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**Identifying clinical managers' leadership competencies: A
Systematic literature review**

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Identifying clinical managers' leadership competencies: A Systematic literature review

Summary

Objective: This study addresses the dearth of research on clinical managers' self-perceived leadership competency, challenges, and developmental needs in Saudi Arabia by examining these aspects through the NHS England clinical leadership competency framework.

Method: Employing a systematic literature review, the research utilised the SPIDER framework and PRISMA methodology, searching databases such as Web of Science, EMCARE, Medline via Ovid, and CINAHL. The author's CASP 2018 qualitative assessment checklist assessed reporting and methodological qualities.

Key Findings: From 2,671 screened articles, 31 high-quality studies met inclusion criteria. Clinical managers, encompassing 6,297 individuals, reported highest competency in "working with others" and the lowest in "improving service." Challenges included a lack of leadership training, role complexity, inadequate developmental training, limited interest in management, short leadership durations, and a weak reward system. All managers emphasized the need for prior and continuous leadership development training.

Track

Leadership and leadership development.

Word count 7149 (excluding, summary, tables, and figures).

Introduction

Effective leadership is pivotal for the success and performance of healthcare organizations, particularly in Saudi hospitals (Alloubani and Almatari, 2014). Healthcare managers wield significant influence over overall leadership and management practices in these settings, emphasizing the need to comprehend their leadership experiences and development needs for fostering positive organizational cultures and achieving high-quality patient care (Hansell, 2018; Grandy and Holton, 2013). The healthcare sector's considerable costs and complexities highlight the critical role of leadership in ensuring the provision of high-quality services (Boyles, 2023; Alilyyani, Wong, and Cummings, 2018). Boyles (2023) outlines essential characteristics for clinical managers, including the ability to function well under pressure, adhere to principles of integrity and clarity, maintain information flow, confront scrutiny, and possess a proactive mindset. Despite clinicians assuming leadership responsibilities without formal education, there is a persistent lack of recognition and incentives for outstanding performance (Lisa et al., 2018). Daft (2015) notes the dynamic nature of healthcare environments, requiring adaptive leadership approaches. Despite recognizing the intricate role of medical staff in leading healthcare, there is a significant gap in knowledge regarding leadership experiences of healthcare clinical managers (Aquilina, 2016). Notably, limited scholarly research exists on leadership development in the Middle East, particularly in Saudi Arabia (Hanaky, 2021). Despite Vision 2030's goals to enhance leadership in the public healthcare sector, the current state of leadership development in Saudi Arabia remains inadequate (Al Khashan et al., 2021). This paper addresses these gaps, examining the leadership experiences and development needs of healthcare clinical managers in Saudi Arabia.

Methodology

The decision to utilize a systematic review methodology was determined based on its congruence with the research aims and its ability to permit a thorough aggregation of current knowledge related to the subject being studied (Crocetti, 2016). The procedure described below followed a six-stage methodology commonly used in conducting a systematic literature review (Moher *et al.*, 2015). This encompasses various aspects such as the creation of protocols, the determination of qualifying criteria, the design of search methodologies, the assessment of research projects, the extraction of data, and the integration of findings. However, the suitability of adopting this research design correspond to the fact that systematic literature review SLR design allow comprehensive synthesis of the current state of knowledge of the predefined research question and objectives (Armstrong *et al.*, 2011). While it uniqueness in healthcare intervention, qualitative evidence synthesis, and the ability of SLR design to utilize systematic and transparent approach to reduce potential source of bias validate and justify the reason for adopting systematic literature review methodology in this research (Moher *et al.*, 2007) Therefore, this comprehensive SLR employed a qualitative data synthesis guideline suggested by Adèr, Mellenbergh and Hand (2011).

Protocol Development

During this phase, a methodical approach was formulated to execute the systematic review, which is characterized by its organization and substantial specificity. The review procedure elucidates the historical backdrop of the review, delineates the precise research question(s) being addressed, outlines the search strategy employed, and enumerates the selected publications for review. Additionally, the protocol elucidates the approach taken to evaluate the quality of the articles, as well as the methods employed to obtain and synthesize the data. The proposed protocol outlines the recommended structure for the ultimate report by (Mohamed Shaffril, Samsuddin and Abu Samah, 2021). Page *et al.* (2021) employed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statements, as per their recommendations for conducting systematic literature reviews.

Research Question

The research question was developed using SPIDER (sample, phenomenon of interest, design, evaluation and research type) framework, as it is useful for qualitative or mixed methods research topics focused on samples rather than population (Cooke, Smith and Booth, 2012). This framework is used to inform the search string and the entire search strategy (Table 1).

Table 1: SPIDER framework for research question

SPIDER Items	Definition	Context
Sample	Group of people under examination	Clinical managers
Phenomenon of interest	What are the perception, challenges, and leadership competency developmental needs of clinical managers in management role in healthcare settings?	Nurses, doctors, and healthcare professionals in management role of healthcare settings
Design	How were data collected?	Literature review
Evaluation	Impact outcome	Experience and perception
Research Type	What type of research method was used?	Qualitative, Quantitative and/or mixed method

Using this SPIDER framework, this review aims to answer three research questions:

RQ1: What are the perceptions or experience of leadership competency of clinical managers in healthcare settings?

RQ2: What are the challenges of clinical managers in exercising their leadership roles in healthcare settings?

RQ3: What effective mechanisms (development needs) can support the leadership development of clinical managers to achieve improve population health outcomes?

Search Strategy

The following electronic databases web of science, CINAHL, MCARE, Web of Science and Medline were selected for the article search. The search was carried out August 2023 using a SPIDER guided search string Appendix A. Search terms were combined using Boolean operators “AND” and “OR” to combine keywords in the title and abstract index on each database.

Eligibility Criteria

The criteria for including and excluding retrieved studies are defined in this stage of SLR process. Hence, the criteria is in table 2 presented below. No limitation was set to the country of publication.

Table 2: criteria for inclusion and exclusion

Inclusion Criteria	Exclusion Criteria
Studies published in English language	Non-English studies
Primary studies	Secondary studies
Original full-text articles; survey, cross-sectional, cohort, longitudinal	Conference abstract, commentaries, dissertations, notes, letters, review papers, grey literature, and case reports
Article published between 2010 till date	Articles published before 2010
Studies that examine clinical managers in management role	Studies on non-management role
Studies directly answering the research question	Studies not in line with the research question
Clinical managers already working in healthcare settings	Studies examining clinical students
Studies that report leadership competence	Other competence such as clinical competence, service delivery and other competency checklist other than leadership and management competencies

Article Screening

The bibliographic data obtained from the four electronic sources (CINAHL, Web of Science, EMCARE, and MEDLINE) were electronically managed and screened using Zotero and Rayyan software. The exclusion of duplicates from the Zotero was performed automatically. The references underwent screening process using the Rayyan programme, whereby the inclusion and

exclusion criteria were utilized (Ouzzani *et al.*, 2016). The title and abstract of the studies were thoroughly scrutinized to assess their alignment with the research objectives. At this juncture, a thorough scrutiny and analysis of the complete content of qualifying papers is conducted to ascertain their alignment with the present research objective. In order to mitigate the potential influence of bias, a comprehensive screening process was conducted on the title, abstract, and full text of the relevant materials. The eligible articles underwent a comprehensive examination.

Study Appraisal

The purpose of this evaluation is to assess the methodology and the extent to which potential bias has been considered in the conception, implementation, and analysis of the study. The eligible papers underwent a quality assessment using a set of 10 checklist questions derived from the Critical Appraisal Skill Programme (CASP, 2018) for qualitative investigations (see Table 3). In accordance with the established inclusion criteria, all selected papers for this systematic review are subject to a comprehensive evaluation conducted by the researcher. The utilization of analytical results can aid in the synthesis and interpretation of the study's findings. The quality of the studies were assessed using a rating scale consisting of ten components on a checklist, with responses categorized as **Yes**, **No**, or **Can't Tell**. The studies are classified into three categories based on their evaluation scores: high, moderately high, or low. The assessment score varies from **high** (80% and above) to **moderately high** (50-79%) to **low** (below 50%), based on the affirmative responses.

Table 3: Critical Appraisal Skill Program Checklist Items (CASP, 2018)

Item 1	Was there a clear statement of the aim and objective of the study?
Item 2	Was appropriate research methodology adopted?
Item 3	Was there justification for the research methodology adopted?
Item 4	Were participants recruited in a way appropriate with the research aim and objectives?
Item 5	Was the data collected in a way that appropriately answer the objectives?
Item 6	Was there adequate consideration for the relationship between the researcher and the study participant?
Item 7	Was ethical consent or approval sought by the study?
Item 8	Was the data analysis rigorously performed to underpin the research objective?
Item 9	Were the findings of the study clearly stated?
Item	Does the study make any meaningful contribution to the body of knowledge?

Data Extraction

The data were retrieved from the selected studies utilizing an electronic data extraction form created with the aid of Microsoft Excel. A concise overview of the key attributes of each study is presented across different categories, facilitating the integration of the most significant outcomes. The extracted information encompasses various aspects, such as the primary author's details, the year of publication, the country of origin, the journal in which it was published, the settings in which the study was conducted, the population under investigation, the study design employed, and the characteristics of the sample, including its size, the age of participants, and the number of years of leadership experience they possessed. Additionally, the assessment scale, the framework used to evaluate leadership competency, the perceptions of clinical managers regarding competency levels (both high and low), the challenges faced by leaders, and their developmental requirements were also included in the extracted information.

Systematic Synthesis

Following data extraction, article characteristics were organized and synthesized in relation to this research objective.

Result

The PRISMA screening process of the included articles, quality assessment, and data extraction is presented in this section.

Study Selection

A total of 2,719 articles were obtained after the five electronic database searches and exported to Zotero for reference management. The obtained studies excluded duplicate records of 960 studies. The screening method resulted in the retention of only 1759 studies. Subsequently, the aforementioned references were input into the Rayyan software platform for the purpose of conducting a screening process. The software was used to screen the titles and abstracts of the retrieved studies. The process of screening primarily relied on the utilization of both inclusion and exclusion. During the course of the screening, a number of 1591 studies were deemed ineligible due to their lack of alignment with the research objectives. Afterwards, the Rayyan programme was used to export the final 64 references. Subsequently, the 64 eligible articles were obtained from the library and underwent a comprehensive screening process. A comprehensive assessment was conducted on these 64 papers, taking into account the established criteria for inclusion. After conducting a thorough full-text screening, a total of 33 papers were deemed ineligible for inclusion due to not meeting the predetermined criteria. Consequently, only 31 primary publications were considered suitable for inclusion in the systematic literature review. The method of screening flow is depicted in Figure 1.

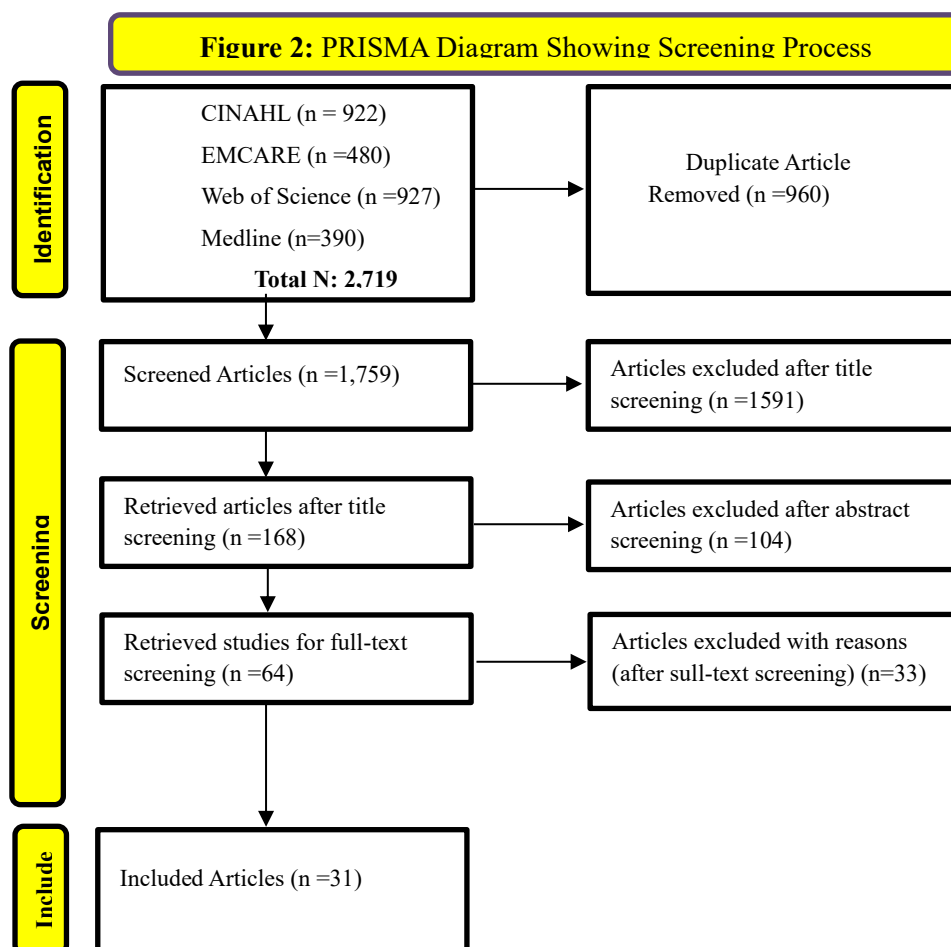


Figure 1: PRISMA flowchart: the study selection process

Quality Assessment

The methodological and reporting quality of the included studies was evaluated by utilizing the 10 elements that were emphasized in Table 3. These items were employed to appraise all 31 studies that were included in the analysis. It is noteworthy that all 31 studies that were assessed exhibit a significant level of reporting and methodological quality, since none of them scored below 70%. None of the articles checked positive to all the checklist questions. Specifically, item 6. In relation to item 6, it is noteworthy that the included articles in this analysis do not explicitly address the extent to which the researcher-study participant relationship was adequately taken into account. Consequently, it becomes challenging to determine whether the authors have thoroughly assessed their own involvement, potential biases, and influence throughout various stages of the research, including the formulation of research questions, data collection procedures, responses to unforeseen events, and implications for change. Out of the total of 31 papers that were included in the analysis, 18 publications, accounting for 58% of the included articles, had a 90% evaluation score and were classified as high-quality studies with a minimal risk of bias. Nine articles, accounting for 29% of the sample, achieved a high assessment score of 80% and were also classified as high-quality studies with low risk of bias. Conversely, the other four papers were categorized as moderate-quality with moderate bias and obtained a 70% assessment score. The quality evaluation scores of the studies were 80% and 90% respectively, with the remaining study receiving a value of 70%.

All the articles included in the study exhibited a well-defined research aim and objectives, employed an appropriate research methodology, provided a justification for the chosen methodology, utilized a suitable method for data collection, demonstrated rigour in data analysis, presented clear findings, and made a meaningful contribution to the existing body of knowledge. Regarding checklist 4, it is unclear whether a total of 11 articles have been incorporated. The following academic references are cited: Mai *et al.* (2021), Fraser *et al.* (2015), Fiset *et al.* (2017), Dickinson *et al.* (2013), Bigbee *et al.* (2010), Pillay (2011), Dawson *et al.* (2013), Hartviksen *et al.* (2020), Furunes *et al.* (2018), Dopelt *et al.* (2021), and McGowan *et al.* (2017). In conclusion, the vast majority of the studies examined, specifically 80% of them, demonstrated a deliberate effort to address ethical considerations. However, it is worth noting that a limited number of articles, precisely six (Fraser *et al.*, 2015; Gulati *et al.*, 2021; Fanelli *et al.*, 2022; Dickinson *et al.*, 2013; Bigbee *et al.*, 2010; Pillay, 2011), did not explicitly state their adherence to ethical considerations, consent, or approval. The comprehensive evaluation is displayed in Table 4.

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Table 4: Article Appraisal

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	%positive	Remarks
Liang <i>et al.</i> (2020)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Ireri <i>et al.</i> (2011)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Ireri <i>et al.</i> (2017)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Mai <i>et al.</i> , (2021)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Fraser <i>et al.</i> (2015)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	No	Yes	Yes	Yes	70%	Moderate Quality
Gulati K. <i>et al.</i> (2021)	Yes	Yes	Yes	Yes	Yes	Can not Tell	No	Yes	Yes	Yes	80%	High Quality
Fiset <i>et al.</i> (2017)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Liang <i>et al.</i> (2013)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Mrayyan, (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Warshawsky and Cramer, (2019)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Liang, Howard, Wang, Xu, <i>et al.</i> , (2020)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
(Fanelli, Pratici and Zangrandi, (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	No	Yes	Yes	Yes	80%	High Quality
Dickinson <i>et al.</i> , (2013)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	No	Yes	Yes	Yes	70%	Moderate Quality
Gulati <i>et al.</i> , (2019)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Welch and Glenn, (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Miltner <i>et al.</i> , (2015)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Liou <i>et al.</i> (2021)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality

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Bigbee, Otterness and Gehrke (2010)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	No	Yes	Yes	Yes	70%	Moderate Quality
Giri, Aylott and Kilner (2017)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Jalghaf <i>et al.</i> (2023)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Gulati <i>et al.</i> (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Pillay, (2011)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	No	Yes	Yes	Yes	70%	Moderate Quality
Xu <i>et al.</i> , (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Dawson <i>et al.</i> (2013)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Isibor <i>et al.</i> , (2020)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Hartviksen, Aspfors and Uhrenfeldt, (2020)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Furunes, Kaltveit and Akerjordet, (2018)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Dopelt, Levi and Davidovitch (2021)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
McGowan and Stokes. (2017)	Yes	Yes	Yes	Can not Tell	Yes	Can not Tell	Yes	Yes	Yes	Yes	80%	High Quality
Ylitalo <i>et al.</i> (2022)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality
Kelly <i>et al.</i> (2023)	Yes	Yes	Yes	Yes	Yes	Can not Tell	Yes	Yes	Yes	Yes	90%	High Quality

Note: Q1-Q10 represent the checklist items highlighted in table 3

The synthesis of results

This systematic literature review encompasses a total of thirty-one primary publications that focus on the perception, challenges, and developmental needs of clinical managers in healthcare settings. The publications included in this study were published throughout the time frame of 2010 to 2023. The purpose of including articles from this period was to get insights into the current state of knowledge about the creation of clinical leadership interventions. By examining literature over the past few decades, this study aimed to provide a comprehensive understanding of the clinical leadership concerns in this field in recent years. The synthesis of available evidence indicates that authors have not consistently undertaken study on this topic, with the largest number of publications observed in the year 2021. Four further years that were noteworthy include 2013, 2017, 2020, and 2022, each accompanied by four corresponding articles (see Figure 2).

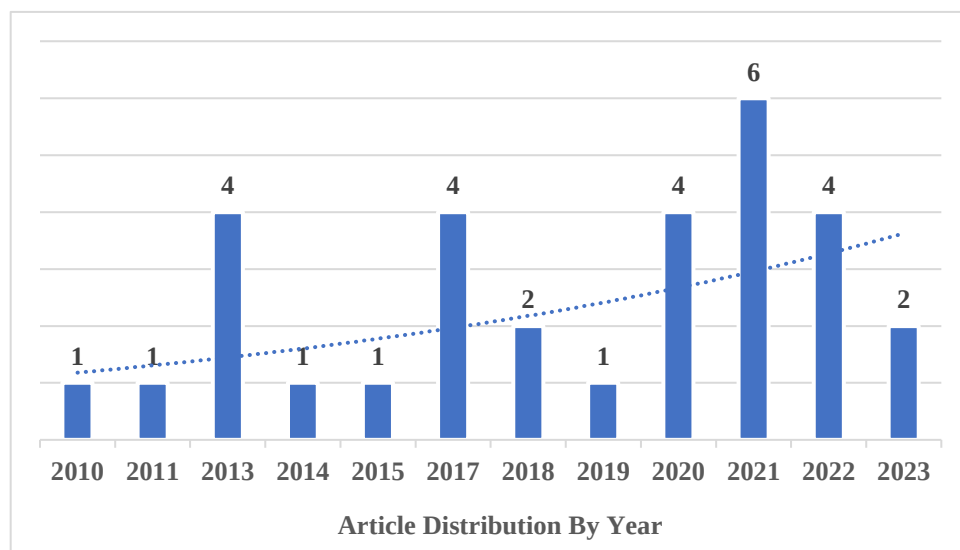


Figure 2: Publication Trend by Year

Moreover, the publishing of all 31 included papers was attributed to a collective of 21 journal sources. Among the several journal sources, *Leadership in Health Service* stands out as the most prominent, boasting a total of five articles. Additional prominent journal sources include *Health Service Management Research*, the *International Journal of Health Planning and Management*, the *Journal of Nursing Management*, and *Public Health Nursing*. The research was conducted over a diverse range of 15 healthcare institutions situated in various nations worldwide. Nevertheless, it is worth noting that a significant proportion, exceeding 40% of the study conducted was specifically focused on healthcare settings inside the United Kingdom and the United States. This observation suggests that these two countries are the primary donors to research in the field of clinical leadership. China and India are also notable countries, each having three articles. Australia, Jordan, and Norway have two articles each, as shown in Figure 3.

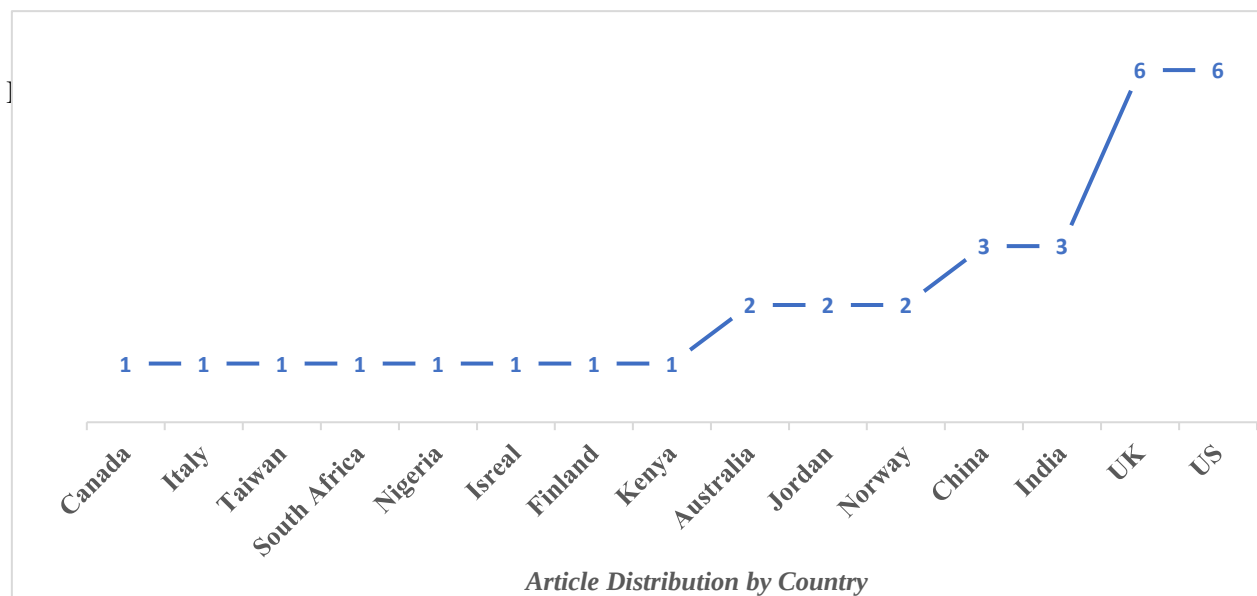


Figure 3:Healthcare Settings of the Included Studies.

Healthcare settings encompass a range of institutions, such as private and public hospitals, care homes, community health service centres, and the National Health Service (NHS) in many countries. The study population comprised clinical health leaders from various disciplines. Nevertheless, the disciplines of nursing and doctoral leadership emerged as the most often integrated areas of expertise, being employed in over 80% of the research encompassed within this systematic review analysis. Among these two most explored clinicians, nurse managers emerged as the focal point in the analysis of the 31 articles under evaluation. In aggregate, the examined studies encompassed a cohort of 6,297 clinical managers occupying diverse healthcare leadership positions, representing various ethnic backgrounds and genders.

All managers possess at least a bachelor's degree, with certain individuals holding advanced clinical certifications. Additionally, a subset of the participants has undergone higher education and received training in leadership. All of the studies included in the analysis employed various study designs, such as qualitative, mixed-method, cross-sectional, and pilot studies. The qualitative approach emerged as the predominant method (Figure 4). The age distribution of the samples included in the studies varies, whereas the age range of the subjects included spans from 25 to 78 years, the range of leadership experience throughout the research varied from 1 to 20 years (Appendix A). However, it is noteworthy that the majority of managers included in the analysis had fewer than 5 years of experience in leadership roles. The studies included in this systematic review utilized participant self-assessment to evaluate leadership perspectives on competence, challenges, and development needs.

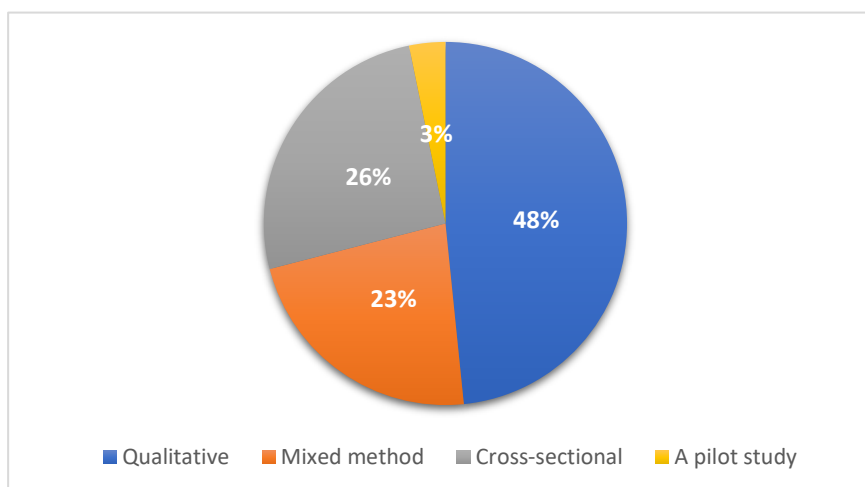


Figure 4: Frequency of Study Design Adopted by Included Articles

The analysis revealed that most of the publications examined did not include any clinical leadership competency frameworks. However, the researcher was able to synthesize a total of 10 competency frameworks from the articles that reports framework. Among the various frameworks available, the Medical Leadership Competency Framework was predominantly utilized. Other notable framework are Management Competency Assessment Programme and the Nurse Manager Competencies Self-Assessment Inventory Tool (Table 5). It is imperative to acknowledge that upon meticulous examination of the elements and items within this framework, it becomes evident that all of these elements can be linked back to the five elements and 20 items outlined in Table 6 of the Clinical Leadership Competency Framework. Hence, the present dissertation will employ a clinical leadership competency framework in the context of an exploratory case study. The objective of this study is to comprehensively examine the various aspects of competency perception, challenges, and developmental requirements among clinical managers operating within the specific healthcare setting of Saudi Arabia.

Table 5: Synthesized Leadership Competency Frameworks

Framework	Element
Medical Leadership Competency Framework	Personal qualities, working with others, managing service, improving service, and setting direction
AONE: Nurse Manager Competencies Self-Assessment Inventory Tool	Managing the business, leading the people, and creating the leader within yourself
Management competency assessment program (MCAP)	Evidence, Resources, Knowledge, communication, leadership and change
Nursing Manager Leadership Domain Framework:	Science, Managing the business and Art: leading the people and leader within, and creating leader in your self
8 Domains of Public Health Competency	Analytic assessment skills, Policy development/program planning skills, Communication skills, Cultural competency skills, Community dimensions of practice skills, Basic public health sciences skills, Leadership and systems thinking skills, and Financial planning and management skills.
7 Domain of NHS England Leadership Academy Health-Care Leadership Framework	Demonstrating personal qualities, working with others, managing service, improving service, setting directions, creating vision, and delivery strategy.
Hennessy Hicks Training Needs Questionnaire	NR

American College of Healthcare Executives Competency Assessment Tool (2020)	Communication and relationship management, leadership, professionalism, knowledge of the health-care environment, and business skills and knowledge
51 competency Items	All items
Clinical Nurse Leader Competency Matrix	Nursing leadership, clinical outcome management, and care environment management

Table 6: Clinical Leadership Competency Framework CLCF (NHS, 2011)

Elements	Items
Demonstrating Personal Qualities	Developing Self-Awareness, Managing Yourself, Continuous Personal Development, Acting with Integrity
Working with Others	Developing Networks, Building and Maintaining Relationship, Encouraging Contribution, Working Within Teams
Managing Service	Planning, Managing Resources, Managing People, Managing Performance
Improving Service	Ensuring Patients Safety, Critical Evaluation, Encouraging Improvement and Innovation, Facilitating Transformation
Setting Directions	Identifying Context for Change, Applying Knowledge and Evidence, Making Decision, Evaluating Impact

Perception of Leadership Competency

The self-assessment study conducted on 6,297 clinical managers by all the reviewed articles reveals the presence of conflicting findings within the existing body of literature. This is evident as many clinical managers feel themselves to possess varying levels of competence in clinical leadership, based on different elements and items within the clinical leadership competency framework. In certain research, a certain element may be documented as having a high value, whereas other articles may present the same element as having a low value. Hence, these findings suggest that the impression of leadership competence among clinicians is contingent

upon the specific country or place, while some moderator could account for the inconsistent findings.

However, while conducting a comprehensive analysis of all 31 publications included in this systematic review, it is evident that managers predominantly consider themselves as very competent in the aspect of "*working with others*" within the context of CLCF. According to the findings presented in Figure 5a, managers reported that "*working with others*" items were viewed as the highest leadership competence skills they possess. On the other hand, setting direction, managing service, and exhibiting personal attributes were assessed to have equal levels of perceived leadership competence. Clinical managers self-reported a lower level of competence in the service improvement component of the Clinical Leadership Competency Framework (CLCF). This finding suggests that clinical managers hold a perception of possessing strong leadership abilities specifically in the domain of "*work with others.*" According to the findings presented in Figure 5b, clinical managers reported seeing themselves to possess relatively low levels of leadership competency skills in the areas of "service improvement" and "managing service."

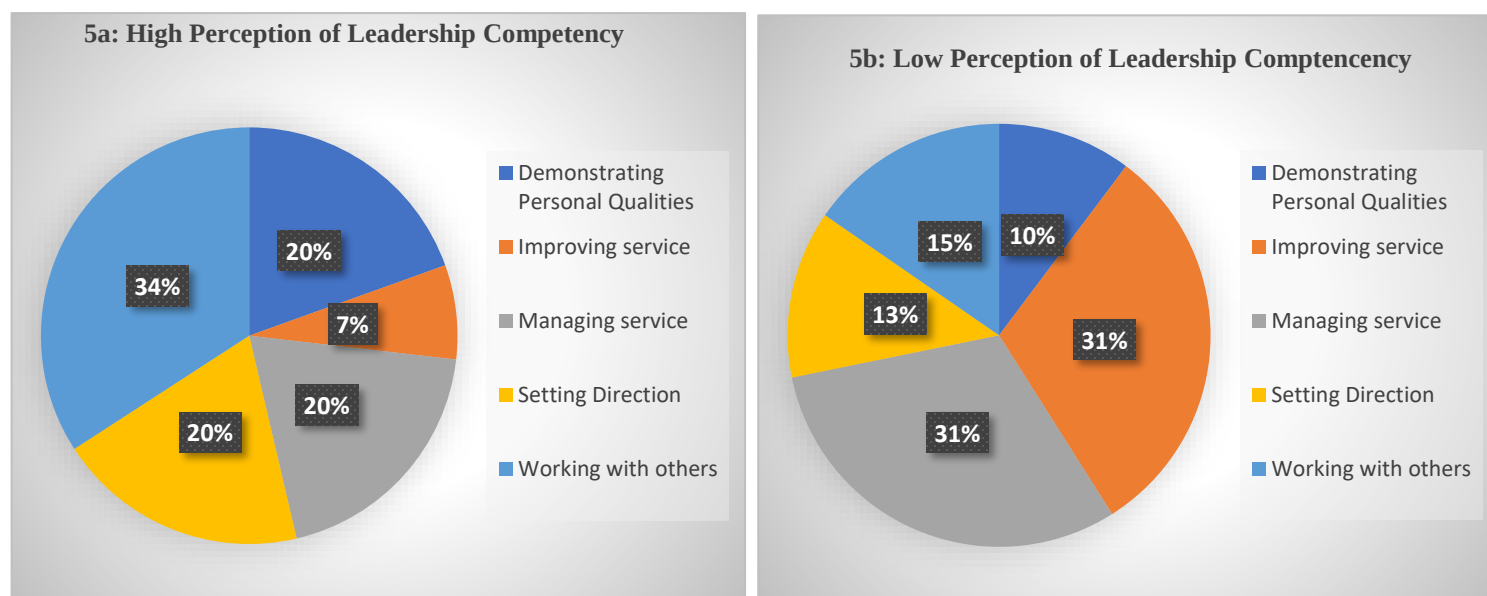


Figure 5: Frequency of self- perceived leadership competency reported by all the clinical managers. 5a represents self-rating of high leadership competency skills while 5b represents self-rating of low leadership competency skills.

Leadership Competency Challenges Faced by Clinicians in a Leadership Role

Clinical managers throughout the trials reported a total of six distinct problems, as documented in **Table 7**. Nevertheless, the most commonly cited challenge in leadership is the absence of leadership training in this domain. A considerable proportion of managers have indicated a lack of formal training in leadership. The primary focus was on the observation that a significant number of clinical managers lack both formal and informal training in leadership before assuming leadership roles in healthcare settings. Additionally, it was noted that medical school curricula are deficient in providing comprehensive instruction in leadership. In addition to these factors, there exist intricacies pertaining to leadership roles. The synthesized complexities encompass various

factors, such as the duration of one's tenure in a leadership position (referred to as experience), the expectations associated with the role, the individual's social status, the ability to navigate political dynamics and exert influence, the burden of excessive workloads, the constraints imposed by limited resources, the costs associated with occupying a leadership position, the absence of power and authority, the challenge of operating within ambiguous boundaries or frameworks, the alignment with organizational values, the absence of support from fellow trainees, the lack of assistance from senior doctors (supervisors), the lack of comprehension from other members of the management team, the lack of support from management, the supervision of a complex context, the need for continuous knowledge development and compensation, all juxtaposed with resource shortages, conflicts arising from conflicting roles, and a deficit in trust and cooperation. The next challenge synthesis was the issue of insufficient leadership development training experienced by clinical managers in leadership roles as highlighted several included papers. These articles point out that the previous leadership training received by clinical managers was deemed inadequate. Several articles also documented that the majority of managers displayed a lack of interest in assuming leadership positions, resulting in their being persuaded to accept such posts, which left them inadequately equipped for the responsibilities involved. Consequently, clinical managers perceive it as arduous and demanding. Other identified challenges included the number of years of experience and the duration of leadership positions held. Additionally, a solitary study highlighted a weak reward system as a primary difficulty, specifically observed inside the healthcare system in Kenya. The characteristics of all the 31 included articles is presented in Appendix A.

Table 7: Clinical Leadership Competency Challenges Among Clinical Managers

Challenges	Sources
Lack of leadership training	Bigbee <i>et al.</i> , 2010; Dickinson <i>et al.</i> , 2013; Dopelt <i>et al.</i> , 2021; Fraser <i>et al.</i> , 2015; Fiset <i>et al.</i> , 2017; Fiset <i>et al.</i> , 2017; Gulati <i>et al.</i> , 2019; Gulati <i>et al.</i> , 2022; Ileri <i>et al.</i> , 2017; Isibor <i>et al.</i> , 2020; Liou <i>et al.</i> , 2021; Mai <i>et al.</i> , 2021; Mrayyan <i>et al.</i> , 2022; Warshawsky <i>et al.</i> , 2019
Grasping complexity	Dawson <i>et al.</i> , 2013; Furunes <i>et al.</i> , 2018; Gulati <i>et al.</i> , 2022; Hartviksen <i>et al.</i> , 2020; Ileri <i>et al.</i> , 2017; Isibor <i>et al.</i> , 2020; Kelly <i>et al.</i> , 2023; Miltner <i>et al.</i> , 2015.
Inadequate leadership development training	Giri <i>et al.</i> , 2017; Gulati <i>et al.</i> , 2021; Ileri <i>et al.</i> , 2013; Jalghef <i>et al.</i> , 2023; Liang <i>et al.</i> , 2020; Liang <i>et al.</i> , 2020b; McGowan <i>et al.</i> , 2017; Pillay, 2011; Xu <i>et al.</i> , 2022.
Persuasion to join management/lack interest in management role	Dickinson <i>et al.</i> , 2013; Ileri <i>et al.</i> , 2017; Warshawsky <i>et al.</i> , 2019.
Years of experience/duration of management	Gulati <i>et al.</i> , 2021; Kelly <i>et al.</i> , 2023; Welch <i>et al.</i> , 2021.
Weak reward system (UK)	Ileri <i>et al.</i> , 2011

Discussion

The systematic literature review of the 31 included studies, the researcher has demonstrated the perception of leadership competency, challenges and developmental needs of clinical managers different healthcare settings in 15 countries. Most prominently United State and United Kingdom health settings. The reviewed findings based on the research questions are presented under sub themes below.

Perception of Leadership Competency Among Clinical Managers

The perception of leadership competency of clinical managers across different leadership position has largely been documented by scholars (Liang *et al.*, 2020; Ireri *et al.*, 2011; Ireri *et al.*, 2017; Gulati *et al.*, 2021; Mrayyan *et al.*, 2022; Warshawsky *et al.*, 2019; Liang *et al.*, 2013; Fanelli *et al.*, 2022; Gulati *et al.*, 2019; Welch *et al.*, 2021; Miltner *et al.*, 2015; Bigbee *et al.*, 2010; Giri *et al.*, 2017; Jalghaf *et al.*, 2023; Pillay, 2011; McGowan *et al.*, 2017; Ylitnmallo *et al.*, 2022). And authors have utilized different clinical professions to underpin the competencies of clinicians in various leadership positions. Liang *et al.* (2020) for instance, utilized a three-component competent survey that involves cross-sectional and qualitative methodology to understand the self-perceived leadership competency of directors and deputy directors of medical service in Chinese public hospitals. Using management competency assessment program (MCAP) framework, self-perceived leadership competency of these directors were identified. In their study, clinicians perceived themselves to have low leadership competency in the area of managing conflicts, performance management and improvement, development of new skills, and swift decision and change making. The author further argued that the level of low self perceived competency identified in medical management level and hospital level is below acceptability for that role. Although, average year of leadership experience could be the research for low level of leadership competency, as all the included clinicians by Liang *et al.*, (2020) only have 1 year of leadership experience. Ireri *et al.* (2017) study was based on 25 Kenya and United Kingdom Doctor manager while the study in the year 2011 was only based on United Kingdom with larger sample of 189 Doctor managers. While in both year, qualitative research design and medical Leadership Competency Framework (Personal qualities, working with others, managing service, improving service, and setting direction) was sought, doctor managers in the first study had only 1 year of leadership experience while doctor managers with 2 years of leadership experience was used in the Ireri *et al.* 2011. In spite of these, the author in both year 2011 and 2017 reported a high perceived self-competency among doctor managers in Kenya and United Kingdom. The doctor managers in these contexts have high self-perceived competencies in managing clinical service, personal qualities and working with others. However, doctor managers were found to have low self-perceived competencies in self-management, working with others and service improvement and setting direction in both Kenya and UK doctor managers. These findings is in line with Gulati *et al.* (2021) who utilized the same medical leadership competency framework and also found low self perceived competencies in setting directions, working with others, and managing services among 540 doctor managers in India private and public hospital with an average of 14.5 years of leadership experience. The author further identifies knowledge of human resources, procurement, financial and contracts management as the lowest items of the leadership element with least competencies. Ireri *et al.* (2013) and Gulati *et al.* (2021) claim using a qualitative methodology was further confirmed by Mrayyan *et al.* (2022) using a quantitative cross-sectional design among 349 nurse managers in Jordanian private and public hospitals. The authors argued that aside high level of clinical knowledge competency among nurse managers, they lack financial and service management leadership competency.

Warshawsky *et al.* (2019) conducted qualitative research among 647 US nurse managers revealed a low self-perceived leadership competency in financial management, strategic management, performance improvement, and foundational thinking. However, the study posited that nurse managers with up to 6 years of experience have high self-perceived competencies in human resources management, clinical practices, diversity management, and technology. These findings are in contrast with Gulati *et al.* (2021) who revealed a low self-perceived human resource competency among nurse managers. Settings and other factors like leadership competency framework may account for the inconsistent findings, as Warshawsky *et al.*, (2019) used Nursing Manager Leadership Domain Framework: Science: Managing the business and Art: leading the people and leader within and creating leader in oneself. In congruence with Warshawsky *et al.* (2019) Welch *et al.* (2021) also demonstrated how 22 nurse manager or director with 5 years of leadership experience in rural hospital in Alabama Black Belt Region US are more competent than those with less than 5 years of experience. The author further argued that nurse managers or directors with less than 5 years of leadership experience are less proficient in knowledge of quality improvement strategies, and ability to lead multi-generational work teams (communication style, motivation factors, conflict management, or even work expectations). Although the study adopted a pilot study design and limited number of sample size. Nonetheless the sample is a representative sample of a US region. Miltner *et al.* (2015) an earlier study in US context with same framework found low self-perceived leadership competency in managing versus Leading, gaining a voice, and garnering support among 20 US nurse using a qualitative approach. Liang *et al.*, (2020) further examine this phenomenon of leadership competency among clinical manager in Junan hospitals in Shandong Province, China. More sample size of 498 Nursing Directors, Clinical directors, and Administrators were studied in this paper using MCAP framework with contain six elements. Of these six elements, it was interesting to note that clinical managers in this Chinese setting posses high leadership competency in knowledge, communication, and leadership while low competency in resource and change management element of MCAP. For the low competency element, three items including conflict management, innovative teamwork, and performance items was reported. Fanelli *et al.*, (2022) similarly found high self perceived competency in leadership, and internal communication among doctor and other health profession managers in Italian health organizations of Emilia-Romagna and Lombardy regions. Other high perceived competency highlighted by the study includes quality improvement, planning, problem solving operation and project management. However, low self-perceived leadership competency in financial management, human resources management, organizational design, external communication, output and outcome assessment was found among 366 doctor, nurse or other health professionals. These findings confirm previous scholarship claims on reported low self-perceived competency in financial management, and human resources management.

Furthermore, eight items of leadership competency was used by Bigbee *et al.*, (2010) to examined self-perceived clinical leadership competency of 30 Boise health setting nurse managers. Using a cross-sectional study design, similar to previous authors they confirmed high self-perceived leadership competency in communication, cultural competency, and leadership skills among the 30 nurse managers. Meanwhile, policy development/program planning, analytic assessment, and financial planning/management competencies were self-perceived to be low among the nurse managers despite having up to 6 years of leadership experience. A unique finding was revealed by Giri *et al.* (2017), These authors compared to other scholars notable found high self-perceived leadership competency in serve improvement and personal qualities among 249 United Kingdom occupational health Clinicians. The study utilized an extended 7 domain framework of NHS England Leadership Academy Healthcare Leadership. In line with previously cited studies, the Giri *et al.*, (2017) also revealed a low

self-perceived competency in setting direction, creating the vision, and delivering strategy. Jalghaf *et al.* (2023) is a more recent study conducted in Jordanian government hospitals. One thirty two nurse managers were asked to self-assessed their leadership competency based on Hennessy Hicks Training Needs Questionnaire, and they found that these nurse managers with less than 5 years of leadership experience perceived themselves to be good at getting on with their colleagues i.e. working with others and appraising own performance i.e. demonstrating personal qualities. A high self perceived competency in self management i.e. demonstrating personal qualities and other items such as planning, controlling, and leading which are items under service management elements was revealed by Pillay *et al.* (2011) among 92 senior nurse managers in South African healthcare settings. McGowan *et al.* (2017) conducted a cross-sectional examination of physiotherapists in healthcare settings in Ireland. The found that High perception of leadership competence by physiotherapists who have had leadership training while Communication and professionalism were the most highly rated. Whilst, social dominance, and self-awareness which demonstrate personal qualities competency, and business acumen which indicates service improvement competency were all self-perceived weak among the 525 Physiotherapist. Day-to-day management and communication with employees and management of large entities were low self-perceived competency reported by Ylitalo *et al.*, (2022) among 21 Finnish clinical nursing and medical managers. MCAP framework was also employed by the study with a qualitative design. Supporting employee and developing digital related solution was found to be the highest self-perceived competence among the Finnish Nurse.

Challenges of Leadership Competency Among Clinical Managers

Clinical managers play a crucial role in ensuring patient safety and the delivery of quality healthcare services worldwide (Bigbee *et al.*, 2010). However, they encounter various challenges that affect their clinical leadership competencies in roles such as clinical supervisors, medical managers, or directors. These challenges are primarily attributed to the lack of leadership training (Ileri *et al.*, 2017; Mai *et al.*, 2021; Fraser *et al.*, 2015; Fiset *et al.*, 2017; Fiset *et al.*, 2017; Mrayyan *et al.*, 2022; Warshawsky *et al.*, 2019; Dickinson *et al.*, 2013; Gulati *et al.*, 2019; Liou *et al.*, 2021; Bigbee *et al.*, 2010; Gulati *et al.*, 2022; Isibor *et al.*, 2020; Dopelt *et al.*, 2021). It's noteworthy that a substantial number of clinical managers do not receive any leadership training before assuming their roles.

Furthermore, medical education often lacks the integration of clinical leadership and management curricula into the training of healthcare professionals (Liang *et al.*, 2020). Even among those who have received leadership training, a significant portion still possesses limited or insufficient leadership skills required for their leadership positions. Ileri *et al.* (2013), Gulati *et al.* (2021), and Liang *et al.* (2020) have all noted that many clinicians have inadequate formal and informal leadership and management training before taking on leadership roles. This deficiency has significantly contributed to the consistently reported low self-perceived leadership competence among clinical managers.

Often, the argument revolves around clinicians not being adequately prepared for leadership roles. Nevertheless, the trend of clinicians transitioning into managerial roles continues to grow, driven by years of experience and performance in clinical practices rather than leadership competency (Gulati *et al.*, 2021; Welch *et al.*, 2021; Kelly *et al.*, 2023). While many clinicians express dissatisfaction with the lack of leadership training before assuming their roles, grappling with the complexities of leadership has also posed significant challenges (Ileri *et al.*, 2013; Miltner *et al.*, 2015; Gulati *et al.*, 2022; Dawson *et al.*, 2013; Isibor *et al.*, 2020; Hartviksen *et al.*, 2020; Furunes *et al.*, 2018; Kelly *et al.*, 2023).

For instance, Ireri *et al.* (2013) emphasized how doctor managers in the United Kingdom experience high workloads, encounter unclear boundaries in their leadership roles, and wrestle with personal and organizational values conflicts. They face constraints such as limited resources and lack of power and authority, leading to a perception of high costs associated with leadership roles, both personal and professional. These findings align with Hartviksen *et al.* (2020) research on leadership challenges among seven middle-level clinical managers in Norway. The study highlights conflicting practice complexities faced by clinicians and emphasizes challenges related to a lack of developmental support, difficulties in navigating unclear boundaries and leadership frameworks, and continuous developmental needs that may not be met due to resource limitations. The role is further complicated by issues like role conflict, poor trust, and inadequate support within the position.

Miltner *et al.* (2015) mentioned challenges such as understanding organizational behaviour, using data to make decisions, and refining problem-solving skills as complex issues faced by 20 US nurse managers. It is important to note that the findings may have limitations due to the small sample size and potential bias. These difficulties may have contributed to clinical leadership positions becoming unattractive to clinicians, with only a few opting for part-time roles (Irerri *et al.*, 2013; Warshawsky *et al.*, 2019; Dickinson *et al.*, 2013).

Furthermore, Isibor *et al.* (2020) emphasized various social support issues among 474 early-career doctor managers. Utilizing nationally representative data of early-career doctors in leadership positions in Nigeria, the study highlighted social support challenges, including a lack of support from fellow trainees, senior doctors, other members of the management team, and management itself as part of the complexities faced by clinicians. The study also identified other notable challenges, such as a lack of training in leadership skills and low confidence. Attitudes, passion, and innate traits were also recognized as factors contributing to leadership competencies among clinicians.

Leadership Developmental Needs of Clinical Managers

Leadership developmental needs of clinical managers remain a critical topic in healthcare leadership management, demanding the development of strategies and policies to enhance competencies among clinical managers before they assume leadership positions, as well as for those already in healthcare leadership roles (Warshawsky *et al.*, 2019; Hartviksen *et al.*, 2020). This need is confirmed through a critical analysis of 31 primary articles reviewed in this systematic literature review, which demonstrates the emphasis placed by clinical managers on their developmental needs for improved performance in leadership positions.

Liang *et al.* (2020) shed light on the inadequate formal and informal leadership and management training provided to clinical managers before assuming leadership roles. To address this issue, the author proposes a two-level approach that integrates educational and organizational features to formulate comprehensive strategies for medical leadership and management development, thereby facilitating continuous leadership competency and personal development among Chinese clinical managers.

Emphasized by Ireri *et al.* (2013) and Ireri *et al.* (2017), the most critical leadership competency needs among clinical managers revolve around service management and working with others. This may be because clinical managers lack financial management, human resources, information management, and motivation and conflict management competencies within the healthcare sector. Consequently, training and developmental programs aiming to enhance these clinical competencies are highly warranted (Irerri *et al.*, 2013, 2017; Fanelli *et al.*, 2022; Liang

et al., 2020; Giri *et al.*, 2017; Jalghef *et al.*, 2023; Pillay, 2011; Xu *et al.*, 2022; McGowan *et al.*, 2017; Gulati *et al.*, 2021; Liang *et al.*, 2020).

Ileri *et al.* (2013) clearly posited that for credible clinical management to be achieved, financial management skills are the most developmental need among clinical managers. Meanwhile, leadership skills such as persuasion techniques, mentoring, conflict management, and coaching, which fall under human resources, are equally essential leadership competency needs among clinical managers. Mai *et al.* (2021) similarly mentioned that effective and timely communication, coupled with efficient time management and resource utilization, are crucial developmental needs for clinical managers.

In contrast, Fraser *et al.* (2015) claim that while several formal leadership competency training needs are imperative, equal attention should be paid to other important aspects. They prioritize leadership competency developmental needs as follows: leading a team (especially among resident clinical managers), innovative problem-solving, coaching and developing others, interpersonal conflict management, and personal attributes such as time management, self-management, self-awareness, and embracing change (Fraser *et al.*, 2015).

The need for formal leadership and management training is further emphasized by Gulati *et al.* (2021) among Indian clinical managers. It is stressed that while such training is essential, clinical managers also require sufficient time in leadership positions to develop the necessary leadership competency. Aligning with this perspective, Fiset *et al.* (2017) identify three categories of developmental needs, including interpersonal development, organizational-level competency, and management-level competency. For interpersonal development, the authors emphasize that clinical managers must possess excellent communication skills, the ability to inspire and motivate peers, conflict resolution skills, self-awareness, and the ability to build relationships among colleagues.

Various studies also highlight organization-level developmental needs, including strategic planning, policy and program development, change theory, and team development. Management competency development needs encompass recruitment and staff retention skills, effective human management skills, policy and procedure development, regulatory compliance, budgetary and financial planning ability, mentoring, supervision, and quality improvement competency needs (Fiset *et al.*, 2017; Bigbee *et al.*, 2010; Giri *et al.*, 2017; Ylitalo *et al.*, 2022).

Liou *et al.* (2021) identify leadership, business literacy, integrative skills, and communication and relationship management as essential developmental needs among Taiwanese nurse managers. They particularly emphasize leadership, communication, and relationship management as competencies that require special attention.

Similarly, Xu *et al.* (2022) found that clinical managers require leadership development in areas such as strategic thinking, horizontal leadership, team coordination and collaboration, advocacy, policy establishment, understanding of system and structure, external awareness, political astuteness, change leadership, leading with vision and values, international perspective, and quality relationship development and management. Furthermore, they underscore the significance of effective communication and interpersonal skills, with a special focus on interpersonal communication. This perspective aligns with Fanelli *et al.* (2022), who describe internal communication as a significant developmental need.

These findings are consistent with the conclusions of Isibor *et al.* (2020), who argue for a structured leadership skill acquisition programme among clinical managers, featuring skills such as communication, listening, decision-making, integrity, and personal qualities. They also

highlight the importance of open communication, attentiveness, decision-making, and catering to meaningfulness as areas of developmental needs, as suggested by Furunes *et al.* (2018).

Furthermore, the need to develop performance feedback skills is emphasized by Jalghef *et al.* (2023) among Jordanian clinical managers. This involves establishing suitable mechanisms for providing staff members and colleagues with performance feedback.

McGowan *et al.* (2017) identify both clinical and non-clinical leadership competency needs among Irish physiotherapy clinical managers. In addition, Pillay *et al.* (2011) find that South African nurse managers require competency in legal and ethical dimensions.

A study conducted among 24 nurse managers, revealed the need for leadership training that strengthens successful working relationships with other board colleagues, development of political skills and personal status, coaching and mentoring, working within a supportive team culture, and having strong professional networks (Kelly *et al.*, 2013).

According to the earlier cited study by Liang *et al.* (2013), there is a need for leadership competency development training to be provided using a systematic approach with specific consideration for different healthcare settings, management levels, and positions. However, Dawson *et al.* (2013) suggest empowerment through education, resources development, streamlined documentation, and use of best practice protocols. Developing career structures to make it easier for clinicians to take on leadership roles, providing training, development, and support in management and leadership at different stages of their careers, and ensuring that pay and other rewards are commensurate with the responsibilities of clinical leaders (Dickson *et al.*, 2013).

While Welch *et al.* (2021) later confirmed that clinical managers must be aware of their need for leadership development and commitment in leadership roles to be able to develop the necessary leadership competency. This raises concerns over self-awareness. However, Miltner *et al.* (2015) posit that professional development activities focusing on higher-level leadership competencies could assist managers in being more successful in this challenging but critical role.

In conclusion, the need to develop leadership competency among clinical managers can never be overemphasized. This is because, in the absence of leadership training, clinical managers, especially those in senior leadership roles, specifically doctors and nurses, may experience difficulties in their leadership roles (Gulati *et al.*, 2022). Hence, interventions should be channelled towards equipping clinical managers with the required leadership training before assuming leadership roles. The successful implementation of such interventions would lead to the development of a culture that encourages continuous management competency development and self-improvement among clinical leaders. Investment in the capability development and competency improvement of global clinical managers across healthcare settings is critical and could lead to improved service quality, greater economic sustainability, and improved public health outcomes.

Limitations and future research

The scope of our review was limited to studies published in English, which may have excluded significant research in other languages. As a result, our findings may not be as comprehensive as we would like. Further, most of the studies used self-reported measures, which can introduce biases such as social desirability and memory bias. As a result, these biases can negatively affect the validity and reliability of the data, making it difficult to draw accurate conclusions about the leadership competencies of clinical managers. Future research should address these limitations by including studies in multiple languages and utilising more objective measures. Including perspectives from subordinates regarding clinical managers leadership can present a more comprehensive and balanced perspective, reducing the biases associated with self-reported data and providing more insight into the effectiveness of healthcare leadership.

Conclusion

The comprehensive systematic literature review revealed several gaps. First, it was evident from the synthesis of the 31 included articles that more than 80% of articles published on this phenomenon of clinical leadership competency has revolved round the medical and nursing professions, with very few study (Dawson *et al.*, 2013; McGowan *et al.*, 2017; Giri *et al.*, 2017; Mai *et al.*, 2021; Fanelli *et al.*, 2022) that examined diverse healthcare professionals. Hence, the findings of these articles may not truly reflect the experience and self-perceived competency, challenges, and developmental needs by other healthcare professions in leadership role as self-perception are subjective. Also, it was important to note that while clinical managers in diverse country and region have been largely investigated on this phenomenon, studies in the context of Saudi Arabia has not been properly investigated. Hence, the case study would be investigating diverse healthcare professionals as the first in Saudi Context.

Methodological gap is another area identify from the review of articles. It was clear that very few studies utilize any clinical leadership competency framework in their research, making their articles non thematically sound and unstructured. However, it was interesting to note that few studies that utilize a specific framework have their items linked to the five element and 20 items of clinical leadership framework Table 5 & 6. This therefore make it reliable for the exploratory case study to utilize the clinical leader competency framework in order to thematically present findings on this phenomenon. The review also found limited studies examining the moderators of this self-perceived leadership competency, and therefore, the exploratory case study would also be investigating possible moderators of low and high self-perceived competency among the clinical managers. Rating scale employed by all this included articles is another major concern, as self-fulfilment of one's competency may only offer subjective information that sometimes are not fact based (Liang, Howard, Wang, Xu, *et al.*, 2020). However, consistent reported of low and high self-perceived competency, challenges, and developmental needs synthesized from all the included studies therefore confirmed the reliability of the rating scale is confirmed. Also, the significance of self-assessment rating scale in this context of leadership performance management has long been validated by (Latham *et al.*, 2005). while Maurer *et al.*, (2003) study posited that self-rating of one's competence directly influence self-ability to learn which as a result lead to one's competency improvement. Against this background, it is reliable to posit that self-rating assessment of leadership competency of clinical managers may be sufficient to uncover this research phenomenon and strategy development for clinical leadership competency.

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