



Scoping review on concept analysis in nursing: Diversity of approaches and analytical pathways

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Abstract

Background: Concept analysis is an essential process in the development of nursing science. This review aims to provide a comprehensive overview of the approaches used to conduct concept analysis in nursing.

Methods: This study was conducted as a scoping review. Google Scholar and international databases, including PubMed, Scopus, ScienceDirect, and CINAHL, as well as Iranian databases such as the Scientific Information Database (SID) and Magiran, were searched using the keywords "nursing concept analysis methods," "concept analysis methods," "nursing concept analysis approaches," and "concept analysis approaches," along with their Persian equivalents, combined with the Boolean operators AND and OR. The search was conducted without time restrictions and included studies published up to May 29, 2025.

Results: A variety of methods for concept analysis in nursing were identified, ranging from classical approaches, such as those proposed by Wilson, Walker and Avant, and Rogers, to more recent methods, including pragmatic utility, semantic, simultaneous, and systematic concept analysis. The specific applications and limitations of each method depend on the research objectives and the context in which it is applied.

Conclusion: This review contributes to nursing theory by clarifying and comparing concept analysis methods, thereby strengthening conceptual foundations and supporting nursing research through informed methodological decision-making. It also has implications for nursing practice and policy by promoting the clearer application of key concepts in clinical and educational settings.

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Highlights

What is current knowledge?

- Concept analysis is widely used to clarify ambiguous nursing concepts and support theory development.
- Walker and Avant's method and Rodgers' Evolutionary Approach are among the most frequently used concept analysis methods in nursing research.
- Concept analysis methods differ in their philosophical foundations and analytical procedures.

What is new here?

- This review provides a comparative analysis of both classical and contemporary concept analysis methods in nursing.
- The identified methods are categorized into three overarching perspectives: Wilsonian, pragmatic, and evolutionary.
- The findings emphasize the importance of selecting concept analysis methods according to the specific research purpose and contextual requirements.

Introduction

Nursing is distinguished by its unique body of knowledge and the way it conceptualizes the contexts in which nurses provide care (1). The foundation of conceptualization and theoretical thinking in nursing lies in the articulation of discipline-specific concepts (2). As an evolving discipline, nursing continues to require further conceptual development (3). These concepts are interpreted in relation to the nursing metaparadigm, which comprises four key elements: person, environment, health, and nursing (2). A concept is a term that identifies and gives meaning to a phenomenon by representing patterns of behaviors or experiences (4).

In other words, a concept is an idea, which may be either concrete or abstract. A concrete concept refers to a tangible entity, whereas an

abstract concept refers to an idea that cannot be fully understood or directly observed (5). These concepts summarize specific aspects of human experience (6). They are fundamental to the development of nursing knowledge and the refinement of nursing theories (7,8).

Although theoretical frameworks in nursing have evolved rapidly, their application in practice has not always been assured. Concept analysis bridges this gap by clarifying the fundamental components of theories, thereby ensuring that concepts are accurately understood and appropriately applied (6,9,10). This approach is particularly valuable when concepts are unclear, under-researched, or inconsistently defined, as it can guide clinical nurse specialists in both research and practice (11).

Conducting concept analysis using a valid and well-established method enhances the credibility of its findings (12). In nursing research and education, classical approaches such as Walker and Avant's method and Rodgers' Evolutionary Approach (REA) are the most frequently used (6). However, reliance on Wilsonian-derived methods has been criticized for limiting conceptual development (13). Despite the substantial increase in published concept analyses, their contribution to advancing nursing science has remained limited, resulting in persistent theoretical ambiguity across nursing education, research, and practice (14,15).

Therefore, methodological innovation is essential for advancing concept analysis in nursing (16). Many students remain unfamiliar with the range of available concept analysis methods (6). Insufficient methodological guidance has led some postgraduate students to rely on terminology-based resources that do not fully satisfy the methodological requirements of concept analysis research (17). Furthermore, despite the apparent similarities among existing methods, substantial differences often emerge during their practical application (18).

Despite the increasing number of concept analysis studies, the methods used in this field have rarely been critically examined (19), and the selection of a particular method is often based on familiarity or educational convention rather than methodological appropriateness.

Consequently, many concept analyses continue to rely on classical approaches, even when the concepts under investigation are dynamic or context-dependent. This routine practice risks producing analyses that are primarily descriptive rather than theoretically informative, thereby limiting their contribution to the advancement of nursing knowledge. Therefore, the present study aims to describe concept analysis methods used in nursing, clarify their underlying assumptions, and compare their analytical pathways.

Methods

This study was conducted as a scoping review using the framework proposed by Arksey and O'Malley (2005), as subsequently refined by Levac et al. (2010). This framework comprises the following stages: identifying the research question, identifying relevant studies, study selection, data extraction, data analysis, and reporting of findings (20,21). Accordingly, to address the research question, "What are the methods of concept analysis in nursing?", searches were conducted in the Google Scholar search engine, as well as the PubMed, Scopus, ScienceDirect, and CINAHL databases, together with the Iranian databases Scientific Information Database (SID) and Magiran. The search strategy included the keywords "nursing concept analysis methods," "concept analysis methods," "nursing concept analysis approaches," and "concept analysis approaches," along with their Persian equivalents, combined with the Boolean operators AND and OR. No time restrictions were applied, and studies published up to May 29, 2025, were included.

The inclusion criteria comprised studies in which the keywords of the present review appeared in the title or abstract, were thematically relevant to the research question, were published in either Persian or English, and had full-text availability.

The initial search identified 35 sources related to concept analysis methods based on the predefined keywords. Most records were retrieved from Google Scholar, followed by the CINAHL database. Table 1 presents the distribution of the retrieved articles according to the

databases searched. After importing the records into the EndNote library, 11 duplicate articles were removed. During the screening stage, four articles were excluded because they were not relevant to the objectives of the present study, and an additional four articles were excluded because their full texts were unavailable. The screening and evaluation processes were conducted by the research team. Two researchers independently reviewed the titles, abstracts, and full texts of the retrieved articles according to the predefined inclusion criteria. Any disagreements were resolved through discussion and consensus among the research team members. No external reviewers participated in the evaluation process. Data related to concept analysis methodologies in nursing were then extracted from the remaining articles (Figure 1). Finally, the findings were synthesized using thematic analysis.

Table 1. Details of articles found in initial search

Database	Count
Google Scholar	19
CINAHL	11
PubMed	3
ScienceDirect	1
SID	1

It should be noted that thematic analysis is a qualitative analytic method for identifying, developing, and interpreting patterns of meaning within qualitative data. It was introduced by Braun and Clarke (2006) and has since become widely adopted. According to Braun and Clarke, a rigorous thematic analysis involves more than merely describing the data; it requires an interpretive account of the data in relation to the research question (22).

Accordingly, the extracted data were analyzed to describe concept analysis methods, explain their implementation procedures, identify their applications, and compare them systematically. Furthermore, to enrich the findings, additional sources beyond those included in the final dataset, such as the reference lists of the retrieved articles and related studies suggested by the databases, were also reviewed.

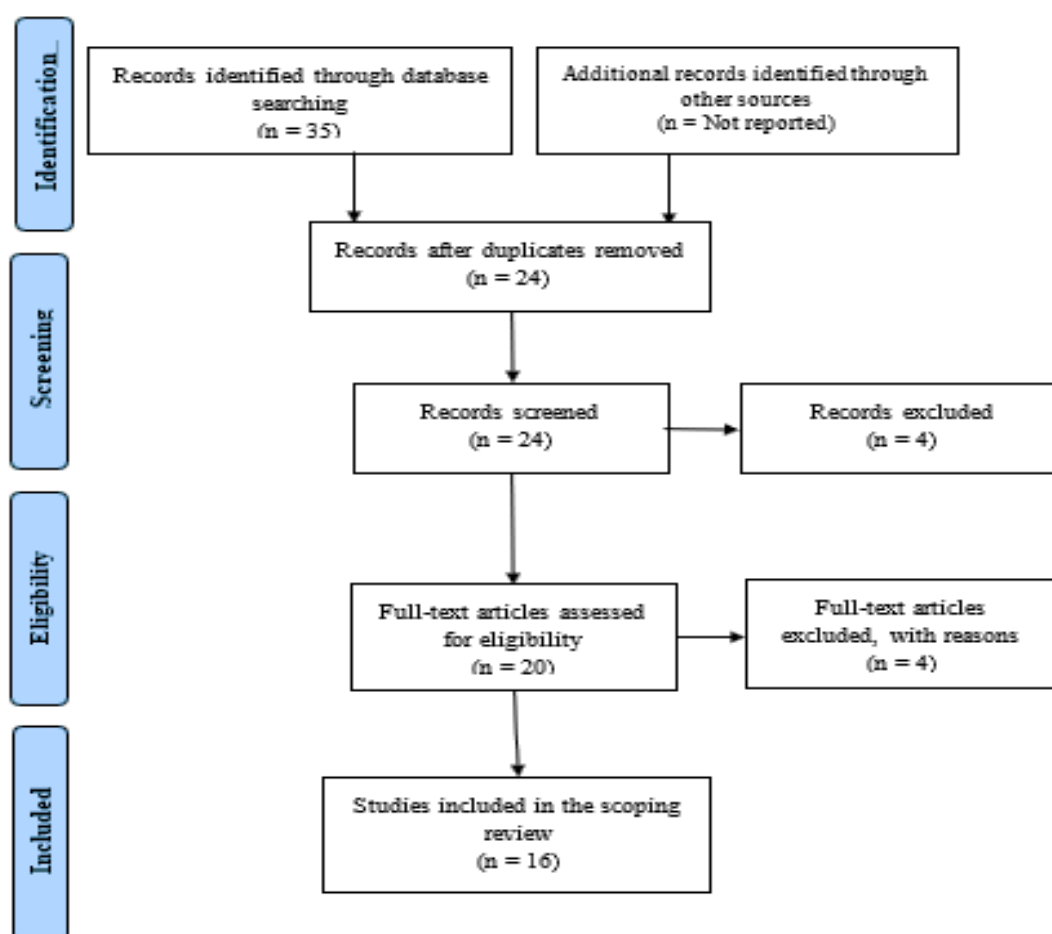


Figure 1. PRISMA flow diagram of the study selection process

Results

This study analyzed 16 full-text articles that met the inclusion criteria, including one article published in Persian and 15 articles published in English (Table 2). Based on these sources, three overarching approaches to concept analysis in nursing research were identified: Wilsonian, pragmatic, and evolutionary (13). Wilson's method and its derivatives, including the approaches proposed by Walker and Avant, Chinn and Kramer, and Schwartz-Barcott and Kim (Hybrid Model), represent the Wilsonian perspective. Pragmatic Utility and the Principle-Based Method are categorized within the pragmatic perspective, whereas Rodgers' Evolutionary Approach (REA) and Simultaneous Concept Analysis represent the evolutionary perspective. Additional methods identified in the literature include Semantic Concept Analysis and Systematic Concept Analysis. Although these methods share several common characteristics, closer examination reveals important differences that become apparent during their application (18).

The terms method, approach, and model are used inconsistently throughout the literature, reflecting differences in philosophical orientation, level of abstraction, and operational structure. To preserve the integrity of the original sources, the terminology adopted by each author has been retained throughout this review. Table 3 provides a comparative overview of the aims and characteristics of these concept analysis methods.

Wilson's method

Wilson's method (1963/1969), also known as the ordinary language approach, provides the foundation for concept analysis in nursing and has informed the development of many subsequent analytical methods (4,23,24).

Wilson proposed an 11-stage analytical process. This process begins with formulating concept-related questions, including factual, value-based, and meaning-related questions, followed by identifying potential answers and examining model cases that represent the defining attributes of the concept. The process also includes the analysis of contrary, related, and borderline cases, as well as the construction of invented cases to highlight shared characteristics. Additional stages involve examining the social context in which the concept is used, its associated emotional dimensions, and its practical consequences. The final stage focuses on clarifying the outcomes of the analysis and selecting appropriate terminology to define the concept (25).

Chinn and Kramer's method

Chinn and Kramer (Formerly Jacobs) introduced their concept analysis method in 1983 based on Wilson's approach. In 1991, they further refined the method by distinguishing it from Walker and Avant's model through the exclusion of antecedents, consequences, and defining attributes as mandatory analytical elements. Their approach is less linear and emphasizes the dynamic interaction among analytical stages. Consequently, they acknowledge that conceptual definitions may evolve within specific contexts as new evidence emerges (6).

The Chinn and Kramer method involves selecting the concept, clarifying the purpose of the analysis, and searching and reviewing multiple data sources, including existing definitions, literature, human sources, and the construction of model, contrary, related, and borderline cases. These steps are followed by an examination of the concept's background, context, and underlying values. The final stage focuses on developing validation criteria for the conceptual definition. A major strength of this method is its emphasis on deriving validation criteria from exemplar cases and evaluating them within their social contexts (26,27).

Walker and Avant's method

Walker and Avant are widely recognized for their substantial contribution to the dissemination of concept analysis in nursing research (28). Walker and Avant's (1983) concept analysis method adopts both linguistic and pragmatic perspectives (4) and remains one of the most widely applied approaches in nursing. Derived from Wilson's framework, it was simplified to improve clarity, particularly for novice researchers (26). The primary objective of this method is to distinguish the defining attributes of a concept from its nonessential characteristics (17). The method consists of eight sequential steps, beginning with concept selection and clarification of the purpose of the analysis (6).

Subsequent steps involve conducting a comprehensive literature review to identify all possible uses of the concept, followed by the identification of defining attributes that form the basis of the final conceptual definition. Model cases are then constructed to illustrate the concept, together with related, borderline, and contrary cases. The method also includes identifying antecedents and consequences—that is, factors that precede or result from the occurrence of the concept, respectively (2). In the final step, empirical referents are identified to determine the measurability of the concept. These referents frequently overlap with the defining attributes of the concept (29,30).

The Schwartz-Barcott and Kim hybrid model

Schwartz-Barcott and Kim (1986) introduced the Hybrid Model of concept analysis to address the limitations of existing methods. Unlike earlier approaches, this model grounds concept identification and case selection in real-world nursing practice. Although Wilson's influence is evident in its use of model cases, the Hybrid Model differs by deriving these cases from empirical data rather than hypothetical examples (26). The Hybrid Model integrates theoretical analysis with practical observation and was developed partly to facilitate concept analysis among graduate students (6).

The Hybrid Model consists of three interrelated phases: the theoretical phase, the fieldwork phase, and the analytical phase. During the theoretical phase, a systematic review of the literature is conducted to clarify the meaning of the concept and approaches to its measurement. The fieldwork phase focuses on collecting qualitative data in real-world settings. Finally, the analytical phase integrates findings from the previous two phases to refine and further develop the concept (10).

Table 2. Articles included in the study

Number	Authors	Year	Aims
1	Hupcey et al. (26)	1996	Critique and comparison of Wilsonian methods of concept analysis
2	Morse et al. (34)	1996	Critique and comparison of main methodological approaches to concept analysis
3	Rodgers (7)	1989	Examining the philosophical foundations of Walker and Avant's (1983) concept analysis approach
4	Penrod and Hupcey (48)	2005	Operationalization the principle-based method of concept analysis
5	Hupcey and Penrod (24)	2005	Discussion on conceptualization and critique of methods for concept analysis
6	Duncan et al. (29)	2007	Clarifying the philosophical foundations of concepts, concept analysis, and their implications
7	Baldwin (9)	2008	Processing different methods of concept analysis
8	Weaver and Mitcham (13)	2008	A Critical Examination of Morse et al.'s Concept Analysis Methods
9	Risjord (35)	2009	Clarifying the ontology of concept analysis and how to strengthen its epistemology
10	Cronin et al. (30)	2010	Ontological and epistemological critique and review of concept analysis methods
11	Nuopponen (17)	2010	Comparing terminological approaches with selected methods of concept analysis
12	Nuopponen (49)	2010	Explaining the steps of terminology method of concept analysis (Systematic concept analysis)
13	Toftthagen and Fagerstrøm (43)	2010	Explanation of Rogers' evolutionary concept analysis as a valid scientific method
14	Foley and Davis (11)	2017	Providing insight into concept analysis through definitions, purpose, and procedures
15	Gunawan et al. (6)	2023	Reviewing concept analysis methods for use in nursing research and education
16	Heydari and Asaroudi (44)	2015	Introducing the systematic concept analysis method to researchers

Table 3. Summary and comparison of concept analysis approaches/models/methods

Approach /Model/ Method	Inventor / Year	Aim and General approach	Key steps / Features	Distinctive Features
Wilson Method	Wilson (1963)	The foundation of many methods; systematic analysis of concept	– Identification of questions, facts, values, meanings – Potential answers – Model cases – Contrary cases – Related cases – Borderline cases – Invented cases – Social contexts – Associated feelings – Practical consequences – Precise naming of the concept	Comprehensive analysis considering context, culture, and practical applications; emphasis on the categorization of examples and examination of associated values and emotions
Chinn and Kramer Method	Chinn and Kramer (1983)	Less linear process, emphasis on interaction of stages, and social values	– Concept selection – Clarifying the purpose – Searching for resources – Constructing model contrary, related, and borderline cases – Examining contexts and values – Formulating validation criteria	Validation criteria are extracted from study samples, and the social context and values are considered in the analysis
Walker and Avant Method	Walker and Avant (1983)	A simpler and more practical approach; differentiating defining and irrelevant characteristics	– Concept selection – Defining the purpose – Identifying all possible uses of the concept – Identifying defining attribute – Constructing model contrary, related, and borderline cases – Identifying antecedents – Identifying consequences – Empirical referents	Simplified version of Wilson's method; greater applicability in nursing; emphasis on empirical referents and the development of measurement tools
Schwartz - Barkot and Kim Hybrid Model	Schwartz - Barkot and Kim (1986)	Integration of theoretical analysis and empirical data for practical application	– Theoretical phase (Reviewing literature and definitions) – Field phase (Qualitative data collection) – Analytical phase (Data synthesis and analysis)	Combining scientific and empirical data; suitable for postgraduate education; cyclical and iterative approach
Rogers Evolutionary Approach (REA)	Rogers (1989)	Dynamic and evolving analysis Emphasis on context and time	– Identifying the concept – Identifying related and alternative expressions – Selecting an appropriate realm and time – Collecting and analyzing data – Identifying antecedents and consequences – Identifying related and contextual concepts	Inductive approach; does not have definitive conclusions; emphasis on evolutionary analysis and the change of concept over time
Pragmatic utility	Morse et al. (1996)	Nonlinear and iterative analysis: examining the extent of operationalization of the concept	– Clarifying the purpose – Selecting a lay concept – Choosing texts – Identifying characteristics – Determining concept maturity – Synthesizing analysis results	Emphasis on context and the scientific community; attention to the maturity of the concept and accurate evaluation of the quality of analysis; multidisciplinary approach
Principle Based Method	Hupcey and Penrod (2005)	A scientific and coherent definition of the concept based on the four principles	– Analysis based on principles: linguistic, epistemological, pragmatic, logical – Systematic search – Evaluation of source quality – Data analysis	Emphasis on context and the scientific community; Attention to the maturity of the concept and precise evaluation of the analysis quality; Multidisciplinary approach
Simultaneous concept analysis	Haase et al. (2000)	Simultaneous analysis of related concepts to differentiate and distinguish meanings	– Identifying the background, characteristics, and consequences of each concept – Comparing and examining similarities and differences – Group collaboration to reach a consensus	Suitable for related and overlapping concepts in nursing science; emphasizes collaboration and critical thinking in a group setting
Semantic Method	Koort (1975)	Focusing on lexical analysis and the linguistic meaning of concepts	– Analyzing dictionaries – Investigation of language applications – Semantic categorization	Suitable for abstract concepts; analysis within the context of a specific language
Systematic Method	Nuopponen (2010)	A structured and repeatable pattern for concept analysis	– Defining the Objective – Searching Resources – Extracting Features – Extracting Antecedents – Extracting Consequences – Operational Definition	Suitable for developing measurement tools; Clear and practical

Although these phases are presented sequentially, they overlap in practice, forming a cyclical and iterative process in which insights gained during one phase inform the others (31). A major strength of the

Hybrid Model is its integration of evidence derived from the scientific literature with participants' empirical experiences, thereby enhancing the rigor and comprehensiveness of concept development (3).

Rodgers' Evolutionary Approach (REA)

Rodgers' (1989) Evolutionary Approach to concept analysis is an inductive method that emphasizes the dynamic nature of concepts and the contextual factors that influence their development. Unlike several other approaches, this method does not seek to produce a definitive definition. Instead, it systematically examines the context in which the concept is used, together with its alternative and related terms, defining attributes, antecedents, examples, and consequences. Rodgers' approach views concepts as dynamic entities that evolve over time under the influence of social, cultural, interdisciplinary, and temporal contexts (6).

Rodgers described six interrelated activities that occur simultaneously throughout the analysis. These include identifying the concept of interest and its surrogate terms (Step 1); identifying related terms and alternative uses (Step 2); selecting an appropriate setting and time frame for data collection (Step 3); collecting and analyzing data with particular emphasis on identifying the defining attributes of the concept while considering contextual influences, including social, cultural, interdisciplinary, and temporal changes (Step 4); identifying references, antecedents, and consequences within the relevant context (Step 5); and recognizing related concepts, applications, and measurement methods and, where appropriate, developing a model case to illustrate the concept (Step 6) (7,32).

The defining attributes of a concept constitute the foundation of the analysis. References denote the contexts in which the concept is applied. Antecedents are conditions that precede and influence the occurrence of the concept, whereas consequences are the outcomes that result from it. In addition, surrogate terms-words or phrases used interchangeably with the concept-are regarded as key search terms during the analysis. At the conclusion of the analysis, implications and hypotheses may be proposed to facilitate the continued development and refinement of the concept (11,33).

Pragmatic utility

Morse et al. (1996) developed the Pragmatic Utility method as an alternative to the approaches proposed by Wilson and Rodgers. This method involves the systematic evaluation of a concept's internal structure, applications, representational characteristics, and relationships with other concepts (34).

Pragmatic Utility adopts a nonlinear, iterative approach to examine the consistency between theoretical and operational definitions. It focuses on "somewhat mature" concepts, using published literature as the primary source of data. Through the formulation of analytical questions, the method identifies definitions, characteristics, applications, commonalities, differences, perspectives, and the extent to which concepts have been operationalized in research. The quality of the analysis is evaluated based on the comprehensiveness of the database, the depth of the evaluation, logical coherence, level of abstraction, validity, and contribution to knowledge (6).

The method includes the following procedures: clarifying the research purpose, specifying a non-specialized (Lay) concept, selecting relevant literature, identifying general characteristics, determining the maturity of the concept, formulating key analytical questions, and synthesizing the findings and their implications. A concept is considered mature when it is clearly defined, its defining attributes, antecedents, and consequences have been identified, and its conceptual boundaries are well established (34).

The principle-based method

Hupcey and Penrod (2005) developed the Principle-Based Method of concept analysis based on the earlier work of Morse et al. This approach aims to define concepts according to scientific principles and their application in research rather than through creative or purely narrative interpretations. It relies on purposeful and strategic data extraction while emphasizing the central role of context in shaping conceptual meaning (24).

In this approach, concept analysis is guided by four principles: linguistic, epistemological, pragmatic, and logical (4,6). The linguistic principle examines the consistency with which a concept is defined and used in scientific literature. The epistemological principle evaluates how clearly the concept is distinguished from related concepts. The pragmatic principle assesses the usefulness of the concept in research and practice, whereas the logical principle examines the conceptual boundaries and relationships within theoretical frameworks (36).

To improve methodological transparency, Smith and Mörelus proposed a staged process that includes systematic literature searching, quality appraisal of the included sources, data analysis, and assessment of concept maturity. Concept maturity refers to the extent to which a concept has been clearly defined and theoretically developed (36).

Simultaneous concept analysis

Many nursing concepts are closely interconnected, such as communication and interaction, as well as change, transition, coping, and adaptation. Simultaneous Concept Analysis is an innovative strategy designed to analyze closely related concepts concurrently. It was first proposed by Haas et al. (2000) to concepts such as spiritual perspective, hope, acceptance, and self-transcendence (37).

This approach simultaneously examines related concepts to identify both their shared and unique characteristics (4,38).

Following concept selection, an appropriate analytical technique is chosen to clarify each concept precisely (39). Individual analyses are then conducted to identify the antecedents, defining attributes, and consequences of each concept. These elements are systematically compared using a validation matrix to identify similarities and differences among the concepts. Members of the analysis group then critically examine the language, semantics, and conceptual objectives. Finally, the findings are presented in visual diagrams or summary tables (25).

Overall, Simultaneous Concept Analysis, as proposed by Haas et al., comprises nine operational steps, including establishing a consensus group, selecting and clarifying the concepts, developing and refining validation matrices, constructing a procedural model, and submitting the findings for expert review. This structured yet collaborative approach provides a rigorous framework for clarifying overlapping concepts within nursing science (37).

Semantic concept analysis

Semantic Concept Analysis, originally developed by Koort (1975) and subsequently refined by Eriksson (2010), is a method widely used in nursing science throughout Northern Europe (40,41). This approach involves the etymological and semantic examination of words using dictionaries to clarify their conceptual meanings within specific linguistic and cultural contexts. By revealing ontological and contextual perspectives, semantic analysis facilitates a deeper theoretical understanding of care-related concepts (42).

This method consists of three principal stages: etymological analysis, semantic analysis, and differentiation. Etymological analysis examines the origin and historical development of a concept using specialized dictionaries (6).

Semantic analysis comprises three analytical components: matrix, paradigm, and evaluation. During the matrix phase, synonyms are identified; during the paradigm phase, related and contrasting terms are compared to determine their degree of synonymy; and during the evaluation phase, the findings are interpreted from an explicit theoretical perspective (43). The analysis concludes if linguistic consensus is achieved. Otherwise, the differentiation stage examines closely related concepts to identify qualitative distinctions and establish conceptual clusters, ultimately leading to one or more operational definitions of the concept (6).

Systematic method

Systematic Concept Analysis is an approach designed to clarify concepts and resolve terminological ambiguities (44). This method emphasizes examining the relationships among concepts. Its principal stages include defining the purpose and scope of the analysis, acquiring background knowledge to establish a general understanding of the subject area, collecting relevant materials, developing a preliminary conceptual framework, systematically analyzing the collected materials, and finally interpreting the findings in accordance with the objectives of the concept analysis.

The systematic analysis involves describing conceptual systems, identifying relationships among concepts, comparing the characteristics of related concepts, clarifying synonymous and polysemous concepts, and refining the conceptual framework. Applying Systematic Concept Analysis facilitates further conceptual development, supports structured research, and ultimately contributes to the development of client-centered, practice-oriented nursing theories (17,25).

Discussion

This study highlights the importance of concept analysis in nursing by emphasizing its role in clarifying commonly used terms and establishing a shared conceptual vocabulary within the discipline (2). Through the systematic examination and precise definition of concepts, concept analysis helps identify knowledge gaps and informs the development of theories and theoretical models. It also facilitates the development of clinical tools and supports empirical research by ensuring that concepts are operationalized consistently and effectively (43).

Since the 1970s, a wide range of concept analysis approaches has been developed within nursing research (3). Although these approaches have made substantial contributions to the discipline, they have also been criticized for lacking sufficient theoretical grounding and for treating concepts as static entities rather than dynamic phenomena (25). Additional criticisms concern the limited discussion of the ontological and epistemological foundations underlying these methods, as well as the arbitrary selection of defining attributes, which may weaken the methodological rationale (30). For example, adaptations of Wilson's method may not fully satisfy the intellectual rigor of the original framework, highlighting the importance of sound methodological justification (23).

Walker and Avant's adaptation is widely recognized for its clear and systematic sequence of analytical steps, which enhances its practical applicability (23,26). Nevertheless, many Wilsonian-derived methods exhibit several limitations, including vague or incomplete guidance regarding their application, unclear criteria for concept selection, and limited consideration of the intellectual rigor required for concept development. Furthermore, little attention has been given to explaining how the individual methodological steps are conceptually interconnected (26).

Wilson's method is regarded as the foundational approach from which Walker and Avant developed a simplified eight-step process. This approach emphasizes distinguishing the defining attributes of a concept from its nonessential characteristics, thereby facilitating a deeper understanding of the concept's internal structure and its evolution over time. This simplification has enhanced the method's practical applicability, particularly in the development of nursing diagnoses (43).

Rodgers' Evolutionary Approach (REA), which originated from the Wilsonian tradition, emphasizes understanding the contemporary use of a concept rather than producing a fixed definition (33). This method enables researchers to explore the historical evolution of concepts (45). It recognizes that conceptual meaning is context-dependent and continually evolves as new evidence and perspectives emerge. By examining attributes, antecedents, related terms, surrogate terms, model cases, and consequences, this approach provides a structured yet flexible framework for concept refinement (43).

Chinn and Kramer's method offers a systematic approach to deriving conceptual meaning from complex or abstract ideas (46). Its principal strength lies in contextualization, enabling researchers to explore subtle variations in meaning and the implications of concepts across different contexts. This approach emphasizes deliberate concept selection, systematic evaluation of both formal and informal sources, and critical examination of concepts' origins, implicit meanings, and applications across diverse disciplinary literature.

Koort's semantic approach emphasizes the linguistic and semantic dimensions of concept analysis (43). It clarifies the meanings of concepts that share similar or distinct characteristics by using dictionaries as analytical tools to explore conceptual meaning. This approach acknowledges that some concepts are interdependent and cannot be fully understood in isolation. Instead, their meanings are clarified through the systematic comparison of related concepts (38).

Systematic Concept Analysis is grounded in terminological theory and aims to clarify the structure, meaning, and characteristics of concepts. This method emphasizes that concepts do not exist independently but emerge from human experience, as reflected in scientific literature (47). Similarly, Pragmatic Utility focuses on evaluating whether a concept requires clarification or revision while assessing the consistency between its theoretical definition and its practical application (34).

As proposed by Morse et al. (34), the Principle-Based Method applies four principles-epistemological, pragmatic, linguistic, and logical-to provide a structured framework for understanding concepts.

This method emphasizes the importance of strong theoretical foundations in developing precise conceptual definitions and strengthening theoretical frameworks. Through the critical analysis of scientific literature, researchers can estimate the "probable truth" of a concept at a given point in time, acknowledging that conceptual understanding evolves alongside scientific progress (47).

The Hybrid Model combines theoretical analysis with empirical observation and is particularly well suited to nursing and other applied sciences. This approach is especially valuable for generating insights from clinical practice when investigating key nursing phenomena. Although the model progresses through theoretical, empirical, and analytical phases, these stages are interconnected rather than strictly sequential, resulting in a cyclical and iterative process in which findings from one phase continuously inform the others (31).

The theoretical phase primarily involves conceptual work. Clinical observations guide the selection of the central concept and the formulation of a preliminary conceptual definition. A comprehensive review of the literature then enables researchers to compare this preliminary definition with existing definitions and refine it into a working definition that guides the subsequent fieldwork phase (10).

A comparative evaluation of concept analysis methods in nursing reveals two broad categories of approaches. The first comprises highly structured methods with clearly defined analytical procedures, such as those developed by Wilson, Walker and Avant, and Rodgers. These methods are particularly appropriate when researchers seek to conduct systematically organized studies. The second category consists of more flexible approaches that allow the analytical process to evolve throughout the study. This category includes the methods proposed by Morse, Penrod, and Schwartz-Barcott and Kim (18). Such flexibility demonstrates how concept analysis can facilitate continued theoretical development by positioning conceptual inquiry as an ongoing process of conceptual evolution. Overall, concept analysis should not be regarded as a static methodological framework because concepts themselves evolve continuously over time (7,14).

As this study was conducted as a scoping review rather than a systematic review, the methodological quality of the included articles was not critically appraised. Consequently, the findings primarily reflect the diversity of concept analysis methods in nursing rather than demonstrating the superiority of any individual method. In addition, the search was limited to Persian- and English-language publications indexed in selected databases, which may have resulted in the exclusion of relevant theoretical works, books, or studies published in other languages or indexed elsewhere. Furthermore, the inconsistent use of the terms method, approach, and model across the literature made precise comparisons challenging. Because thematic analysis is inherently interpretive, the findings may also have been influenced by the researchers' perspectives, despite efforts to faithfully represent the original sources. Finally, this review focused on describing and conceptually comparing concept analysis methods rather than empirically evaluating their effectiveness in clinical or research settings. Therefore, the findings should be used to guide methodological selection rather than to suggest the superiority of any particular approach.

Conclusion

Concept analysis methods transform concepts that already exist within a discipline into explicit subjects of scientific inquiry. Concepts are not merely words; rather, they are mental representations of phenomena that exist in individuals' minds and are often difficult to express precisely. Across all scientific disciplines, specialists, researchers, and educators engage with concepts that are fundamental to the development of knowledge and theory. In healthcare, however, professionals frequently encounter abstract concepts whose meanings are unclear or insufficiently defined. These concepts require conceptual clarification to facilitate the development of disciplinary knowledge that ultimately enhances professional practice.

Within nursing, the discipline is responsible for strengthening its scientific foundation through the development and refinement of key concepts relevant to its domain of practice. Many of these concepts remain ambiguous and evoke different interpretations depending on the context. Concept analysis approaches provide systematic methods for identifying the defining characteristics or attributes of vague or poorly

defined concepts, thereby promoting conceptual clarity regarding phenomena of interest in nursing science. These methods are inherently complex and are unlikely to be effective unless the processes involved in theory and knowledge development are carefully considered. Despite the growing number of published concept analyses in nursing, concerns remain regarding their contribution to the discipline's body of knowledge. Regardless of the framework adopted, concept analysis requires rigorous sampling, data collection, literature review, and analytical procedures and should ultimately be conducted as a means of advancing theory and disciplinary knowledge. Future research should provide more explicit methodological guidance by empirically comparing the effectiveness of different concept analysis methods across diverse clinical settings.

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Ethical Statement

Ethical approval for this study was obtained from the Ethics Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran (Ethics Code: IR.SBMU.PHARMACY.REC.1404.064). Throughout all stages of conducting and reporting this research, the principles of research ethics were strictly observed. These included reviewing the literature without bias regarding the authors' ethnicity, gender, academic discipline, educational level, or political orientation; honestly reporting data while preserving fidelity to the original sources; avoiding offensive content and plagiarism; and appropriately citing all sources used. The names and institutional affiliations of all individuals who contributed to the research have been included as authors of this article.

Conflicts of Interest

The authors declare that they have no competing interests.

Author Contributions

N.D.: Study conception and design; literature search; data acquisition; data analysis and interpretation; and drafting of the manuscript. F.P.S.: Critical revision of the manuscript for important intellectual content; methodological guidance; and study supervision. P.V.: Study supervision; administrative support; critical revision of the manuscript for important intellectual content; and final approval of the manuscript.

Data Availability Statement

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Use of Artificial Intelligence

No generative AI tools or AI-assisted technologies were used during the preparation of this manuscript.

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