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Twenty Years of Nurse-Led Research in Hemato-Oncology: A Mapping Review

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ABSTRACT

Objectives: Nurse-led research in hemato-oncology is diverse, but its nature and extent are unknown. This review aimed to identify and map nurse-led research in hemato-oncology over 20 years (2004–2024) to highlight under-researched gaps, describe methodological and topic trends, and allow comparison between geographical regions.

Methods: A mapping review was undertaken following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, Scoping Review (PRISMA-ScR) checklist. Five databases were systematically searched: Medline (Ovid), CINAHL (EBSCOhost), Embase (Elsevier), ProQuest, and Scopus (Elsevier). Independent screening and data extraction were undertaken on the web-based platform Covidence.

Results: A total of 1,916 sources were included (n = 1,618 journal publications; n = 262 published conference abstracts; n = 36 doctoral dissertations). The most common methodology was non-experimental (60.5%), followed by qualitative (19.2%), experimental (12.5%), evidence syntheses (6.3%), and mixed methods (1.5%). Most of the studies were undertaken by nurses working in the USA, followed by nurses in China, Türkiye, Canada, Australia and Iran. Studies in pediatric, adolescent, and young adult settings represented 42.4% of the included studies. A high number of studies undertaken in hematopoietic stem cell transplant settings were found.

Conclusions: The number of research studies led by nurses in hemato-oncology settings, particularly in the USA, is upward. Most of the research undertaken has adopted a descriptive quantitative methodology. More interventional research is needed to contribute meaningfully to scientific knowledge that enhances the quality of care for individuals affected by blood cancer across the disease trajectory.

Implications for Nursing Practice: To support more nurse-led interventional research, strategic investment in mentorship, protected research time, interdisciplinary collaboration, structured clinical-academic posts, and funding pathways is needed.

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Layperson Summary

What we investigated and why

We examined how much and what kind of research nurses conducted on blood cancers from 2004 to 2024. We wanted to see the trends and identify gaps where more nurse-led research is needed.

How we did our research

We carefully planned database searches using keywords and saved our searches on a web-based software named Covidence. The team then used Covidence to review all the studies and decide which studies should be included or excluded.

What we have found

We found 1916 studies that met our inclusion criteria of being nurse-led. The top three countries where nurses published the most were the USA, China and Türkiye. Almost half of the studies were undertaken by nurses working in paediatrics or adolescent and young adult settings. Many of the studies were focused on bone marrow transplants.

What it means

Over the past twenty years, research led by nurses has steadily increased. Institutional support is needed to support clinical-based nurses leading research.

Nurses working in hemato-oncology interdisciplinary teams manage the care of people with blood cancers. These complex and heterogeneous cancers can be broadly classified as malignant and non-malignant conditions. The major categories in malignant hematology are lymphoma, myeloma and leukaemia.¹ Myeloproliferative neoplasms are also classified as blood malignancies.² Many of these hematological malignancies are curable with intensive treatments; however, it is estimated that up to 60% of these diagnoses are incurable or chronic in nature.³

Nurse-led research in hemato-oncology is diverse. Examples of nurse-led primary research include symptom management,⁴⁻⁹ supportive care and survivorship issues,¹⁰⁻¹⁸ palliative and end of life care,^{19,20} carers' experience,^{21,22} and child and family experiences.^{23,24} Moreover, nurses are also increasingly leading hemato-oncology related evidence syntheses.²⁵⁻³¹

In a recent survey, most hematology nurses (57.5%/n = 125) viewed nurse-led research as a high/very high priority.³² However, half of the nurses surveyed further clarified that their nurse-led research had to be undertaken outside working hours (n = 99/45.0%).³² This highlights that "protected time" remains an issue for nurses during working hours to carry out research, and acceptance by management and the organization is crucial to fostering a positive nursing research culture.³² However, also crucial to nurse-led research is a collaborative model where nurses in academic roles support clinicians in securing funding and undertaking research.³³⁻³⁵

Review Aim

The nature and extent of nurse-led research in hemato-oncology are not well documented. Therefore, this mapping review aimed to identify and map nurse-led research in hemato-oncology over twenty years (2004-2024) to reveal trends in methodology over an extended period. Mapping the focus of nurse-led research in hemato-oncology internationally will highlight gaps that are under-researched, in addition to methodological and topic trends, and allow

comparisons between geographical regions. This will help inform the direction of future nurse-led research in hemato-oncology.

Methods

A mapping review was chosen as the most suitable methodology for this study because it aimed to describe nurse-led research in oncology and hematology from 2004 to 2024. Mapping reviews aim to explain "what and where research exists in a particular area" (p.5).³⁶ Moreover, a mapping review extracts descriptive data using predefined codes.³⁶ The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, Scoping Review (PRISMA-ScR) checklist to ensure consistent reporting.³⁷

Database Searching

The database search was undertaken on May 22nd, 2024, in Medline (Ovid), CINAHL (EBSCOhost), Embase (Elsevier), ProQuest, and Scopus (Elsevier), and a year limitation was applied from 2004.

An initial search of the Medline (Ovid) and CINAHL (EBSCOhost) databases assisted with the development of the free-text keywords (Table 1) and identified relevant index terms within the databases. Following this, a complete search strategy for the Medline database was conducted and validated with the support of a health sciences research librarian using the Peer Review of Electronic Search Strategies (PRESS) checklist to enhance the search quality.³⁸ A search strategy of free text keywords and database specific index terms was performed in all databases using Boolean operators alongside truncation, wildcard, and proximity operators. An example of a search strategy using the Medline database is noted in Table 2.

Using the 'author' and 'affiliation' fields within each database was necessary to narrow the search to include nurse-led research.

TABLE 1
Free Text Keywords

Concept 1 – Author Credentials/Affiliation – Searched Using "Author Field" or "Affiliation Field" – Searched With OR	Searched Using AND	Concept 2 – Context of Haemato-Oncology – Searched Using "Title, Abstract and Keyword" Field – Searched With OR
RN		Hemato-oncology
BN		Hematooncology
RGN		Hematological neoplasm
BSN		Hematological malignancy
MSN		Leukemia
MN		Myelodysplastic syndrome
APRN		MDS
APN		AML
FAAN		CLL
DNP		CML
DN		Blood cancer
ANP		Myeloma
		Myelomatosis
		Myeloproliferative
		Myelofibrosis
		Plasmacytoma
Nurse (searched using affiliation field)		"Myeloid Metaplasia"
		Lymphoma
		Lymphosarcoma
		Hematology nurse
		Hematology cancer
		Hematology patient
		Hematology oncology
		Hematological disease
		Hematological
		Hematopoietic stem cell transplant
		HSCT

TABLE 2
Medline (Ovid) Search

#	Query	Results From 22 May 2024
1	H?emato-oncology.ab,kw,ti.	696
2	H?ematooncology.ab,kw,ti.	66
3	"H?ematolog* Neoplasms* ".ab,kw,ti.	1,996
4	"H?ematolog* Malignanc* ".ab,kw,ti.	35,773
5	Leuk?emia.ab,kw,ti.	283,981
6	"Myelodysplastic Syndrome* ".ab,kw,ti.	20,781
7	MDS.ab,kw,ti.	23,526
8	AML.ab,kw,ti.	42,702
9	CLL.ab,kw,ti.	17,449
10	CML.ab,kw,ti.	19,866
11	"Blood Cancer* ".ab,kw,ti.	1,890
12	Myeloma.ab,kw,ti.	62,625
13	Myelomatosis.ab,kw,ti.	779
14	Myeloproliferative.ab,kw,ti.	13,753
15	Myelofibrosis.ab,kw,ti.	8,240
16	Plasmacytoma.ab,kw,ti.	6,659
17	"Myeloid Metaplasia".ab,kw,ti.	1,170
18	Lymphoma.ab,kw,ti.	192,144
19	Lymphosarcoma.ab,kw,ti.	4,642
20	"h?ematolog* nurs* ".ab,kw,ti.	53
21	"h?ematolog* cancer* ".ab,kw,ti.	3,639
22	"h?ematolog* patient* ".ab,kw,ti.	2,329
23	Hematologic Neoplasms/ or exp Leukemia/ or Preleukemia/ or Myelodysplastic Syndromes/ or Myeloproliferative Disorders/ or Primary Myelofibrosis/ or Multiple Myeloma/ or Plasmacytoma/ or exp Lymphoma/	508,189
24	"H?ematopoietic stem cell transplant* ".ab,kw,ti.	33,337
25	H SCT.ab,kw,ti.	17,579
26	"H?ematolog* disease* ".ab,kw,ti.	7,856
27	H?ematological.ab,kw,ti.	87,068
28	(H?ematology adj2 oncology).ab,kw,ti.	4,783
29	Hematopoietic Stem Cell Transplantation/	55,901
30	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29	794,914
31	RN.ai.	44
32	BN.ai.	3
33	RGN.ai.	0
34	BSN.ai.	0
35	MSN.ai.	4
36	MN.ai.	11
37	APRN.ai.	1
38	APN.ai.	1
39	FAAN.ai.	6
40	DNP.ai.	2
41	DN.ai.	1
42	ANP.ai.	0
43	"nurs*".ia.in.	376,466
44	31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43	376,499
45	30 and 44	3,667
46	45 and 2004:2024.(sa_year).	3,436

However, at the protocol stage, the possibility that some relevant sources would not provide the author's credentials or affiliations was identified. Therefore, cancer nursing journals listed on Scimago Journal and Country Rank (SJR) were screened using the hematology-specific free-text keywords only to capture such sources and alleviate this limitation. These journals include Cancer Nursing, European Journal of Oncology Nursing, Oncology Nursing Forum, Journal of Pediatric Hematology/Oncology Nursing, Seminars in Oncology Nursing, Clinical Journal of Oncology Nursing, Canadian Oncology Nursing Journal, Asia-Pacific Journal of Oncology Nursing, ONS Connect, and ONS news/Oncology Nursing Society, Journal of Pediatric Oncology Nursing, and Australian Journal of Cancer Nursing.

Study Selection

Once the search strategy was conducted on each database, all sources were exported into EndNote 21, and duplicates were

removed. The remaining sources were imported into the web-based platform, Covidence, for screening, where further duplicates were removed. The screening process was completed in two stages in Covidence. The first stage included the research group independently screening the titles and/or abstracts of all sources following predefined inclusion criteria. These included any nurse-led research or quality improvement project in hemato-oncology published from January 1st 2004 to May 22nd 2024. "Nurse-led" was identified as the first, last and/or corresponding author being a nurse academic or practitioner (determined by authorship with a registered nurse (RN) or similar credentials). For sources where the nursing credentials were not provided, further exploration was conducted (ie, searching author employment affiliations, ORCID, and ResearchGate). A wide range of evidence was considered for inclusion, including primary studies, quality improvement projects, conference proceedings, and dissertations. Reviews/evidence synthesis studies were also included if the research question was focused on a hemato-oncology topic.

The second stage of screening included screening the full texts of all remaining sources for eligibility. The study selection process from database screening to final papers included in the review is highlighted in the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) flow diagram (Fig. 1).³⁷

Data Extraction

Data extraction on all included full-text papers was undertaken in Covidence by the first author using pre-defined codes determined following a pilot extraction of 30 papers. The pre-defined codes included: year, country, methodology [experimental, non-experimental, qualitative, mixed methods, review], setting (young adult population (AYA)/pediatric, adult), participants (patients, professionals, hematology, mix of hematology and oncology, careers/relatives), hematology setting, publication type journal, conference abstract, other, eg, dissertation].

Once data extraction was completed on all 1,916 papers, the Microsoft Excel file generated in Covidence was downloaded. This function in Covidence was central to achieving the analysis on time. It helped ensure an efficient and manageable workflow in the analysis and mapping process.

Results

After removing duplications, the research team independently screened 12,851 papers for title and/or abstract and considered 4627 papers for full-text screening. The final number of sources included in the review was 1916 (Fig. 1; Supplementary file). Of the 1,916 sources included, 1,618 were journal publications, 262 were published conference abstracts, and 36 were doctoral dissertations.

Of all 1,916 included studies, most were undertaken in specialized hematology settings (64.3%), with the remainder including samples from both hematology and oncology care settings. Of the recent (2023–2024) abstracts published in conference proceedings (n = 17), most were published in the ESMO Annals of Oncology (Impact Factor: 56.7) and MASCC Supportive Care in Cancer (Impact Factor: 2.8). Overall, nurses based in the USA published the highest number of articles, followed by China, Türkiye, Canada, Australia and Iran (Fig. 2; Table 3).

The number of publications has steadily increased, especially since 2015. In 2004, there were 23 publications. This rose to 104 in 2015 and was 174 in 2023. The 2024 figure is expected to exceed all previous years, as our search found 103 papers published between January and May. The most frequent original research methodology used was non-experimental (60.5%), followed by qualitative (19.2%), experimental (12.5%), evidence syntheses (6.3%) and mixed methods (1.5%) (Fig. 3). Regarding recent experimental studies (2023–2024),

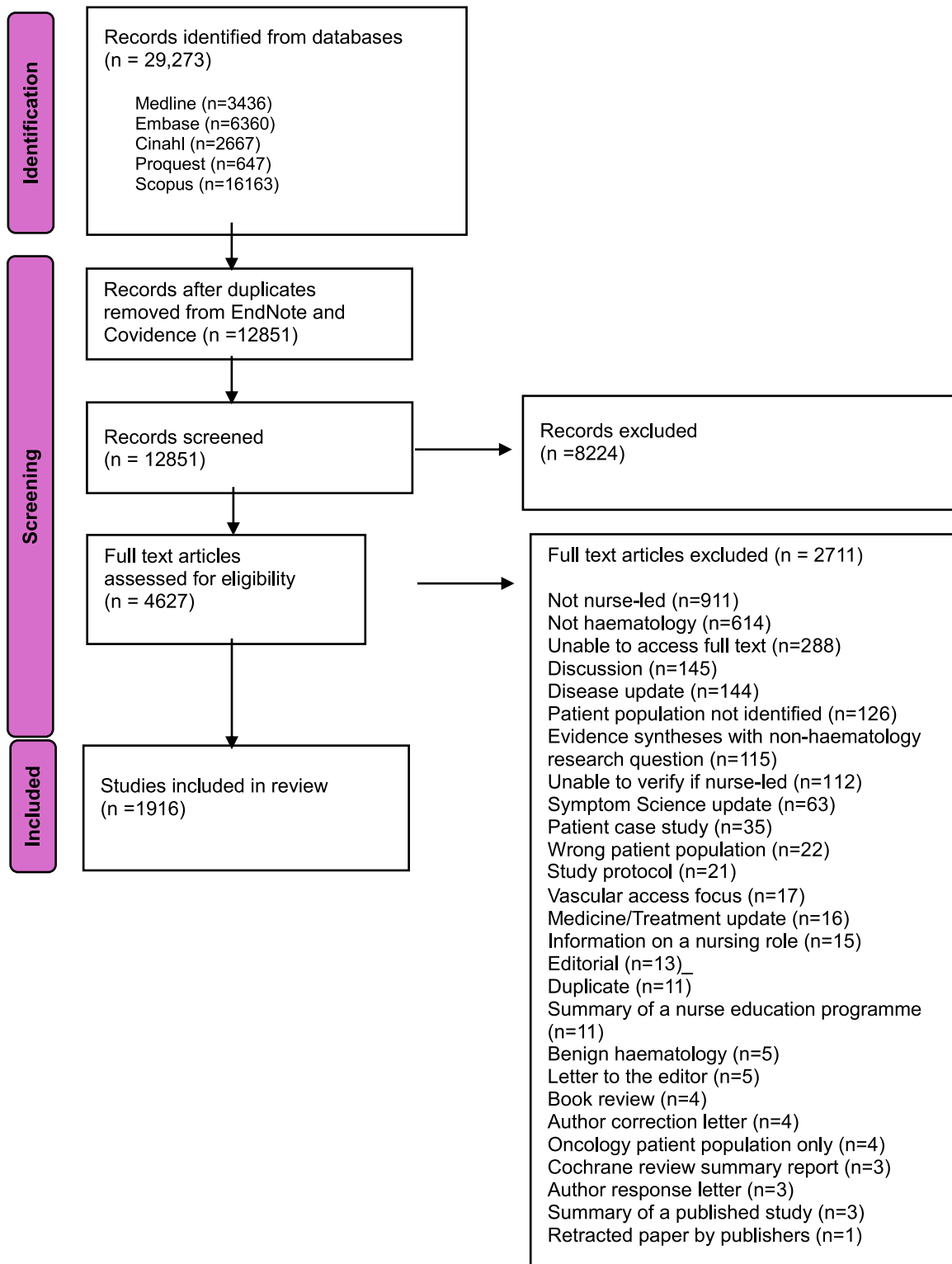


FIG 1. PRISMA-ScR flow diagram.

the vast majority (71%) were undertaken by nurses from Asia and the Middle East.

Studies in pediatric, adolescent, or AYA settings represented 42.4% of all included studies, and most of these included samples from both hematology and oncology settings, with 46.3% of studies exclusively in hematology settings. Most pediatric/AYA hematology studies focus on leukemia and hematopoietic stem cell transplantation (HSCT). Examples of the focus of recent HSCT studies include interviews with

parents and HC professionals and observations of children in a qualitative case study of how children's pain is assessed after allogeneic HSCT,³⁹ children's communication of pain,⁴⁰ music therapy during HSCT,⁴¹ and survivors' experiences following HSCT.⁴² The focus of recent leukemia studies included music therapy for symptom management,⁴³ physical activity levels,⁴⁴ family empowerment programmes,^{45,46} effect of peppermint inhalation versus Swedish massage on chemotherapy induced nausea and vomiting,⁴⁷ and the

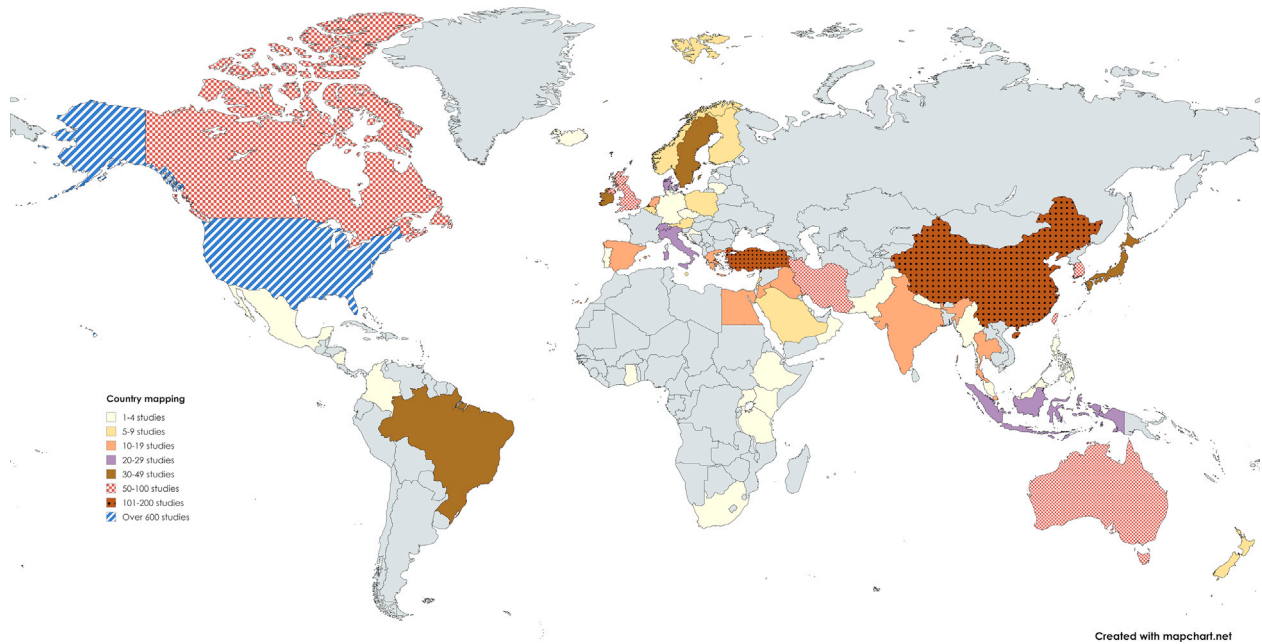
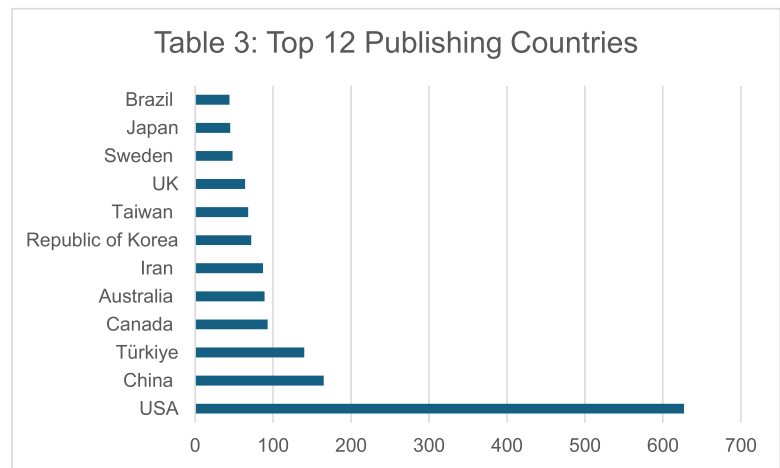


FIG 2. Number of studies published by country globally.

TABLE 3
Top 12 Publishing Countries



Country	Number of Publications
USA	627
China	165
Türkiye	140
Canada	93
Australia	89
Iran	87
Republic of Korea	72
Taiwan	68
UK	64
Sweden	48
Japan	45
Brazil	44

efficacy of honey or olive oil on the severity of oral mucositis.⁴⁸ In addition, a trend of focusing on symptom clusters in pediatric leukemia was evident among nurses in China.⁴⁹⁻⁵²

The studies undertaken in adult hematology settings represented 45.1% of the included studies, most were conducted in transplant settings and mixed hematology populations (eg, lymphoma and acute leukemia) (Table 4). Examples of recent

interventional studies include the effects of creative arts interventions on quality of life among patients undertaking HSCT,⁵³ increasing physical activity after HSCT for multiple myeloma,⁵⁴ use of essential oils in reducing chemotherapy induced nausea and vomiting in HSCT,⁵⁵ and the efficacy of propolis in the prevention of oral mucositis in patients having high dose chemotherapy.⁵⁶

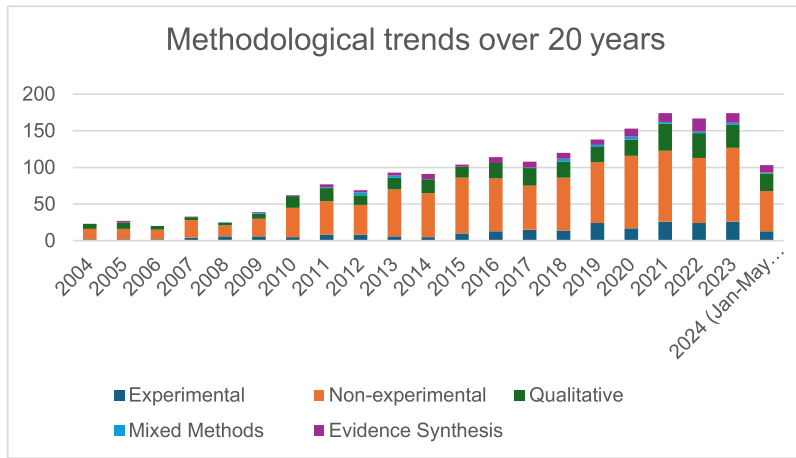
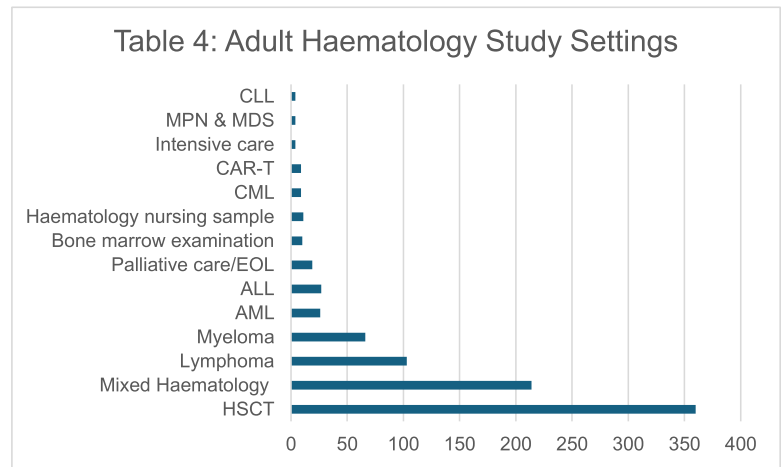


FIG 3. Methodological trends in 20 years.

TABLE 4
Adult Hematology Study Settings



HSCT	360
Mixed Hematology	214
Lymphoma	103
Myeloma	66
AML	26
ALL	27
Palliative care/EOL	19
Bone marrow examination	10
Hematology nursing sample	11
CML	9
CAR-T	9
Intensive care	4
MPN & MDS	4
CLL	4

Only nine reports of eight studies focused exclusively on CAR-T therapy. These included one interventional study that investigated the efficacy of a nursing approach using a specific protocol,⁵⁷ qualitative exploration of patients' experiences,^{7,58-60} and descriptive studies of neurocognitive outcomes,⁶¹ nutritional status,⁶² anxiety and depression post CAR-T therapy,⁶³ and a nursing educational pathway.⁶⁴ Four studies included patients with chronic lymphocytic leukemia, three with myelodysplastic syndromes, and one on myeloproliferative neoplasms (Table 4).

Studies with informal caregivers/relatives samples totaled 17.4% (n = 334). Most of these studies were in pediatric and AYA settings, with many recent studies focusing on family support

interventions.⁶⁵⁻⁶⁷ In adult population studies focused on caregivers, a recent trend is the use of dyadic methods.⁶⁸⁻⁷³

Studies that included nurses or healthcare professional samples totaled 7.5% and focused on a wide range of topics. For instance, nursing management of oral mucositis in pediatric cancer clinics,⁷⁴ acceptability of palliative intervention for older adults with acute myeloid leukaemia,⁷⁵ burnout and compassion fatigue,^{76,77} bone marrow examination education programme,⁷⁸ advance care planning,^{79,80} HSCT induction programme,⁸¹ and preventing neutropenia in children with leukaemia.⁸²

Doctoral studies have addressed a variety of topics. The earliest doctoral thesis was a descriptive study of sleep, fatigue and caregiver burden in parents of children with acute lymphoblastic leukemia

(ALL).⁸³ More recent doctoral work included a needs assessment for standardized operating procedures for long-term follow-up in adult stem cell transplant survivors,⁸⁴ the systematic application of a vitamin D protocol for adults undergoing hematopoietic stem cell transplant,⁸⁵ and orthostatic vital signs in patients undergoing bone marrow transplantation.⁸⁶

Review/evidence syntheses studies represented 6.3% of the included sample (Fig. 3). The number of reviews/evidence synthesis studies rapidly increased after 2015. During the 10-year period 2004 to 2014, only 23 were found. The number was 98 from 2015 to May 2024. Recent reviews have focused on non-Hodgkin lymphoma patient and caregiver education,⁸⁷ patient education during inpatient HSCT,⁸⁸ cognitive function with acute myeloid leukemia treated with chemotherapy,⁸⁹ prevalence of and risk factors for venous thromboembolism in lymphoma,⁹⁰ experience of care among adults with ALL near end of life,⁹¹ fall risk factors associated with HSCT,⁹² and coping skills interventions for fatigue.⁹³

Discussion

This mapping review is the first to map the trends in nurse-led research in hemato-oncology over the past twenty years. Unsurprisingly, most of the studies published were by nurses working in the USA, a trend previously reported.⁹⁴ Many of these nurses publishing their research have a Doctor of Nursing Practice (DNP) qualification. Across the discipline of nursing in all specialties, publications among DNP qualified nurses have increased 136% from 2012 to 2018, including 56% with DNP as first authors and 62% collaborative and interprofessional publications.⁹⁵

However, the trend in increased publications (across all areas of nursing) by nurses in Asia and the Middle East (Table 3) differs significantly in terms of high numbers from the low numbers reported in 2009.⁹⁴ Moreover, Türkiye's third place (Table 3) is unsurprising, given that in 2018, it was in the top 10 countries of publications when searched using frequency and percentage values by the number of articles in World of Science (WoS) with "nursing" keyword.⁹⁶

As outlined in Fig. 3, most designs were non-experimental, followed by qualitative, experimental, evidence syntheses and mixed methods. This mirrors findings of methodologies adopted by authors from Asia published in *Nurse Education Today* from 2019 to 2024.⁹⁷ The increasing trend of published reviews/evidence synthesis is also unsurprising. This is likely because evidence synthesis is a rigorous method that combines all existing studies' results, enabling a greater understanding of the results and bridging the gap between research and clinical practice through knowledge transfer.⁹⁸ A surge in published systematic reviews has reached "epidemic proportions" (p.486).⁹⁹ On average, systematic reviews with meta-analysis result in more citations,^{100,101} and contribute to a higher journal impact factor.

The published abstracts represented 13.6% of the included sources in this review. Arguments against including conference abstracts in systematic reviews include the resource-intensive aspects and the fact that they may lack adequate information on methods, risk of bias, and results for systematic reviewers to appraise.¹⁰² Indeed, inconsistencies in data presented as abstracts and those reported in subsequent published reports have been found in an analysis of published trials.¹⁰³ More recently, it has been recommended that researchers submitting trial data as conference abstracts adhere to CONSORT (Consolidated Standards of Reporting Trials).¹⁰⁴ However, these arguments are less relevant to a mapping review and in the context of most databases, which now include international cancer-focused conferences publishing abstracts in associated journals. In addition, 17.9% (n = 47) of the conference abstracts were published as full journal publications. Therefore, the topics were 'double-counted'. This low number highlights the challenges that clinically based nurses face in finding the time and accessing support from academic

nurse colleagues to develop published abstracts into full journal papers. On average, 45% of all conference abstracts will subsequently appear as full journal publications.¹⁰⁵

The high number of studies published on HSCT is unsurprising. In the continually evolving specialty of HSCT, nurses are central to patient outcomes.¹⁰⁶ In their highly specialized roles, nurses deliver patient and family education, support and mentor colleagues, and prevent, promptly recognize, and manage complications related to HSCT.¹⁰⁷ Moreover, while many nurses are publishing clinical and disease updates (as evident in the excluded papers in Fig. 1), including nursing role development on CAR-T therapy,^{108,109} nurse-led studies in this area are only emerging (Table 4). They first appeared in 2019 and were published in increasing numbers in 2023 to 2024.^{7,59,60,110,111} With the evolution of this specialty, nursing care remains crucial to patient outcomes, and a competent, knowledgeable, and well-educated practitioner is required; therefore, a commitment to research is crucial.¹⁰⁶

This review found that palliative care in hematological malignancies continues to be explored in nursing research. With advances in treatments, particularly in the last 10 years, more treatment options have become available, resulting in an increase in life span for patients and multiple lines of treatment. As a result, patients with hematological malignancies are likely to receive palliative care input in the latter course of disease, mainly at the end of life, resulting in suboptimal care.^{29,112} Recent nurse-led research focuses on the meaning of dying in the last year of life, how to improve palliative care, when to initiate it, and the appropriate referral criteria.¹¹³⁻¹¹⁶

This review found that nurse-led research on family caregivers in pediatric hematology-oncology settings is well established.¹¹⁷⁻¹²¹ Nurse-led research on family experience in acute hematological settings is well established also.^{68,122,123} This contrasts with limited nurse-led research on caregivers' experience in chronic hematological cancers.^{21,28,124,125} In addition, a dearth of nurse-led research is conducted within the disease areas of myelodysplastic syndromes (MDS),¹²⁶ and myeloproliferative neoplasms (MPNS).^{127,128} The reason for the latter is unknown. However, it may be likely due to the varying stages of the chronic disease trajectory.¹²⁹

This review has limitations, including the risk that some relevant sources may have been excluded, particularly in papers where the lead authors' nursing credentials or affiliations did not explicitly mention nursing. An attempt was made to mitigate this by searching cancer nursing journals with only the hematology search terms; however, there is still a likelihood that relevant sources were not captured.

Of the 36 Doctoral dissertations found, 15 were also published in scientific journals (so double-counted). In addition, only one was undertaken by a nurse outside the USA.¹³⁰ This was surprising, as the research team expected to find PhDs that they knew were undertaken by hematology nurses in their European and Australian networks. A subsequent focused search on ProQuest for PhDs undertaken by hematology nurses known to the team revealed their absence from the database. However, this may be somewhat explained by the increasing popularity of the thesis by publication¹³¹ option, where the PhD candidate publishes a collection of standalone articles when undertaking their study. Some included studies in this review were by PhD candidates undertaking a PhD by publication.^{21,25,26,28}

Conclusion

This review provides evidence of nurse-led research in hemato-oncology over twenty years. Nursing research in HSCT is most prevalent. In addition, the review highlights the growth in research skills among hematology nurses.

What is clear is the upward trajectory of the number of research studies being led by nurses in hemato-oncology settings, particularly

in the USA, and their focus on contemporary developments relevant to people affected by blood cancers. To continue to improve clinical practice within the area of hematology, research must continue to be conducted to inform evidence-based clinical guidelines and improve patient outcomes. The review has also highlighted the increase in the publication of evidence syntheses, thus ensuring that the highest quality of evidence and results are becoming more available to nurses in hematology.

Evaluating the factors that enable doctoral-prepared nurses to publish is essential to sustain and build upon the upward trajectory of nurse-led research in hemato-oncology over the past two decades. Such an evaluation could provide valuable insights into how clinical nurses (often balancing demanding care responsibilities) can be better supported to engage in and lead research. In addition, interprofessional research resources offered by Doctoral-prepared nurses based in healthcare settings are essential to supporting clinical nurses undertaking research in their practice. Doctoral-prepared clinical nurse experts are ideally placed as research nurse scientists who can help clinical staff develop and undertake research. The value of clinical academic nurses is well established in the USA,¹³² with strategic and policy efforts underpinning its role implementation in the UK.¹³³

Likewise, identifying the facilitators and motivations behind successful nurse-led hematology research is critical to ensuring continued growth in this area. Collaboration and support are crucial to continuing to foster nurse-led research where the need is amplified by the rising prevalence and complexity of hematological disorders and malignancies, which demand specialized, evidence-based nursing care. In addition, to sustain and further this upward trajectory of nurse-led research, it is critical that institutional and systemic support are strengthened. Strategic investment in mentorship, protected research time, interdisciplinary collaboration, structured clinical-academic posts and funding pathways could further empower nurses to contribute meaningfully to scientific knowledge and improve patient outcomes. Encouraging a research culture within clinical settings where nursing research is valued and expected will result in translating frontline experience into impactful scholarly work. Ultimately, continued growth in nurse-led research will be instrumental in addressing current gaps in the literature, improving evidence-based practice, and enhancing the quality of care for individuals affected by blood cancers across the disease trajectory.

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Declaration of competing interest

The authors declare no potential conflicts of interest.

CRediT authorship contribution statement

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Supplementary materials

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