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REVIEW

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Nurses' experiences and perceptions of running nurse-led clinics: A scoping review

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Abstract

Aim: To explore what is known about nurses' experiences and perceptions of running nurse-led clinics.

Background: Nurse-led clinics were established to address health care needs. In collaboration with medical practitioners, advanced practice nurses may take a selected group of patients and manage their ongoing healthcare independently. Their experiences in running nurse-led clinics directly impact patient satisfaction and clinical outcomes.

Design: Scoping review of the peer-reviewed literature.

Data Source: Systematic search through CINAHL, Medline, PsycINFO and Web of Science databases from January 2010 to September 2023.

Review Methods: This scoping review is guided by the updated methodological guidance for the conduct of scoping review from Joanna Briggs Institute.

Results: Of 2747 retrieved articles, 15 were included in this review. Synthesis of the findings revealed that nurses believed implementing nurse-led clinics was beneficial to themselves, patients, and healthcare systems. However, they faced challenges in running nurse-led clinics, including insufficient support, teamwork obstacles and lack of role recognition.

Conclusion: Nurses need to be proactive in promoting their clinics and overcoming challenges. Healthcare organizations are responsible for creating a positive culture to support nurse-led services. Future research should focus on ways to increase global awareness of nurse-led clinics.

KEYWORDS

advanced practice nurse, experience, nurse-led clinic, nurse-led services, nurses, perception, scoping review

Summary statement

What is already known about this topic?

- Nurse-led clinics were introduced to reduce medical practitioners' workload, bridge care gaps and address the pressures of healthcare systems.
- Nurses manage their own patient caseload and have increased autonomy.
- Nurses' experiences and perceptions of running nurse-led clinics directly impact on patient satisfaction and clinical outcomes.

What this paper adds?

- There are limited insights into experiences and perceptions of nurse-led clinics from nurses' perspectives.
- Nurses perceived nurse-led clinics empowered them personally and professionally, promoted teamwork, patient-centred holistic care and reduced burdens on medical practitioners and healthcare systems.
- Nurses faced challenges in running nurse-led clinics, including insufficient training and support and lack of role recognition.

The implications of this paper:

- Nurse-led clinics should be promoted globally through education and research.
- Healthcare organizations should provide sufficient support for nurses to implement and run nurse-led clinics.
- Future studies should identify enablers and barriers of nurse-led clinics, which will guide organizations to have strategies in place to enhance nurse-led clinics.

1 | INTRODUCTION

In recent decades, the demands for clinical services have grown exponentially (Hatchett, 2016). To address the shortage of Medical Practitioners (MPs) and bridge care gaps, nurse-led clinics (NLCs) were established and are recognized as an effective alternative to traditional MPs-led clinics in primary, secondary and tertiary healthcare settings (Molassiotis et al., 2021; Randall et al., 2017; Wilson et al., 2021). The term 'Nurse-led clinic' was introduced in the 1980s, when a large number of clinics were established globally (Hatchett, 2013). Due to the diversity of NLCs, there is no clear and uniform definition. The general understanding includes 'nurses having their own patient caseload' and 'increased autonomy' (Hatchett, 2016, p. 64) as assuming greater responsibilities for patients' care and management.

NLCs are often managed by advanced practice nurses (APNs). APN is an umbrella term. The International Council of Nurses (ICN, 2020) nominated two titles that are commonly used for APNs, which are Clinical Nurse Specialists (CNSs) and Nurse Practitioners (NPs). Both CNSs and NPs possess advanced knowledge at the expert level, complex decision-making abilities, and extensive clinical experience (ICN, 2020). They perform comprehensive assessments, offer psychosocial support and health-related education, provide and monitor treatment, admit and discharge patients (Randall et al., 2017), as well as coordinate patient care with multidisciplinary teams to accomplish integrated holistic care (Wong et al., 2023). With suitable training, APNs also carry out certain procedures safely and effectively through NLCs (Tan et al., 2017). In addition, NPs incorporate nursing and medical clinical skills to support advanced patient assessment, diagnosis, and management. The practice of NPs is beyond the scope of practice of registered nurses (ICN, 2020).

A nurse-led service is considered an important development in advancing the nursing profession (Shiu et al., 2012). APNs offer a wider and deeper holistic view of patients' health status and provide patient-centred integrated care resulting in a higher level of patient engagement and satisfaction. This approach has been shown to improve patients' quality of life and health outcomes (Gysin et al., 2019; Randall et al., 2017). These benefits indicate that NLCs can be a practical substitute to the medical clinics in some situations (Gysin et al., 2019).

Nurses are the primary service providers for NLCs. Their experiences and perceptions of running NLCs are pivotal. Effective clinical consultations can positively influence outcomes and patients' satisfaction with services (Desborough et al., 2013). Following observation of nurses running NLCs and interviewing with nurses, Dong et al. (2023) found that nurses with a higher sense of achievement and confidence are more likely to build effective therapeutic relationships with patients and work collaboratively with other health professionals, subsequently speeding up patients' recovery and improving clinical outcomes. Nurses' positive work experiences enhance self-recognition

and professional reputation, which may attract more junior nurses working towards APN roles (Haaland et al., 2019), therefore potentially easing the global healthcare workforce shortage. On the contrary, if there is negative feedback from nurses in running NLCs, it reminds healthcare organizational leaders to address nurses' concerns, implement effective interventions (Andrioti et al., 2017), as well as provide a supportive working environment (Hagglund, 2010) to those nurses who are running NLCs.

Current literature reviews on NLCs were either focused on the impact of NLCs in specific specialties (Molassiotis et al., 2021; Randall et al., 2017) or addressed advanced practitioners' experiences of working in specific clinical contexts (Evans et al., 2021; Jakimowicz et al., 2017). To our knowledge, there are no other reviews focusing on the broad topic of nurses' experiences and perceptions of running NLCs; therefore, a scoping review of the peer-reviewed literature was conducted.

2 | REVIEW METHODS

2.1 | Aim

The aim of this scoping review was to systematically search and synthesize the current peer-reviewed primary research evidence on nurses' experiences and perceptions of running NLCs; determine the significance of the topic, summarize the findings, and identify knowledge gaps in the literature to guide further research and provide evidence about nurse-led practice.

2.2 | Design

A scoping review is an evidence synthesis method to identify and map the coverage of existing literature, clarify key concepts or definitions, provide a broad or detailed overview of its focus, and establish current understanding of a specific topic, concept, or issue (Munn et al., 2022; Peters et al., 2020). Due to the broad nature of the topic and the authors' aim to explore what is known about nurses' experiences and perceptions of running NLCs, a scoping review of the peer-reviewed literature was chosen as the review method. This review is guided by the updated methodological guidance for the conduct of scoping review from the Joanna Briggs Institute (Peters et al., 2020). The original guidance (Peters et al., 2015) was built on the earlier established scoping review framework by Arksey and O'Malley (2005). This scoping review was reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (Tricco et al., 2018).

2.3 | Review question

The scoping review question was: What is known about nurses' experiences and perceptions of running NLCs?

2.4 | Search methods

Systematic searching of CINAHL, Medline, PsycINFO and Web of Science databases was conducted from January 2010 to September 2023. The search strategies were developed by all authors through multiple research meetings to achieve consensus. Search keywords were identified following P (Population) I (Intervention) C (Comparison) O (Outcome) concept map (Table 1) (Wolters Kluwer health, n.d.). Pilot searches were conducted to test the search terms and identify the most relevant articles. Both Medical Subject Headings (MESH) and keywords were used to search the CINAHL, Medline and PsycINFO databases. Only keywords were used to search the Web of Science database. The initial systematic search was conducted in May 2021. Individual search strategies were developed for each database based on the different features of each database to capture as many relevant articles as possible, using the agreed key terms. An extended search was performed in September 2023 to identify the articles published between May 2021 and September 2023. In addition, reference lists of relevant articles and reviews were also checked to identify additional articles that met the selection criteria.

2.5 | Search outcome

The primary author exported all retrieved articles to EndNote 2.0 for screening. All authors developed the article selection criteria together (Table 2). The selection criteria included all peer-reviewed primary research articles published in English after January 2010, including those exploring nurses' experiences, perceptions or opinions of running NLCs. Exclusion of studies beyond the 13 years' timeframe might have limited the number of eligible studies, but studies published beyond 13 years might reflect outdated literature considering the evolution of NLCs in the last decade. Throughout the search, some studies covering both nurses' and other health professionals' experiences, perceptions, or opinions with NLCs were identified. Recognizing that valuable evidence could be missed if these studies were excluded, if nurses' experiences or perceptions could be distinguished from those of others, these articles were eligible to be included in this scoping review. The primary author (XP) removed duplicate articles and performed title and abstract screens in collaboration with another author (CM) for all imported results. Both XP and CM read the full text of all articles that were selected for screening independently to identify the articles that met the selection criteria. Any disagreements were resolved with the third author (GM).

2.6 | Quality appraisal

Quality appraisal is not normally required for scoping reviews (Peters et al., 2020). However, Daudt et al. (2013) deemed assessing the quality of the articles is a required step for scoping review when the review has the aim of providing research evidence to guide policymakers and clinical practice. Therefore, to enhance the validity of this

TABLE 1 Search keywords using PICO concept map.

Search terms	P (population)	I (Intervention)	C (Comparison)	O (Outcome)
PICO	Nurs*	Running Nurse-led clinics	No comparison group	Nurses' experiences and perceptions
Keywords and Synonyms	'nurse consultant*' Or 'nurse specialist*' Or 'nurse clinician*' Or 'nurse coordinator*' Or 'advanced practice nurse*' Or 'nurse practitioner'	'nurs* led clinic*' Or 'nurse-led clinic*' Or 'nurs* managed clinic*' Or 'nurs* run* clinic*'		experience* Or perception* Or attitude* Or opinion* Or view* Or Perspective*
Thesaurus (MESH*)	**MESH from Ovid** 'Nurse Clinicians'/ Or 'Nurse Specialists'/ Or 'Nurse Practitioners'/ **MESH from CINAHL** (Nurse Consultants) Or (Clinical Nurse Specialists) Or (Nurse Practitioners+)	**MESH from CINAHL** (Nurse-Managed Centres)		**MESH from Ovid** 'Attitude of Health Personnel'/

TABLE 2 Article selection inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
• Peer reviewed, primary research.	• Non-peer reviewed articles.
• English language.	• Not written in English.
• Studies published between January 2010 and September 2023.	• Studies published prior 2010.
• Studies including nurses' experiences, perceptions and opinions of running nurse-led clinics.	• Nurses' experiences and perceptions of running nurse-led clinics cannot be separated from other stakeholders' opinion with nurse-led clinics.
	• Literature that did not include empirical data (review articles, experts' opinion, news etc.).

scoping review, selected qualitative studies were appraised using Critical Appraisal Skills Program (CASP) qualitative checklist (CASP, 2019a). Quantitative studies were appraised using CASP cohort checklist (CASP, 2019b). And mixed methods studies were appraised using the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018). The number of items meets the appraisal criteria listed in Table 3. The quality appraisal was performed by the primary author, results were discussed during research meetings, and agreement on selection of articles was reached by all authors. No study was excluded from this scoping review after quality appraisal.

2.7 | Data abstraction

The primary author performed initial data charting and summarized the findings for selected articles, which were checked and verified by the other two authors. The characteristics of the studies, including authors, year of publication, study aims, method/methodology, study settings, study tools, data collection procedures and findings that were relevant to nurses' experiences and perceptions, were extracted, charted, summarized and presented in Table 3 (Arksey & O'Malley, 2005).

2.8 | Data analysis/synthesis

A descriptive summary was made to analyse the characteristics of the studies. According to Arksey and O'Malley (2005), an analytic framework or a thematic construction is needed to present the narrative description of the current literature. This process includes having the primary researcher reading and rereading all selected articles to get a comprehensive understanding of the data. Sections or sentences addressing the review question were extracted and coded. Similar codes were then categorized into subthemes to seek patterns and explore similarities and differences among the data. Subsequently, the primary researcher presented all codes and subthemes to all researchers involved in this scoping review. All subthemes were reviewed, refined and further grouped into two overarching themes.

TABLE 3 Summary of study characteristics.

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
Hagglund (2010)	To explore district continence nurses' experiences of running continence service in primary care system.	Qualitative descriptive study	Questionnaire	District continence nurses	Nurses ($n = 22$)	Sweden	The nurses who had scheduled NLCs and maintained good teamwork with other health professionals gained more professionalism. In contrast, nurses felt frustrated, inadequate and less professional when they did not have scheduled NLCs and when there was a lack of collaboration with others.	9/10 (CASP qualitative)
Desborough et al. (2013)	To gain the in-depth understanding of experiences and satisfactions of working at a nurse-led walk-in Centre.	Qualitative phenomenology study	Face-to-face interview	Nurse-led Walk-in Centre	Nurses ($n = 13$)	Australia	All nurses expressed they built strong teamwork and received support from their colleagues. Advanced practice nurses felt autonomy was their challenge, whereas the nurse practitioners felt more comfortable with autonomy. Nurses' capacity in delivering the quality care were limited by protocols. Preparatory training and ongoing education were not sufficient.	9/10 (CASP qualitative)
Marshall et al. (2011)	To explore the nurses' experiences and perceptions in participating NLHLCs in high deprivation areas in New Zealand.	Qualitative study	1. Narrative report 2. Semi-structured interview	Nurse-led healthy lifestyle clinics ($n = 19$)	Nurses' Narrative reports ($n = 53$) Interview ($n = 16$)	New Zealand	Nurses enjoyed working in the NLHLCs. They received positive feedback and were contended to see patients taking more responsibilities for	8/10 (CASP qualitative study)

(Continues)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
							their health. The areas where nurses faced challenges included limitations of the computer template, changes in funding and patient eligibility when initially establishing the project, and limited clinic availability time.	
Wade et al. (2015)	To evaluate the acceptance of the nurse-led AM clinics in ProtecT trial and to compare the experiences with standard urology-led active surveillance care.	Mixed-methods study	Questionnaire and semi-structured interview with research nurses	Nurse-led AM clinics for men with localized prostate cancer	*In trial* Clinics $n = 9$ Nurses $n = 23$	UK	Research nurses agreed nurse-led AM clinics provided benefits to patients including continuity of care, timely and reliable appointment for patients. Some nurses believe NLCs reduced burden for NHS and were cost-effective. Nurses agreed they developed special skills from running AM clinics and reported high level of job satisfaction. However, lack of training and support were identified.	11/17 (MMAT)
Hutchison et al. (2011)	To identify the scope of practice of cancer NLCs, factors that determine the success of these NLCs and provide suggestions for developing cancer NLCs in the area.	Questionnaire study	1. Scope survey 2. Questionnaire	Nurse-led cancer clinics	NLCs $N = 100$ Surveys returned $N = 84$ represented NLCs $N = 88$	Scotland	Providing treatment, symptom management, diagnostic and providing support were the main functions of NLCs. Not having absence cover was identified as the challenge of	8/12 (CASP cohort study)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
							NLCs. Nurses identified autonomy in decision making, continuity of care, reduced waiting time for patients, holistic care, reduced pressure for medical staff, and so on, as the benefits of NLCs.	
MacKenzie et al. (2010)	To evaluate the acceptance and usefulness of a community-based nurse-led heart failure clinic.	Mixed-method exploratory study	Structured email survey	Community based nurse-led heart failure clinic	Nurses $n = 3$	Scotland	Nurses strongly deemed pre-launch planning may benefit in implementing a new NLC, but it was hard to arrange nurses to see all GPs' practice and there was not much research on how to establish and maintain chronic heart failure NLCs. All nurses expressed communicating with GP can be difficult, but over time, GP gradually accept NLCs.	13/17 (MMAT)
Christiansen et al. (2013)	To discover APNs' perceptions in developing APN's role in nurse-led out of hours services and identify the potential facilitators and barriers of the role development.	Quantitative scales incorporated into qualitative research Content analysis	Written open-ended questionnaire	Nurse-led out-of-hours care	APN $n = 120$	Hong Kong, China	Nurse-led out of hours clinic improved patients' care and safety, reduced waiting time for patients to access the healthcare service, improved nurse's image as a nurse, also increased nurses' autonomy, responsibilities and professional	9/10 (CASP qualitative)

(Continues)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
							development opportunities. In general, APNs had a high level of job satisfaction. However, lack of acceptance of APNs' role, inadequate support and education were the barriers identified.	
MacKay et al. (2020)	To assess the perceived facilitators and barriers of implementing nurse and midwife led HIV clinics.	Mixed-method study	1. Close-end questionnaire 2. Interviews 3. A facility audit	Clinics $n = 30$ Include both primary healthcare settings and hospital settings	Questionnaire respond $n = 211$ Clinical supervisors interview $n = 62$	Eastern and southern African countries ($n = 11$)	Nurses rated training provided them knowledge and skills to run NLCs but identified low satisfaction with training provided and provided negative responses in getting feedback and receiving supportive supervision. Nurses rated they had authority to run the clinics, high in positive staff and patient relationship, and have adequate time to provide care for patients. The findings from the service supervisors identified shortcomings in preservice training, staff, supplies or spaces, insufficient mentorship and challenges in workload.	15/17 (MMAT)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
Shiu et al. (2012)	To explore the features of good ANP in NLCs and suggestions for expanding these services.	Qualitative study-multiple case study design	1. Open- ended observation schedule 2. Interviews	Continence NLCs, Diabetic NLCs, wound care NLCs	Observation $n = 9$ days Interview $n = 6$	Hong Kong, China	Researchers identified elements of good ANP and factors contributing to good ANP. To expand ANP in NLCs, authors suggested reshaping four boundaries based on findings and discovered facilitating and hindering factors of expanding APN's role in NLCs.	9/10 (CASP qualitative study)
Farrell et al. (2011)	To discover the scope of practice of oncology specialist nurses who were involved in advanced clinical practice and NLCs in the UK.	Questionnaire study	Questionnaire survey	Oncology specialist nurses	Questionnaires sent $n = 161$ Returned $n = 103$	UK	Nurses took different training and delivered various services in NLCs. Most nurses extended their role to improve patient services. Some nurses expressed they received appreciation from multidisciplinary team, but others expressed lack of support and understanding of their role from colleagues.	9/12 (CASP cohort study)
Farrell et al. (2017)	To explore nurses' role in nurse-led chemotherapy clinic.	Ethnographic study	1. Non-participant observation 2. Interviews 3. Review of clinic documentation.	Nurse-led chemotherapy clinic	Consultation observation $n = 61$ Interview $n = 11$	UK	Based on nurses' scope of practice and autonomy, the researchers identified four levels of nurse-led chemotherapy clinic. Nurses' scope of practice and autonomy were varied and heavily influenced by doctors.	9/10 (CASP qualitative study)

(Continues)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
							Some nurses viewed their clinical assessment as holistic, but others perceived advanced practice nurses' role were medicalized.	
Dong et al. (2023)	To explore the work experiences of nurses who work in NLCs in TCM hospitals.	Focused ethnographic study	1. Interviews 2. Non-participant observation 3. Review of documents from medical records	Various NLCs in TCM hospitals	Interview $n = 11$ Observation $N = 7$ nurses (25 consultations)	China	Nurse-led clinics were established in TCM hospitals to ease the growing clinical demands and fulfil nurses' career development needs. All the participants are passionate about NLCs and have achieved high levels of self-recognition and accomplishment in their careers. However, nurses also experienced operational challenges with their NLCs due to a lack of specialization, which restricted their scope of practice and career progression.	10/10 (CASP qualitative study)
Gyldenvang et al. (2022)	To explore patients' satisfaction with nurse-led consultations and health professionals' perceptions of extended nurses' scope of practice.	A sequential multi-methods study	Focus group interviews with clinical nurse specialists	Nurse-led clinics for patient with breast- or gynaecological cancer	Focus group $n = 2$ Nurses $n = 10$	Denmark	The nurses' interview revealed that nurses embrace holistic and patient-centred care through NLCs. They achieved greater professionalism and job satisfaction through nurse-led consultations. Nurses perceive that preparations,	13/17 (MMAT)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
							including preparatory training and a designated clinical space, are vital before implementing NLCs. Nurse clinics saved time for physicians and reduced patients' waiting time to receive the service, but nurses found it hard to maintain the schedule while running NLCs.	
Ramachandran et al. (2022)	To explore patients and health professionals' experiences of nurse-led cirrhosis clinics to identify the acceptability, strength and limitations.	A qualitative study	Interviews	Nurse-led liver cirrhosis clinic	Specialist nurses $n = 3$	Australia	The specialist nurses perceived nurse-led cirrhosis clinics as saving patients' waiting time to access hospital specialist clinics, preventing patient loss of follow-ups and providing holistic care in NLCs. By running NLCs, nurses increased their clinical and communication skills. Nurses were also concerned about extended patient overload and a lack of on-site doctor's support. Therefore, they need clear protocols in NLCs and regular patient case discussions with hepatologists.	10/10 (CASP qualitative study)

(Continues)

TABLE 3 (Continued)

Authors, years	Aim of the study	Method/ methodology	Data collection	Study setting	Study size	Countries	Key findings	Number of items that meet the appraisal criteria
Doumen et al. (2021)	To explore stakeholders' perceptions on NLCs in rheumatic arthritis in Belgium.	A cross section qualitative study	Focus-group interviews	NLCs for rheumatic arthritis	Nurse $n = 16$ (two focus groups)	Belgium	Nurses serve as the primary point of contact for patients; however, they are reluctant to take on the full responsibilities of patients' management and prefer a doctor to be available as their backup. Nurses did not like excessive policies to guide them in NLCs as it may limit their ability to provide holistic care.	9/10 (CASP qualitative study)

Abbreviations: AM, active monitor; ANP, advanced nursing practice; CASP, Critical Appraisal Skills Program; HIV, human immunodeficiency viruses; MMAT, Mixed Methods Appraisal Tool; NHS, National Health Service; NLCs, nurse-led clinics; NLHLCs, nurse-led healthy lifestyle clinics; UK, United Kingdom; TCM, traditional Chinese medicine.

3 | RESULTS

3.1 | Search results

A total of 2747 articles were identified for screening across four databases, and relevant articles' reference lists search. In total, 328 duplicate articles were removed, and 2419 articles were screened for titles and abstracts. At this level of screening, 2381 articles were removed, and 38 articles met the eligibility criteria for full text screening. Following full text screening, 15 articles were included in this scoping review of the peer-reviewed literature. The systematic search and article selection process is presented in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 flow chart (Figure 1) (Page et al., 2021).

3.2 | Summary of study characteristics

Among the 15 reviewed studies, nine used qualitative methodology (Dong et al., 2023), two presented a survey method that included multiple-choice and open-ended questions (Farrell et al., 2011; Hutchison et al., 2011), and four adopted a mixed-methods design. Among the four mixed-methods studies, three included other stakeholders' perceptions with NLCs. Two of them collected qualitative data to explore nurses' experiences with NLCs (Gyldenvang et al., 2022; MacKay et al., 2020), and one (Wade et al., 2015) adopted questionnaires which contained both qualitative and quantitative data.

All studies except MacKay et al. (2020) were conducted in economically developed countries, including five in the United Kingdom, three in China, two in Australia, and one in New Zealand, Belgium, Denmark and Sweden. MacKay et al.'s (2020) study was conducted in 11 African countries.

The 15 studies involved 11 different specialties, including continence (Hagglund, 2010), cancer (Farrell et al., 2017), cardiac (MacKenzie et al., 2010), diabetes, wound (Shiu et al., 2012), human immunodeficiency viruses (MacKay et al., 2020), liver cirrhosis (Ramachandran et al., 2022), rheumatic arthritis (Doumen et al., 2021), nurse-led walk-in centres (Desborough et al., 2013), Chinese medicine (Dong et al., 2023) and lifestyle clinics (Marshall et al., 2011). Three studies were conducted in primary care settings (Hagglund, 2010) and nine studies in specialist clinics or hospital settings (Dong et al., 2023). One study was conducted in both primary healthcare settings and hospital settings (MacKay et al., 2020). Both Desborough et al. (2013) and Christiansen et al. (2013) explored nurses' perceptions of nurse-led out-of-hours care.

From the studies identified, five studies explored nurses' perceptions, experiences, satisfaction, facilitators and barriers of running NLCs (Dong et al., 2023). Six studies focused on both stakeholders' and nurses' experiences, perceptions and acceptance of NLCs (Doumen et al., 2021). Four articles investigated nurses' role and scope of practice in delivering NLCs (Farrell et al., 2017).

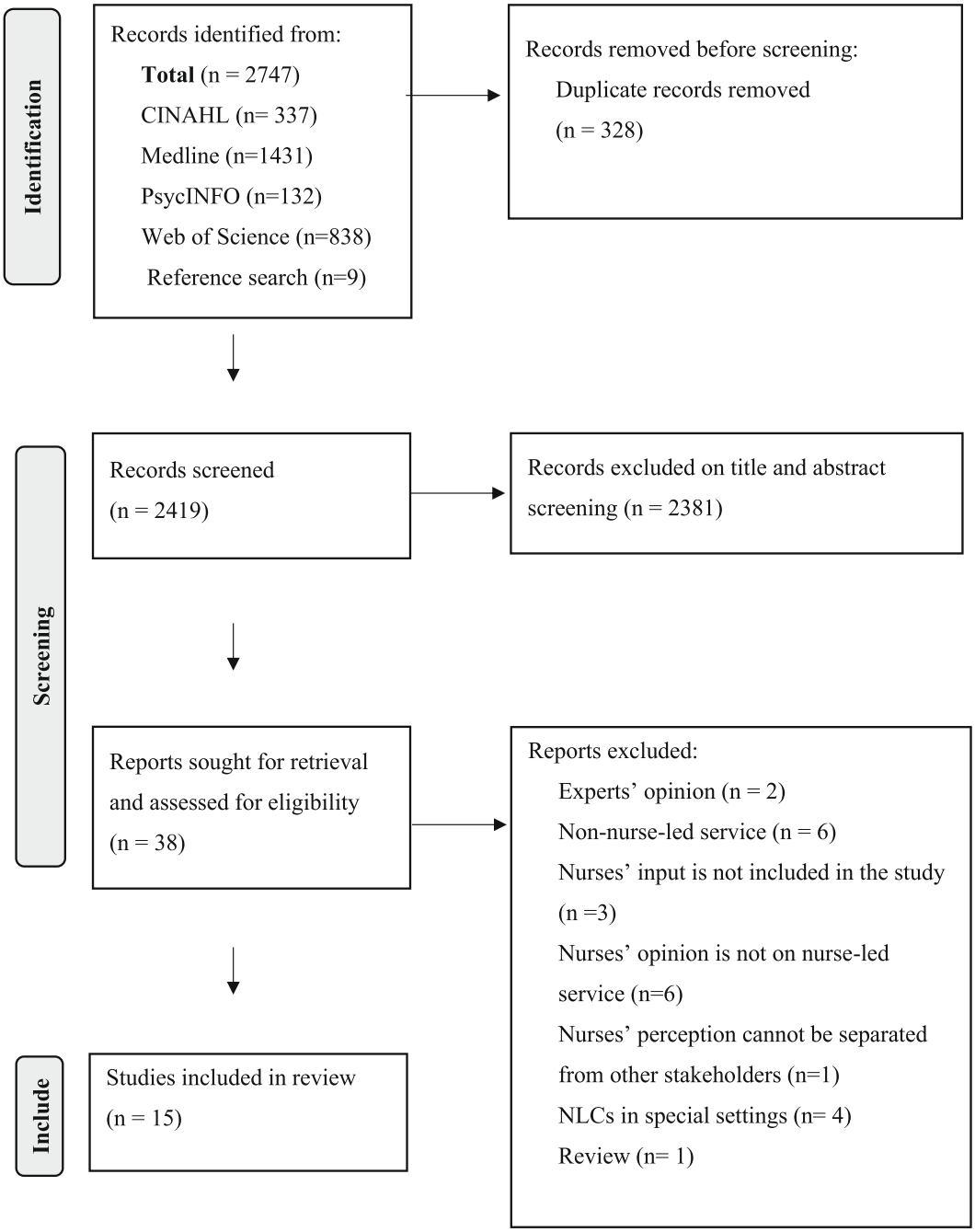

FIGURE 1 The PRISMA 2020 flow chart (Page et al., 2021).

3.3 | Narrative summary of themes

3.3.1 | Theme 1: Benefits of running NLCs

This theme summarized the benefits of running NLCs which comprised two subthemes.

Benefit to nurses

One of the benefits of NLCs is increased autonomy. Nurses believed NLCs enabled them to develop and exercise autonomy (Christiansen et al., 2013; Wade et al., 2015). Some nurses in Desborough et al. (2013) pointed out that nurses' autonomy is related to their qualifications and previous work experiences and skills. Other nurses in Gyldenvang et al. (2022) study expressed that running NLCs created opportunities for them to transition their knowledge and skills into practice. They felt more comfortable and confident with nurse-led clinical practice. Overall, nurses in nine studies highlighted that NLCs created new challenges, provided opportunities to expand their role, and extended knowledge, skills and experiences, which enabled nurses to achieve self-recognition and improved their image as a nurse (Christiansen et al., 2013; Wade et al., 2015). All these benefits enhanced nurses' job satisfaction (Dong et al., 2023; Marshall

et al., 2011) and led nurses to an advanced career pathway (Christiansen et al., 2013).

Another advanced nursing practice element in NLCs was integrated teamwork (Shiu et al., 2012), as NLCs promoted positive staff relations (MacKay et al., 2020). In Hagglund (2010) and Wade et al. (2015) studies, the nurses expressed good collaboration and teamwork with MPs and other health professionals. The nurses viewed the MPs as supportive colleagues (Wade et al., 2015). When there was no MPs available to support nurse-led services, nurses in Desborough et al.'s (2013) study worked collaboratively with their nurse colleagues and supported each other.

Benefit to patients

There were clear perceptions from nurses that NLCs improved patient services and resulted in positive outcomes. Shiu et al. (2012) explored the elements of nurses' role in NLCs from nurses', MPs' and patients' perspectives and found that providing holistic, patient and family-centred care was one of the best aspects of APNs' role. Nurses served as the primary point of contact for patients (Doumen et al., 2021), provided patients with psychosocial support (Hutchison et al., 2011; Wade et al., 2015), respected patients' cultures (Hagglund, 2010; Marshall et al., 2011) and families (Marshall et al., 2011; Shiu et al., 2012). In both Marshall et al. (2011) and Ramachandran et al. (2022) studies, the nurses expressed through narrative reports and interviews that NLCs provided opportunities for nurses to spend more time than usual consulting patients in a holistic way, which helped build therapeutic relationships and rapport. It also promoted patients' health-seeking behaviours and empowered patients to take care of their own health. In the Gyldenvang et al. (2022) study, the oncology CNSs highlighted that they believed patients living with cancer may encounter other issues in their lives. When consulting patients with treatment-related side effects, they also addressed a wide range of other issues, such as weight management, fear of cancer recurrence or sexual relationships. Apart from providing individualized comprehensive patient care, nurses also mentioned that NLCs enhanced patient safety (Christiansen et al., 2013), reduced waiting time for patients to access services (Dong et al., 2023), maintained continuity of care (Hutchison et al., 2011) and mitigated burdens for both patients and MPs (Gyldenvang et al., 2022).

3.3.2 | Theme 2: Challenges and barriers of running NLCs

Synthesis of the findings from included studies showed participating nurses identified challenges and barriers in running NLCs which can be categorized into five subthemes.

Lack of training and support

Nurses voiced concerns regarding insufficient pre-service or ongoing training and support provided for their role (Desborough et al., 2013; MacKay et al., 2020). Hutchison et al. (2011) identified 30% of oncology nurses were not assessed or did not know whether they were assessed for competencies to run NLCs. In MacKay et al.'s (2020) study, nurses provided negative responses on receiving supportive supervision and mentorship. Participants in Dong et al.'s (2023) study raised the issue of inadequate specialized education programs relevant to their NLCs. For example, an oncology nurse wanted to train herself in breast care, but the course was not available in her country. All selected studies except MacKenzie et al. (2010) raised the need for nurses to receive ongoing training and support. Two studies suggested their role in NLCs should be governed by a legal framework to ensure accountability (Doumen et al., 2021; Ramachandran et al., 2022). Nurses recommended preservice training, in-service programs, networking, regular forums to discuss patients with the multidisciplinary team, and mentorship for those who manage NLCs (MacKay et al., 2020; Ramachandran et al., 2022). Seeking professional development opportunities is also the individual nurse's responsibility. This was supported by Christiansen et al. (2013) and Shiu et al. (2012) who suggested that nurses need to be educated at master's degree level to be able to take responsibility to run NLCs.

Obstacles with teamwork

Farrell et al. (2017) found that some nurses felt frustrated as MPs controlled the referral of patients to NLCs. Specialist nurses conducting NLCs in specialist clinics preferred to have MPs available as backup, but the MPs were either not onsite or consistently too busy to discuss patients (Gyldenvang et al., 2022; Ramachandran et al., 2022). Nurse participants in Hagglund's (2010) study highlighted limited collaboration and understanding of their work from General Practitioners (GPs) and other health professionals. MacKenzie et al. (2010) reported that communication with GPs was always unsatisfactory, especially when GPs were busy. It was hard to gain the confidence and trust of GPs. However, nurses found that as time passed, GPs' attitudes changed. GPs gradually accepted the nurses' roles as APNs and their ability to run NLCs. Some nurses reported not every nurse was willing to collaborate and work as a team. Moreover, APNs were not given clear explanations on how they should work with other health professionals to address the patients' health problems (Hagglund, 2010).

Varying views on protocols and guidelines

Nurses must have clear evidence-based protocols in place when running NLCs (Ramachandran et al., 2022; Wade et al., 2015). However, nurses claimed the protocols that guided nurses to run NLCs created frustration among nurses and other healthcare practitioners (Christiansen et al., 2013). Nurses in Desborough et al. (2013) felt the protocol limited their capacity to provide patient care. Farrell et al. (2017) found some protocols limited patients' referral eligibility. Moreover, MPs' poor adherence to protocols led to small numbers of patients being seen in NLCs. Whereas nurses in Dong et al. (2023) raised the concern that sometimes they could not see patients in NLCs, as there was no specific protocol to guide nurse-led practice, with nurses having to refer patients to the MPs first. However, nurses in Doumen et al. (2021) were concerned that if nurses' practice in NLCs is overly ruled by protocols, they would shift nurses' focus away from patient-centred care.

Lack of role recognition

Public awareness was mentioned in both Hong Kong studies (Christiansen et al., 2013; Shiu et al., 2012). APNs commented in the questionnaire that some patients trusted MPs more than nurses. This may be related to the traditional healthcare culture in Hong Kong (Christiansen et al., 2013). Similarly, in MacKay et al.'s (2020) study, lacking community trust appeared as an obstacle to nurse-led practice. In Farrell et al. (2011), a few nurses noted a lack of understanding of specialist nurses' roles by their colleagues, especially when nurses expanded their roles while staying in the same position. The above studies were either conducted over a decade ago or in economically disadvantaged countries. Another study conducted more recently in China (Dong et al., 2023) reported a different view from nurses that NLCs have been well accepted by patients, MPs, and healthcare organizations, as nurses could solve problems that MPs have missed, and NLCs relieved the burden of the healthcare systems.

Inadequate organizational support

Some nurses identified inadequate support from organizations as a barrier that limited their practice, for example, limited consultation rooms and equipment, clinical nurses' shortage and lack of administrative support (Dong et al., 2023; Hutchison et al., 2011). Although 80% of nurses reported having administrative support in Hutchison et al.'s (2011) study, researchers still considered this was a barrier because those 20% of nurses who did not receive administrative support, faced challenges running the clinics effectively.

Another challenge for nurses identified in some studies was a lack of absence cover. In both Farrell et al. (2011) and Hutchison et al. (2011) studies, nearly 40% of nurses reported there was no leave cover provided during their absence. In Shiu et al. (2012), APNs expressed a sense of loneliness. The most common reason might be that most NLCs were delivered by a single clinician, and no other trained nurses were available to cover them.

4 | DISCUSSION

This scoping review of the peer-reviewed literature synthesized the findings from studies exploring nurses' experiences and perceptions of running different NLCs in various clinical contexts, cultures and geographic regions, which have not been previously reviewed. The included studies presented heterogeneous characteristics, which this review consolidated into one piece of work.

Nurse-led services have evolved swiftly in the last few decades. These clinics are now widely implemented around the world in community care, outpatient clinics and out-of-hours care (Connolly & Cotter, 2023). Some APNs deliver face-to-face care, and others run NLCs over the phone. The recent coronavirus pandemic accelerated the expansion of telecare, which enabled nurses to see patients without meeting in person. This approach improved continuity of care for some patients during the pandemic and saved patients' travel time (Wong et al., 2023).

NLCs play an important role in performing holistic health assessments, post-treatment follow-ups and facilitating health promotion in many countries (Randall et al., 2017). Nurses are considered the central agents in NLCs as they foster an integrated teamwork culture in multidisciplinary teams to provide holistic and patient-centred care (Shiu et al., 2012). By running NLCs, nurses see themselves as experts in the field (Tan et al., 2017).

The benefits and positive outcomes of NLCs to patients have been reported by nurses themselves, via service evaluation and patient feedback. John et al. (2019) has shown that NLCs promoted timely treatment to address individual patients' needs and reduced the requirements for outpatient appointments with MPs. From Randall et al.'s (2017) systematic review of identifying the impact of NLCs on patient outcome and satisfaction, some patients expressed confidence and felt comfortable attending NLCs, others voiced that they trusted nurses and felt they were respected, as they received tailored care according to their needs. As a result, patients recommended NLCs to others. This is in line with nurses' perspective that NLCs are of benefit to patients, as reported in the studies included in this review.

This scoping review of the peer-reviewed literature revealed that nurses experienced several barriers in running NLCs. Limited support from health organizations with a high patient caseload (Stewart et al., 2018) was one barrier for specialist nurses to deliver holistic patient care. Although this culture is changing, studies still pointed out that health organizations did not support or value NLCs as much as they supported MPs' clinics (Evans et al., 2021; Hutchison et al., 2011). In addition, Yuill's (2018) study on exploring APNs' working experiences identified that sometimes nurses did not know where to seek support, and other times, nurses were hesitant to ask for support because it was not available immediately.

The acceptance of a novel nurse-led care model is influenced by the support of organizational leadership and the quality of care provided by individual APNs (Wilson et al., 2021). To maintain a high standard of service quality, APNs must undergo comprehensive training across various fields and specifically tailored to their respective NLC specialties. However, even in the countries where NLCs have been implemented for many years, the lack of formal training and clinical governance to guide nurses in addressing specific health issues or adopting new services within NLCs was repeatedly reported (Doumen et al., 2021; Wand et al., 2021). In contrast to this review, which identified a lack of supportive supervision and competency assessment to ensure nurses are equipped to run NLCs, recent studies have highlighted an increasing demand for APNs (Evans et al., 2021; Gyldenvang et al., 2022). It is valuable to note that all these studies were conducted in diverse clinical contexts. Therefore, future research is warranted to explore the current training and support available for APNs in running NLCs.

Some APNs achieved great collaboration with MPs, especially nurses who worked with specialists. NLCs in secondary care were always in parallel with MPs' clinics or under MPs' supervision (Rogers et al., 2017). From the MPs' perspectives, they felt positive about NLCs as nurses spend more time with patients to provide continuity

and coordination of care. This allowed MPs to focus on more complex patients (Ramachandran et al., 2022). Other nurses identified challenges in collaborating with MPs as they were reluctant to hand responsibilities to APNs (Nardi & Diallo, 2014). The study by Farrell et al. (2017) highlighted that expanding nurses' role to take on MPs' responsibilities created tension between nurses and MPs. In addition, nurses' roles and scope of practice in NLCs were not clearly stated. This made MPs less interested in collaborating with APNs, as the APNs' role changed over time, their role and scope of practice remained ambiguous and poorly defined. Lack of role clarity raised patient safety concerns for MPs; as a result, MPs did not value APNs (Evans et al., 2021; Jakimowicz et al., 2017). Therefore, clarifying nurses' roles and responsibilities, and identifying clear standards for nurses to follow in running NLCs is necessary.

To gain support for NLCs, APNs should initiate collaboration with MPs. There is evidence to show that as time passes, MPs become more familiar with APNs' roles and NLCs. MPs were happy for APNs to handle some tasks and responsibilities (Jakimowicz et al., 2017). Therefore, APNs are encouraged to promote their role by joining MPs' consultations, attending regular multidisciplinary meetings, and providing advice on patient care and disease management from a nursing perspective. In addition, APNs are encouraged to introduce their NLCs and APN roles to new MPs and share their experiences in supporting and caring for patients through nurse-led services at local and international conferences, seminars and webinars to promote NLCs and APNs' roles.

This review has identified varying opinions on protocols while delivering care in NLCs. One voice claimed protocols sometimes limited APNs' autonomy in NLCs (Desborough et al., 2013), but there is a potential argument from MPs in a later study that nurses may not be adequately skilled to assess the patients and make appropriate clinical decisions in the absence of protocols (McGlynn et al., 2014). Patients also highlighted that they were more comfortable with NLCs if there were specific protocols in place to guide nurses (Doumen et al., 2021). Therefore, standard protocols and guidelines are essential to ensuring safe practice in NLCs. One study reported poor adherence to the NLC protocols by MPs (Farrell et al., 2017), hence, the authors suggested all stakeholders, including nurses, MPs and healthcare organizational leaders, should develop protocols in collaboration to ensure nurses and their NLCs receive the support they should be given. All protocols are to be developed based on the available evidence. In addition, the proposed protocols should be developed in consultation with healthcare consumers to make sure they are confident attending NLCs.

This review indicated that there are limited studies revealing the experiences and perceptions of nurses who run NLCs. Many studies were undertaken to assess the impact of NLCs and APNs' roles. Those studies offer limited insights into APNs' opinions and experiences of managing NLCs (Woo et al., 2019). Despite the considerable development of NLCs over the years, it is still a relatively novel model of care. The insufficient education on the roles of APNs to the public contributes to a limited awareness and confidence in NLCs within the community (Wilson et al., 2021). Given the unequivocal benefits demonstrated by NLCs, both healthcare organizations and individual APNs bear the responsibility to actively promote NLCs and the role of APNs through community events and social media. Moreover, governments have a duty to enact supportive policies that reinforce the significance of APNs and NLCs in the healthcare landscape.

The studies identified in this scoping review of the peer-reviewed literature indicated NLCs started to appear in less developed regions. Nurses may experience more challenges in developing and managing nurse-led services in low and low-middle income nations, such as lack of resources, and insufficient training support or programs that do not meet international standards and best practices (MacKay et al., 2020; Scanlon et al., 2020). Therefore, future research may draw attention to ways of supporting and training nurses to run NLCs and overcome the challenges that nurses may face during implementing NLCs in these countries.

The evidence also shows that the care needs of people in rural and underserved areas may be different from those of people living in urban cities (Christiansen et al., 2013). Nurses' experiences and perceptions of providing holistic care through NLCs in rural regions can be quite different from those in urban cities. The practice experiences derived from NLCs in urban areas cannot be transferred to remote areas directly (MacKenzie et al., 2010). Future studies may include APNs from different healthcare settings and different geographic areas and compare their experiences in running NLCs.

4.1 | Limitations

The authors searched articles from four electronic databases and relevant articles' reference lists, and only included peer-reviewed primary research studies. Grey literature and unpublished literature were not searched and were not included in this scoping review. It is possible some valuable evidence may have been missed.

Only articles written in English were screened for this scoping review of the peer-reviewed literature, as English is the only language used to communicate within the research team. Most of the selected articles were from western and English-speaking countries. Whether similar studies were written in other languages remains unknown. The studies included in this scoping review were from diverse clinical settings and geographic regions. While recognizing that the studies conducted in diverse settings may not always be directly comparable, this scoping review provided valuable insights into nurses' experiences and perceptions of running NLCs. It serves as a valuable guide for further exploration of this topic.

Due to a scarcity of studies exclusively focused on nurses' experiences and perceptions of running NLCs, this scoping review included studies involving other stakeholders. While the review specifically considered nurses' experiences and perceptions, it acknowledges the possibility that findings may reflect opinions from other health professionals to some extent.

5 | CONCLUSION

This scoping review of the peer-reviewed literature identified current evidence on nurses' experiences and perceptions of running NLCs. Findings suggested that nurses believed implementing and running NLCs were beneficial to themselves, patients and healthcare systems. Although nurses faced challenges in delivering nurse-led services, they were willing to expand their roles and services. It is important that strategies are in place to address nurses' concerns and the challenges they face in managing NLCs. Further studies are needed to explore nurses' experiences and perceptions of running NLCs in different countries and healthcare contexts. Future studies should also aim to identify the enablers and barriers of NLCs from both APNs' and stakeholders' perspectives.

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CONFLICT OF INTEREST STATEMENT

No conflict of interest has been declared by the authors.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

AUTHORSHIP STATEMENT

All listed authors meet the authorship criteria and agree with the content of the manuscript. XP, GM, and CM designed the study and selected the articles for this study. XP and GM analyzed the data. XP collected the data and prepared the initial draft. All authors were involved in revising the draft critically and agreed on the final version for submission.

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