

The Determinants of Professional Autonomy of Nurse Practitioners; A Systematic Review

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Abstract: *Professional autonomy is a core attribute of nurse practitioner practice and a critical determinant of workforce effectiveness, role sustainability, and quality of care, yet its realization varies substantially across clinical and policy contexts. This systematic review synthesizes contemporary evidence on the determinants of professional autonomy among nurse practitioners, focusing on behavioural, organizational, and contextual influences, as well as associated outcomes. Guided by PRISMA 2020 guidelines, peer-reviewed quantitative, qualitative, mixed-methods, and review studies were systematically identified, screened, and analysed using a standardized literature review matrix and narrative synthesis approach. The findings demonstrate that professional autonomy is shaped by the interaction of individual competence, self-efficacy, and professional identity; organizational factors such as leadership style, governance structures, interprofessional relationships, and work environments; and external regulatory and policy frameworks, particularly scope-of-practice regulations. Higher levels of autonomy were consistently linked to positive outcomes, including greater job satisfaction, enhanced professional fulfilment, improved patient safety activities, and more efficient utilization of nurse practitioner roles, whereas restrictive organizational cultures and regulatory constraints limited the translation of formal authority into everyday practice. Overall, the review highlights that professional autonomy is a dynamic and multidimensional capability that requires coordinated educational, organizational, and policy-level strategies to be effectively realized in modern healthcare systems.*

Keywords: Nurse practitioner; Professional autonomy; Scope of practice; Advanced nursing practice; Healthcare workforce.

1. Introduction

Professional autonomy is a foundational element of advanced nursing practice and a critical determinant of nurse practitioners' (NPs) ability to deliver safe, effective, and patient-centred care across diverse healthcare settings. Autonomy in nursing extends beyond individual independence and encompasses the authority, competence, and professional judgment required to make clinical decisions, influence care processes, and collaborate as an equal partner within interprofessional teams. In the context of nurse practitioner practice, professional autonomy is particularly salient because NPs are expected to manage complex patient conditions, initiate diagnostic and therapeutic interventions, and assume leadership roles within increasingly strained health systems (Mrayyan et

al., 2024). Globally, health systems are facing escalating demands driven by population ageing, the growing burden of chronic disease, and persistent shortages of physicians, particularly in primary care, rural, and underserved settings. Nurse practitioners have been positioned as a key workforce strategy to address these challenges, yet their contribution is strongly shaped by the degree of professional autonomy afforded to them in practice. Evidence indicates that when NPs are able to exercise higher levels of autonomy, they are more likely to manage independent patient panels, practice with reduced physician oversight, and provide care comparable in complexity and quality to that delivered in more restrictive environments (Neprash et al., 2021). Conversely, constrained autonomy may limit the scope and efficiency of NP practice, undermining the potential system-level benefits associated with advanced nursing roles.

Professional autonomy is not a unidimensional construct but rather a multidimensional phenomenon influenced by individual, organizational, and contextual factors. Conceptual analyses of nursing autonomy highlight core attributes such as professional competence, accountability, advocacy, shared leadership, and inter- and intra-professional collaboration, all operating within a supportive work environment (Mrayyan et al., 2024). Empirical studies further demonstrate that autonomy is shaped by organizational empowerment, leadership practices, workload, and practice environments, with important implications for job strain, job satisfaction, and retention among nurse practitioners (Yang et al., 2022). These findings underscore that autonomy is both an individual capability and a product of structural and organizational conditions. At the policy and regulatory level, variation in scope-of-practice and full practice authority regulations represents a major contextual determinant of NP autonomy. Jurisdictions that grant greater regulatory independence to NPs tend to facilitate more autonomous practice arrangements and expanded service delivery, particularly in settings facing clinician shortages (Neprash et al., 2021). However, autonomy cannot be fully understood through regulation alone, as workplace culture, interprofessional relationships, and organizational governance may either enable or constrain the translation of formal authority into everyday practice.

Despite a growing body of research examining aspects of nurse practitioner autonomy, the existing literature remains fragmented across conceptual, empirical, organizational, and policy-focused studies. Prior reviews have often focused on specific settings, such as intensive care units, or on particular outcomes, such as ethical practice or workforce distribution, without offering an integrated synthesis of the determinants shaping professional autonomy for nurse practitioners across contexts (Poškutė et al., 2022). As a result, there is limited consolidated evidence to guide policymakers, healthcare leaders, and educators in designing interventions that systematically strengthen NP autonomy. Therefore, a comprehensive systematic review is warranted to synthesize the existing evidence on the determinants of professional autonomy of nurse practitioners. By integrating findings across conceptual analyses, quantitative and qualitative studies, and regulatory research, this review aims to clarify the key behavioral, organizational, and contextual factors influencing NP autonomy and to identify gaps for future research and policy development. Such synthesis is essential to inform workforce planning, optimize NP practice environments, and ultimately enhance the quality and accessibility of healthcare delivery (Mrayyan et al., 2024).

2. Methodology

This systematic review was conducted to identify, appraise, and synthesize empirical and conceptual evidence on the determinants of professional autonomy of nurse practitioners. The methodological approach was guided by established principles of systematic review design, emphasizing transparency, reproducibility, and rigor throughout all stages of the review process. The overall

structure and reporting of the review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 framework, which provides a standardized approach for documenting study identification, screening, eligibility assessment, and inclusion decisions. The use of a structured and explicit methodology was essential to ensure that evidence on nurse practitioner autonomy was comprehensively captured and systematically evaluated, given the multidimensional and context-dependent nature of the concept (Mrayyan et al., 2024). A comprehensive literature search was conducted across multiple electronic databases commonly used in nursing, health services, and policy research. These included PubMed, CINAHL, Web of Science, Scopus, and ScienceDirect. The search strategy was designed to capture studies examining professional autonomy, practice autonomy, clinical autonomy, and scope of practice in relation to nurse practitioners. Keywords and Medical Subject Headings were combined using Boolean operators and adapted to each database to maximize sensitivity while maintaining relevance. The search was limited to peer-reviewed articles published in English to ensure methodological quality and consistency in interpretation. The time frame focused on contemporary evidence reflecting current nurse practitioner roles, regulatory environments, and practice contexts, aligning with the evolving nature of advanced nursing practice (Yang et al., 2021).

Clear inclusion and exclusion criteria were established prior to screening to reduce selection bias. Studies were included if they explicitly examined professional autonomy or closely related constructs among nurse practitioners or advanced practice nurses, addressed determinants at individual, organizational, or policy levels, and employed qualitative, quantitative, mixed-methods, or review-based designs. Concept analyses and scoping or systematic reviews were also included where they provided substantive insight into autonomy as a core construct. Studies focusing exclusively on general registered nurses without relevance to advanced or autonomous practice roles were excluded unless they contributed conceptual or organizational insights applicable to nurse practitioner autonomy. Editorials, opinion pieces, and conference abstracts without full methodological detail were also excluded. All records retrieved from the database searches were exported into reference management software, and duplicates were removed prior to screening. The screening process was conducted in two stages. First, titles and abstracts were reviewed to assess relevance against the predefined eligibility criteria. Studies that clearly did not meet the inclusion criteria were excluded at this stage. Second, the full texts of potentially eligible articles were retrieved and independently assessed for final inclusion. Any uncertainties regarding eligibility were resolved through careful re-examination of the study aims, methods, and reported outcomes, with decisions guided by the review objectives and conceptual focus on nurse practitioner autonomy (Poškutė et al., 2022).

Data extraction was conducted using a standardized literature review matrix to ensure consistency across studies. Extracted information included author and year, country and setting, study design, sample characteristics, conceptualization or measurement of autonomy, key determinants examined, and reported outcomes related to autonomy. A narrative synthesis approach was adopted due to heterogeneity in study designs, contexts, and outcome measures. This approach enabled the integration of findings across conceptual, empirical, organizational, and regulatory studies, allowing for the identification of recurring patterns and determinant categories influencing professional autonomy (Mrayyan et al., 2024). The study selection process is summarized in Figure 1, which presents the PRISMA 2020 flow diagram. The diagram illustrates the number of records identified through database searching, the number of records screened after duplicate removal, the number of full-text articles assessed for eligibility, and the final number of studies included in the review. This visual representation enhances transparency and allows readers to clearly follow the decision-making process underpinning the review, thereby strengthening the methodological credibility of the study (Yang et al., 2021).

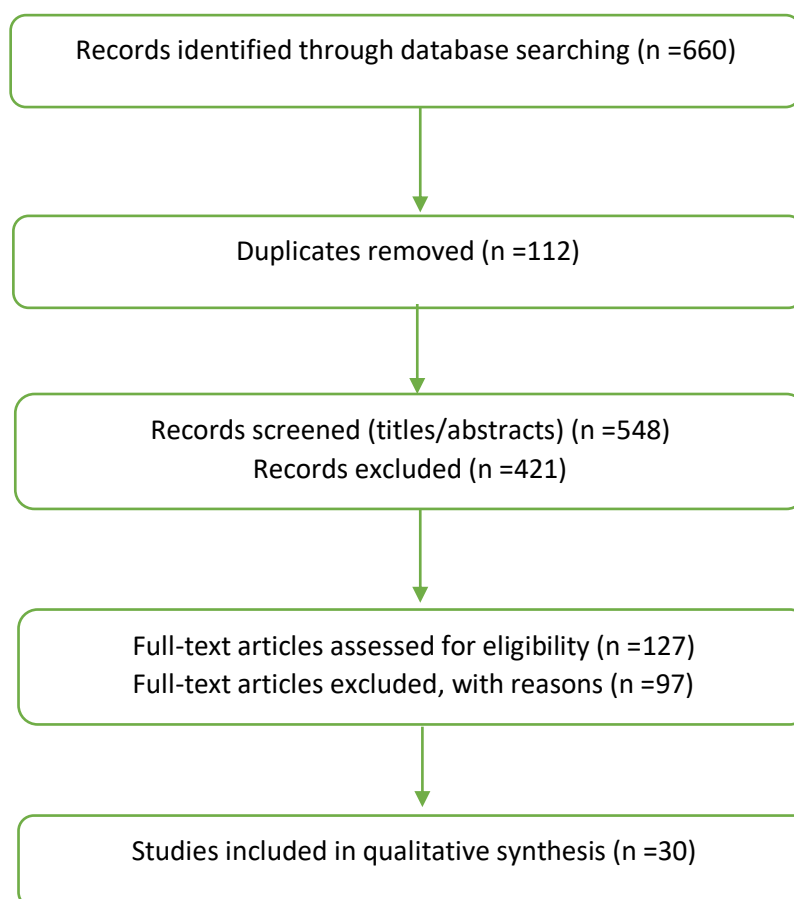


Figure 1. PRISMA 2020 Flow Diagram illustrating the identification, screening, eligibility, and inclusion of studies in the systematic review.

3. Results

3.1 Study Selection and Characteristics

The systematic search and screening process resulted in the inclusion of studies that collectively provide a comprehensive overview of the determinants of professional autonomy among nurse practitioners across diverse healthcare systems and practice settings. Following duplicate removal and eligibility assessment, the final body of evidence comprised quantitative, qualitative, mixed-methods, and review-based studies published primarily within the last decade, reflecting contemporary regulatory, organizational, and professional contexts of nurse practitioner practice. The included studies originated predominantly from high-income countries, particularly the United States, Canada, and several European nations, although selected evidence from other regions was also represented, offering comparative and contextual insights into autonomy across different health systems (Yang et al., 2022).

As summarized in Table 1 (Literature Review Matrix), the methodological designs varied substantially. Large-scale quantitative studies frequently relied on national survey datasets to examine associations between regulatory environments and indicators of nurse practitioner autonomy, such as independent practice, absence of physician oversight, and control over clinical decision-making (Neprash et al., 2021). Qualitative studies focused on lived experiences of autonomy, emphasizing

professional identity, interprofessional dynamics, and perceived constraints or enablers within organizational settings (Poškutė et al., 2022). In addition, concept analyses and systematic or scoping reviews contributed theoretical clarity by defining autonomy, identifying core attributes, and mapping antecedents and consequences of autonomous practice (Mrayyan et al., 2024).

Across the included studies, professional autonomy was operationalized using diverse measures, including regulatory classifications of scope of practice, self-reported autonomy scales, functional autonomy indicators, and qualitative thematic constructs. Despite this heterogeneity, common thematic domains emerged, enabling synthesis across studies. These domains included regulatory and policy determinants, organizational and workplace factors, professional competence and education, and relational dynamics within healthcare teams. Collectively, the characteristics of the included studies demonstrate a robust yet fragmented evidence base, underscoring the need for integrative synthesis to better understand how multiple determinants interact to shape nurse practitioner autonomy.

Table 1. Literature Review Matrix

| No. | Author(s) & Year | Professional Autonomy | Individual / Behavioral | Job Satisfaction / Work Outcomes | Work Environment / | Leadership / Management | Interprofessional Collaboration | Organizational Support | Regulatory / Policy / Scope of | Patient Care / Practice |
|-----|------------------------------|--------------------------|----------------------------|-------------------------------------|-----------------------|----------------------------|------------------------------------|---------------------------|-----------------------------------|----------------------------|
| 1 | Mrayyan et al. (2024) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 2 | Yang et al. (2022) | ✓ | ✓ | ✓ | | ✓ | | ✓ | | |
| 3 | Almeida et al. (2025) | ✓ | | | | | | | ✓ | ✓ |
| 4 | Poškutė et al. (2022) | ✓ | | | | | ✓ | | ✓ | ✓ |
| 5 | Neprash et al. (2021) | ✓ | | | | | | | ✓ | ✓ |
| 6 | Pursio et al. (2024) | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 7 | Hsiu-Ying et al. (2022) | ✓ | ✓ | | | ✓ | ✓ | ✓ | | |
| 8 | Parizad et al. (2021) | ✓ | | ✓ | | | ✓ | | | |
| 9 | Yuk & Yu (2023) | ✓ | | | ✓ | | | ✓ | | ✓ |
| 10 | Ryskina et al. (2024) | ✓ | | | | | | | ✓ | ✓ |
| 11 | Slade et al. (2025) | ✓ | | | | | ✓ | | ✓ | ✓ |
| 12 | Smith (2022) | ✓ | | | | | | | ✓ | ✓ |
| 13 | Yang et al. (2021) | ✓ | | | | | | | ✓ | ✓ |
| 14 | Feyereisen & Goodrick (2021) | ✓ | | | | | | | ✓ | |
| 15 | O'Reilly-Jacob et al. (2022) | ✓ | ✓ | | ✓ | | | ✓ | ✓ | ✓ |
| 16 | Heath et al. (2023) | | ✓ | | | ✓ | | | | |
| 17 | Hoyt et al. (2024) | ✓ | | ✓ | | | | | ✓ | |
| 18 | Lockwood (2022) | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ |
| 19 | De Rosi et al. (2023) | ✓ | ✓ | | ✓ | | ✓ | | | |
| 20 | Lavoie (2026) | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ |
| 21 | Auffermann et al. (2021) | | ✓ | ✓ | ✓ | | | ✓ | | |
| 22 | Harris et al. (2021) | | ✓ | ✓ | | ✓ | | ✓ | | |
| 23 | Ljungbeck et al. (2021) | ✓ | | | | ✓ | ✓ | | ✓ | |

| No. | Author(s) & Year | Professional Autonomy | Individual / Behavioral | Job Satisfaction / Work Outcomes | Work Environment / | Leadership / Management | Interprofessional Collaboration | Organizational Support | Regulatory / Policy / Scope of | Patient Care / Practice |
|-----|-----------------------------------|--------------------------|----------------------------|-------------------------------------|-----------------------|----------------------------|------------------------------------|---------------------------|-----------------------------------|----------------------------|
| 24 | Vo et al. (2022) | ✓ | ✓ | | ✓ | | ✓ | | | ✓ |
| 25 | Saeed et al. (2024) | ✓ | ✓ | | | | | | | ✓ |
| 26 | Clarke et al. (2021) | | ✓ | | | ✓ | ✓ | ✓ | | ✓ |
| 27 | Taleghani et al. (2023) | ✓ | ✓ | | ✓ | | | ✓ | | ✓ |
| 28 | Yimer et al. (2024) | ✓ | ✓ | | ✓ | ✓ | | ✓ | | |
| 29 | Beil-Hildebrand & Smith (2022) | ✓ | | | | | | | ✓ | |
| 30 | Ito et al. (2024) | ✓ | ✓ | | ✓ | | ✓ | | | |

3.2 Prevalence and Determinants

The prevalence of professional autonomy among nurse practitioners varied considerably across studies and jurisdictions, reflecting differences in regulatory frameworks, organizational structures, and practice environments. Evidence consistently indicated that nurse practitioners practicing in jurisdictions with less restrictive scope-of-practice or full practice authority regulations reported higher levels of autonomy, including greater likelihood of practicing without physician supervision and increased control over clinical decisions (Neprash et al., 2021). However, the presence of permissive regulation alone did not guarantee high autonomy in daily practice, as organizational and relational factors frequently mediated the translation of formal authority into functional autonomy. At the policy level, regulatory determinants emerged as a primary structural influence on autonomy. Expanded scope-of-practice laws were associated with greater workforce distribution in underserved areas and increased independent practice arrangements, suggesting that regulatory autonomy enables nurse practitioners to more fully utilize their training and competencies (Yang et al., 2022). Nevertheless, studies also demonstrated that restrictive governance structures, such as physician-dominated oversight bodies, could significantly constrain autonomy even in otherwise supportive regulatory contexts (Mrayyan et al., 2024).

Organizational determinants played a critical role in shaping autonomy at the practice level. Supportive leadership, access to resources, manageable workloads, and inclusive decision-making cultures were consistently linked to higher perceived and functional autonomy among nurse practitioners (Poškutė et al., 2022). Conversely, hierarchical organizational cultures, unclear role definitions, and limited institutional support reduced practitioners' ability to exercise independent judgment. Interprofessional relationships were particularly influential; collaborative environments facilitated autonomous practice, whereas conflictual or physician-driven dynamics restricted it, regardless of formal scope-of-practice allowances (Yang et al., 2022). Individual and professional determinants also contributed to variations in autonomy. Higher levels of education, advanced clinical competence, and professional confidence were associated with greater autonomy, as these factors enhanced practitioners' capacity to make independent decisions and advocate for their role within healthcare teams (Mrayyan et al., 2024). Experience emerged as an important determinant, with more experienced nurse practitioners reporting higher autonomy due to increased trust from colleagues and

familiarity with organizational systems. Demographic factors such as age and years of practice were occasionally associated with autonomy, although findings in this area were less consistent.

Contextual determinants, including practice setting and population served, further influenced autonomy. Nurse practitioners working in primary care, rural, and underserved settings generally reported higher autonomy compared with those in highly specialized or hospital-based environments, where institutional protocols and hierarchical structures were more prominent (Neprash et al., 2021). Overall, the evidence highlights that professional autonomy among nurse practitioners is shaped by an interdependent set of regulatory, organizational, professional, and contextual determinants rather than by any single factor.

3.3 Outcomes

The outcomes associated with professional autonomy of nurse practitioners were consistently positive across the reviewed studies, spanning workforce, organizational, and patient-related domains. Higher levels of autonomy were strongly linked to improved job satisfaction, professional fulfillment, and intention to remain in practice. Nurse practitioners who reported greater autonomy experienced enhanced role clarity, stronger professional identity, and increased motivation, all of which contributed to improved retention and reduced turnover intentions (Poškutė et al., 2022). These outcomes are particularly important in the context of global workforce shortages and the increasing reliance on advanced practice nurses to meet healthcare demands. Autonomy was also associated with improved quality of care and service delivery outcomes. Studies indicated that autonomous nurse practitioners were more likely to provide timely care, manage full episodes of treatment, and respond effectively to patient needs, particularly in primary care and underserved settings (Yang et al., 2022). Enhanced autonomy enabled practitioners to streamline clinical processes, reduce unnecessary referrals, and improve continuity of care, thereby contributing to system efficiency. Importantly, evidence did not suggest that increased autonomy compromised patient safety or care quality, reinforcing the legitimacy of autonomous nurse practitioner practice (Neprash et al., 2021).

At the organizational level, professional autonomy was linked to greater engagement in leadership, innovation, and evidence-based practice. Nurse practitioners with higher autonomy were more likely to participate in quality improvement initiatives, influence policy and protocol development, and contribute to organizational learning (Mrayyan et al., 2024). Autonomy supported practitioners' ability to act as change agents, bridging clinical practice and organizational strategy. Conversely, constrained autonomy limited such contributions and was associated with frustration, role conflict, and underutilization of advanced competencies. Patient-related outcomes were also positively influenced by nurse practitioner autonomy. Greater autonomy facilitated holistic, patient-centred decision-making and strengthened therapeutic relationships, leading to improved patient satisfaction and perceived quality of care (Yang et al., 2022). By enabling nurse practitioners to fully apply their clinical judgment, autonomy supported more responsive and individualized care delivery. Collectively, the evidence demonstrates that professional autonomy is not only a professional or workforce issue but also a critical determinant of organizational performance and patient outcomes, underscoring its central role in contemporary healthcare systems (Mrayyan et al., 2024).

4. Discussion

4.1 Interplay of Behavioral, Organizational, and Contextual Determinants

The findings of this review demonstrate that professional autonomy among nurse practitioners is not the result of a single enabling factor, but rather emerges from a dynamic interplay between behavioral, organizational, and contextual determinants. At the behavioral level, individual capabilities, confidence, and professional self-efficacy play a foundational role in shaping how autonomy is exercised in practice. Nurse practitioners with higher levels of clinical competence, decision-making confidence, and perceived self-mastery are more likely to utilize available autonomy effectively, even in settings where formal authority may be ambiguously defined (Mrayyan et al., 2024). Behavioral determinants therefore act as internal conversion factors that influence whether structural opportunities for autonomy translate into actual autonomous practice. Organizational determinants interact closely with these behavioral elements. Supportive leadership, participatory governance structures, adequate staffing, and access to resources consistently emerged as critical enablers of autonomy across the reviewed studies. Organizational cultures that value nurse practitioner expertise and incorporate them into clinical and strategic decision-making processes amplify individual capacity for autonomy (Poškutè et al., 2022). In contrast, hierarchical management models, physician-dominated governance, and rigid institutional protocols restrict the practical expression of autonomy, regardless of individual competence or regulatory allowances. This interaction suggests that professional autonomy is co-produced through both individual agency and organizational endorsement.

Contextual determinants further shape this relationship by embedding nurse practitioner practice within broader regulatory, cultural, and clinical environments. Regulatory context, particularly scope-of-practice frameworks, establishes the outer boundaries of autonomy and strongly influences organizational behavior. Evidence indicates that nurse practitioners practicing in jurisdictions with less restrictive regulations are more likely to encounter organizational environments conducive to autonomous roles (Neprash et al., 2021). However, regulatory permissiveness alone does not guarantee autonomy; local organizational norms and interprofessional relationships often mediate its realization. This highlights the importance of meso-level factors that connect macro-level policy to micro-level practice. Clinical context also moderates the interaction between behavioral and organizational determinants. Nurse practitioners working in primary care, rural, or underserved settings frequently experience greater functional autonomy due to service demand, workforce shortages, and reduced physician presence (Yang et al., 2022). In contrast, acute care and highly specialized hospital environments often impose tighter controls through protocols and interprofessional hierarchies, limiting autonomous decision-making even for highly skilled practitioners. These contextual pressures require nurse practitioners to continuously negotiate their role, balancing professional judgment with institutional constraints.

4.2 Policy, Practical, and Theoretical Implications

The synthesis of findings yields important implications for policy, practice, and theory. From a policy perspective, the evidence reinforces the need for regulatory frameworks that move beyond formal authorization toward enabling conditions for meaningful autonomy. Expanding scope-of-practice regulations remains a necessary foundation, as restrictive laws consistently limit nurse practitioner autonomy and workforce contribution (Neprash et al., 2021). However, policy reforms must also

address governance structures, licensure models, and accountability mechanisms that influence how autonomy is enacted within healthcare organizations. Without such alignment, policy-level autonomy risks remaining nominal rather than functional. Practically, healthcare organizations play a decisive role in operationalizing autonomy. Leaders and managers should prioritize inclusive governance, role clarity, and interprofessional collaboration to support nurse practitioner decision-making authority. Organizational investments in leadership development, mentorship, and continuing professional education can strengthen behavioral determinants of autonomy by enhancing confidence and competence (Poškutė et al., 2022). Additionally, workforce planning strategies that ensure appropriate staffing and workload distribution are essential, as excessive workload and resource scarcity undermine autonomous practice even in supportive environments.

Interprofessional practice models represent another critical practical implication. Collaborative cultures that recognize nurse practitioners as equal clinical partners facilitate autonomy while maintaining team-based care quality. Conversely, unresolved power asymmetries and physician-centric models perpetuate dependency and role ambiguity. Practical interventions should therefore target relationship-building, shared decision-making structures, and communication frameworks that normalize nurse practitioner autonomy within teams (Yang et al., 2022). From a theoretical standpoint, the findings support a shift away from linear or purely regulatory models of autonomy toward multidimensional and capability-based frameworks. Traditional conceptualizations that equate autonomy with independence or absence of supervision are insufficient to capture the complexity observed in practice. The reviewed evidence aligns with theoretical perspectives that frame autonomy as a capability shaped by resources, conversion factors, and agency, emphasizing context and relational dynamics (Mrayyan et al., 2024). Such frameworks allow for a more nuanced understanding of why autonomy varies across settings despite similar formal authority. Theoretically, this also suggests the need to integrate autonomy within broader models of professional practice, organizational behavior, and health system performance. Autonomy should be viewed as both an outcome of supportive systems and a mechanism through which quality, innovation, and workforce sustainability are achieved. This dual role strengthens the case for embedding autonomy within strategic health workforce policies and organizational performance frameworks rather than treating it as an isolated professional concern.

4.3 Comparison with Existing Reviews, Limitations, and Future Research

When compared with existing reviews, the findings of this study are largely consistent with prior syntheses while also extending the literature by emphasizing interactional and contextual dimensions of autonomy. Previous reviews have highlighted the positive association between nurse practitioner autonomy and outcomes such as access to care, job satisfaction, and workforce distribution (Yang et al., 2022). The current synthesis corroborates these conclusions but further demonstrates that autonomy is highly contingent on organizational and relational factors, even in permissive regulatory environments. Unlike earlier reviews that focused predominantly on regulatory determinants, this review integrates behavioral and organizational perspectives, offering a more holistic understanding of autonomy. Conceptual analyses in the literature have identified attributes and consequences of autonomy but often lacked empirical integration across settings (Mrayyan et al., 2024). By synthesizing diverse study designs, this review bridges empirical findings with conceptual insights, highlighting autonomy as a dynamic and situated phenomenon rather than a static professional attribute.

Several limitations must be acknowledged. First, heterogeneity in study designs, measures of autonomy, and practice contexts limits direct comparability across studies. Autonomy was

operationalized variably, ranging from legal classifications to self-reported perceptions, which may capture different dimensions of the concept. Second, much of the empirical evidence originated from high-income countries, particularly the United States, potentially limiting generalizability to low- and middle-income settings. Third, cross-sectional designs dominated the quantitative literature, restricting causal inference regarding determinants and outcomes of autonomy. Future research should address these limitations by adopting longitudinal and mixed-methods designs that capture how autonomy evolves over time and in response to policy or organizational change. There is a particular need for intervention-based studies that test strategies to enhance autonomy at organizational and team levels, as existing evidence remains largely descriptive (Poškutė et al., 2022). Comparative international research would also enrich understanding by examining how cultural, economic, and system-level differences shape autonomy in diverse contexts. Additionally, future studies should work toward conceptual and measurement harmonization to enable more robust synthesis and comparison. Developing validated, multidimensional autonomy instruments that integrate regulatory, functional, and perceived autonomy would strengthen empirical rigor. Finally, research should explore the reciprocal relationship between autonomy and outcomes, examining not only how autonomy affects performance and satisfaction, but also how outcomes feed back into professional confidence and organizational support. Such work would further solidify professional autonomy as a central construct in advanced nursing practice and health system effectiveness (Yang et al., 2022).

5. Conclusion

This systematic review synthesised current evidence on the determinants of professional autonomy of nurse practitioners and demonstrates that autonomy is a multifaceted and context-dependent phenomenon. The findings indicate that professional autonomy does not arise solely from formal role designation or regulatory permission, but from the alignment of individual capability, organizational support, and broader contextual conditions. Nurse practitioners are more likely to exercise meaningful autonomy when they possess strong clinical competence and professional confidence, work within organizations that value shared governance and interprofessional respect, and practice in regulatory environments that permit independent decision-making. The review further highlights that autonomy is best understood as a dynamic capability that is enacted in daily practice rather than a static legal status. Even in settings where nurse practitioners are formally authorized to practice independently, autonomy may remain constrained if organizational cultures, leadership structures, or interprofessional relationships do not actively support autonomous roles. Conversely, supportive environments can enhance functional autonomy even in more restrictive contexts by enabling nurse practitioners to participate fully in clinical and organizational decision-making.

Importantly, professional autonomy is consistently associated with positive outcomes at multiple levels. At the practitioner level, autonomy contributes to higher job satisfaction, professional fulfillment, and role sustainability. At the organizational and system levels, it supports improved access to care, continuity of services, and more efficient utilization of the advanced nursing workforce. These findings underscore the strategic importance of autonomy not only as a professional value but also as a mechanism for strengthening healthcare delivery and workforce resilience. Overall, the evidence suggests that efforts to enhance nurse practitioner autonomy should adopt an integrated approach that simultaneously addresses education and professional development, organizational leadership and governance, and regulatory and policy frameworks. By fostering environments in which nurse practitioners can fully exercise their expertise and judgment, health

systems can better leverage the potential of advanced nursing practice to meet evolving population health needs.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study. This research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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