inspection (Perloff et al., 2016; Schadewaldt et al., 2016).

Nurse practitioners have indicated that their ability to fully exercise their scope of practice is hindered when doctors are compensated based on a fee-for-service model (Holm Hansen et al., 2020). In Australia, the lack of money poses a challenge to the implementation of nurse practitioners' function in healthcare settings. This is because nurse practitioners are only able to receive payment for their services when they have gained access to funds via the Medicare benefits schedule. Nevertheless, nurse practitioners do not favor the fee-for-service model to fully exercise their scope of practice and function in health settings. Additionally, doctors see a danger to their outcomes when nurse practitioners work in the same institution (Roots and MacDonald, 2014; Holm Hansen et al., 2020; Porat-Dahlerbruch et al., 2022). Moreover, opposition from other healthcare professionals is a significant obstacle that affects the adoption of nurse practitioners' function in healthcare settings. The literature studies revealed that other health professionals shown resistance towards nurse practitioners by refusing to accept referrals from them and failing to collaborate.

The primary obstacle to the implementation of nurse practitioners' job was the experts' reluctance to accept recommendations from nurse practitioners. Furthermore, nursing practitioners experienced a deficiency in respect and confidence from doctors and other healthcare professionals (Holm Hansen et al., 2020). However, the research done by de Guzman et al. (2010) had a limited sample size, which may have hindered the potential to uncover significant correlations among health professionals. The collaboration between nurse practitioners and doctors plays a crucial role in the effective integration of nurse practitioners into healthcare settings (Roots and MacDonald, 2014; Gysin et al., 2019). Based on the majority of the literature examined, it was discovered that when various healthcare professionals, such as nurse practitioners, doctors, pharmacists, and staff nurses, work together

collaboratively, it has a good impact on patient care and the effective adoption of new roles within healthcare organizations (Roots and MacDonald, 2014). However, the research done by Gysin et al. (2019) was limited to primary health care settings and primarily focused on basic health care. Therefore, it may not accurately represent the actual organizational conditions.

Nurse practitioners encounter opposition from other healthcare professionals in their work, which has a detrimental effect on their performance and hinders the full use of their professional abilities (Abraham et al., 2021). In addition, nurse practitioners encounter opposition from healthcare professionals external to their organization. This is particularly evident in rural locations, where they may face pushback when declining a referral or prescription. Moreover, they experience even greater resistance in hospital settings. The opposition from other health professionals stems from the novelty of the nurse practitioners' function in their workplace and their lack of recognition of the nurse practitioners' role and scope of their duties (Abraham et al., 2021; Banaser et al., 2021). In addition, some healthcare professionals see a danger from the function of nurse practitioners due to legislative and regulatory changes that have occurred in the healthcare sector after the implementation of the nurse practitioners' role.

The absence of clear knowledge and misconceptions about the function of nurse practitioners in the organization leads to opposition from other healthcare professionals (Abraham et al., 2021). The hostility towards nurse practitioners in healthcare settings results in a lack of acceptability of nurse practitioners by other healthcare professionals within the organization. The adoption of nurse practitioners' function is hindered by resistance from other healthcare professionals within organizations (Roots and MacDonald, 2014; Gysin et al., 2019; Abraham et al., 2021; Rietze, 2022). Unsuccessful cooperation between nurse practitioners and doctors might hinder practice, sometimes due to physicians seeing a certain level of ineptitude and therefore developing a greater degree of hostility regarding nurse practices (Al Soqair, 2020). Resistance to the expanded scope of practice for nurse practitioners in healthcare settings arises when doctors refuse to accept referrals from nurse practitioners. This resistance stems from the belief that nurse practitioners will increase physicians' workload and burden them.

Many medical professionals who are affiliated with the Australian Medical Association fear that if nurse practitioners are permitted to exercise their function, they will pose a danger to the doctors' position in the organization. As a result, they are opposed to supporting nurse practitioners (Faraz, 2017). In addition, other healthcare professionals, such as staff nurses and medical nurse professionals,

express concerns over the practice of nurse practitioners. They fear that they may lose their autonomy and authority, leading to resistance. The lack of clarity on the role of nurse practitioners has the potential to adversely impact team communication, support, acceptance, and professional confidence (Bryant-Lukosius et al., 2020).

Suggestions for Future Studies

This study emphasized the need for strong research that proves the importance of the NP position in primary healthcare settings. This research should show how NPs may improve health outcomes, reduce disparities in accessing health care, and enhance interdisciplinary practice. Conducting well-designed assessment studies of NP practice that analyze the effect of the complex healthcare systems involved will help create better knowledge of how to enhance access to treatment in these circumstances.

Ongoing assessment of the NP position and extent of practice will provide proactive planning and advancement in both urban and rural regions, therefore allowing the adoption of NP responsibilities that can effectively address the needs of disadvantaged groups. In order to evaluate primary medical services in nearby and rural locations, any prospective study should monitor the possible impact of the NP function, which includes assessing the availability of NP positions. In order to facilitate the necessary research, NPs in primary care settings need a guarantee of ongoing NP responsibilities within services, as well as close connections to higher-level academic institutions, to ensure their continuous professional growth.

Limitations

Although foreign publications may have offered more insights into nurse practitioners working in remote primary health care, they were excluded owing to the challenges of comparing across countries caused by variations in health systems. Furthermore, the study only included publications from 2010 to 2024. This time range was chosen because while the fundamental topics discussed in earlier articles remained the same. However, these changes were small and not enough to significantly alter the overall themes.

Although the present evaluation only found 33 publications, this suggests that care is needed when interpreting the findings. However, it effectively combines the existing sources and emphasizes the lack of research in this field and promising topics for further investigation.

Conclusion

This comprehensive review investigates the function of Nurse Practitioners (NPs) in primary care settings, analyzing the challenges and facilitators of their integration. The study emphasizes the increasing global demand for NPs, which is primarily due to the geriatric population and workforce shortages.

Although NPs have the potential to improve patient satisfaction and outcomes, their implementation is impeded by substantial obstacles. The investigation pinpoints numerous significant obstacles. Initially, perplexity and conflict are the result of a lack of clarity regarding the roles and responsibilities of NPs within organizations. This ambiguity may be the result of a lack of comprehension among physicians about the NP's capabilities, overlapping duties with other healthcare professionals, and an ambiguous scope of practice. Secondly, the fee-for-service payment model, which is prevalent in numerous healthcare systems, may serve as a financial impediment to the integration of NPs by encouraging physicians to prioritize patient volume over quality of care. Third, the adoption and collaboration of NPs can be impeded by resistance from other healthcare professionals, which is motivated by concerns about job security, autonomy, and the perceived threat to their established positions.

The study also identifies numerous facilitators for successful NP integration, despite these challenges. It is essential to have a clear definition of roles, robust training programs, and strong organizational support. It is imperative that NPs and physicians collaborate effectively to cultivate a culture of shared decision-making and mutual respect. The study underscores the significance of acknowledging the distinctive skills and expertise of NPs, thereby enabling them to completely leverage their advanced clinical knowledge.

In summary, the study emphasizes the necessity of a multifaceted approach to enabling the successful integration of NPs into primary care settings. It is imperative to confront the obstacles of professional resistance, financial incentives, and role ambiguity. Healthcare systems can capitalize on the potential of NPs to enhance workforce efficiency, improve patient care, and address the increasing demand for primary care services by cultivating a culture of collaboration, recognizing NP expertise, and providing adequate support.

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