

**Principle-based concept analysis: Caring in nursing education**Maryam Salehian<sup>1</sup>, Abbas Heydari<sup>2</sup>, Nahid Aghebati<sup>3</sup>, Hossein Karimi Moonaghi<sup>4</sup>, Seyed Reza Mazloom<sup>5</sup>

<sup>1</sup> Ph.D. Student in Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>2</sup> Professor, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>3</sup> Assistant Professor of Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>4</sup> Associate Professor: A- Evidence-Based Caring Research Center, B- Department of Medical-Surgical Nursing, School of Nursing and Midwifery, and C- Department of Medical Education, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>5</sup> Lecturer, Evidence-Based Caring Research Center, Faculty of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

**Type of article:** Original**Abstract**

**Introduction:** The aim of this principle-based concept analysis was to analyze caring in nursing education and to explain the current state of the science based on epistemologic, pragmatic, linguistic, and logical philosophical principles.

**Methods:** A principle-based concept analysis method was used to analyze the nursing literature. The dataset included 46 English language studies, published from 2005 to 2014, and they were retrieved through PROQUEST, MEDLINE, CINAHL, ERIC, SCOPUS, and SID scientific databases. The key dimensions of the data were collected using a validated data-extraction sheet. The four principles of assessing pragmatic utility were used to analyze the data. The data were managed by using MAXQDA 10 software.

**Results:** The scientific literature that deals with caring in nursing education relies on implied meaning. Caring in nursing education refers to student-teacher interactions that are formed on the basis of human values and focused on the unique needs of the students (epistemological principle). The result of student-teacher interactions is the development of both the students and the teachers. Numerous applications of the concept of caring in nursing education are available in the literature (pragmatic principle). There is consistency in the meaning of the concept, as a central value of the faculty-student interaction (linguistic principle). Compared with other related concepts, such as "caring pedagogy," "value-based education," and "teaching excellence," caring in nursing education does not have exact and clear conceptual boundaries (logic principle).

**Conclusion:** Caring in nursing education was identified as an approach to teaching and learning, and it is formed based on teacher-student interactions and sustainable human values. A greater understanding of the conceptual basis of caring in nursing education will improve the caring behaviors of teachers, create teaching-learning environments, and help experts in curriculum development.

**Keywords:** caring, nursing education, principle-based concept analysis

**1. Introduction**

Caring in education has been emphasized as the first place for teaching and learning the values of the nursing profession (1). The manifestation of caring, in practice, theory, and research, depends on reflection on and attention to the idea of caring in the educational process (2). Caring, as a moral principle, guides the nurses' performances in clinical practice and is fostered in the academic environment. In fact, if nursing students are expected to exhibit

**Corresponding author:**

Associate Professor Dr. Abbas Heydari, School of Nursing, Mashhad University of Medical Sciences, Mashhad, Iran. Tel: +98.9188129963, E-mail: [HeidaryA@mums.ac.ir](mailto:HeidaryA@mums.ac.ir)

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caring behavior in their clinical practices, an atmosphere of caring should be created during their training (3, 4). Caring for nursing students during their education is important because it empowers them to be confident and teaches them to develop a caring attitude towards others. When students see the atmosphere of caring in education, they learn a professional way of behaving (5). Although several studies have been conducted on the importance of caring and introducing this concept in education, a clear or precise definition of caring in nursing education can rarely be found in the literature (1, 6, 7). It is assumed that caring in education is only a similar concept transferred from the clinical environment. Therefore, if a nurse has the knowledge to take care of a patient, then he/she, as a nursing teacher, has the ability to take care of nursing students (8). Several authors who have addressed nursing issues also have referred to caring in nursing education as a multi-dimensional concept that is expressed through interactions among the nursing faculty, between the faculty and nursing students, among the nursing students, and between nursing students and patients (3). This comprehensive definition of the concept of caring in education has made it difficult to define this concept precisely without ambiguity (5, 8, 9). Morse stated that, in order to overcome the complexity of describing the concept of caring, careful consideration, clarity, and forbearance are required (10). To fully understand and apply a concept, it is essential to understand that concept from different dimensions, and the analysis of the concept leads to the identification of the barriers and clarification of the concept (11). The aim of this research was to present the findings of a comparative, principle-based, concept analysis of caring in nursing education and to explain the current state of the science based on philosophical epistemologic, pragmatic, linguistic, and logical principles. The state of the science permits an attempt to manifest a probable truth concerning caring in nursing education.

## **2. Material and Methods**

### *2.1. Framework*

To describe the scientific conceptualization of caring in nursing education, a principle-based concept analysis was used (12-14). Morse and colleagues introduced this concept-analysis method as the evaluation of the maturity of concept (15, 16). Later in 2005, Penrod and Hupcy developed the method of principle-based concept analysis (14). This method delineates the state of the science (or probable truth) and “focuses exclusively on the use of the concept in science, not on the creative interpretation found in art, fiction, or other representative forms (17). Thus, extraction of the dataset is intentional and strategic. This type of concept analysis is based on epistemological, pragmatic, linguistic, and logical philosophical principles. A 1996 study by Morse et al. indicated that the maturation of each of the four principles was analyzed based on the criteria for level of maturity (16). Morse et al. declared that an undetermined level of concept maturity from immature to mature evolved with discrete cleared boundaries. Just as the state of caring in nursing education is fully perceived and advanced, so is the science of nursing.

### *2.2. Epistemological principle*

The epistemology principle includes knowledge related to the concept of interest. Based on this principle, a mature concept has been well defined, well differentiated, and fairly positioned in the literature of discipline (12). The epistemological maturity of caring in nursing education will guide an examination of how fairly caring in nursing education has been defined in the nursing literature.

### *2.3. Pragmatic principle*

Pragmatism refers to the utility of a concept in a discipline. In pragmatic maturity, the data were evaluated from a solstitial vision to delineate the concept’s pragmatic use to discipline and how it has been operationalized in nursing (12). Pragmatic principle will determine the fit of caring in education and its usefulness to nursing.

### *2.4. Linguistic principle*

The Linguistic principle relates to human speech and language. A linguistically-mature concept is consistent in use and meaning in the literature of discipline with consideration of the context (12). The linguistic principle is used to conduct the evaluation of consistency in use and the meaning of caring in nursing education in the nursing literature.

### *2.5. Logical principle*

Logic refers to the uniformity of a concept with relevant concepts. Logical maturity is depicted by the clear boundaries of the concept when placed with related concepts (12). The logical maturity of caring in nursing education will depend on the grade to which caring in nursing education’s conceptual boundaries are explicitly and theoretically distinguished from similar concepts.

### *2.6. Sample and selection of disciplinary literature*

In this concept analysis, the sample included theoretical and empirical research in nursing to provide an understanding of caring in nursing education. Initial inclusion criteria were: a) English language, b) articles published between 1990 and 2014, and c) key words in the titles, i.e., caring, nursing education. Given that the result of this search was the identification of numerous articles, books, and literature references, the second iteration of the search was limited to the period 2005 to 2014. In this stage, based on the review of the result of the first search and in order to ensure access to all of the relevant sources, the keywords “teacher,” “nursing student,” “teacher-student relationship,” and “teaching-learning process” were added to the aforementioned keywords. Exclusion criteria were a) theses, b) articles that were conceptually unrelated, and c) abstract only.

### *2.7. Sampling technique*

A purposive sampling and audit trail was considered by the researcher. International and national online databases were used according to the inclusion criteria, and they included ProQuest, Google Scholar, Scopus, MEDLINE, CINAHL and SID. Articles with caring in nursing education definition, theoretical and conceptual models of caring in nursing education, measurement and evaluation of caring, theories of caring in education, and teaching and learning interaction were most important and relevant to the purpose of this research. A secondary method (screening of the search and collection of resources) was used to retrieve relevant articles. About 307 articles were retrieved based on the inclusion criteria. Then, the titles, abstracts, and full text of the articles were skimmed. From this process, theses (n = 6), articles with only the abstract available (n = 6), and conceptually-unrelated articles (n = 256) were omitted. The final dataset consisted of 39 articles that addressed caring in nursing education. During the process of skimming the literature, five related articles and two books were identified and selected (secondary methods). In all, 46 literature resources (44 articles and chapters from two books) were analyzed in this study.

### *2.8. Data collection*

The articles were analyzed critically based on epistemological, pragmatic, linguistic, and logic philosophical principles. The researcher assessed the explicit and tacit meaning of the concept (epistemology), usage of the concept (pragmatics), consistency in application and meaning (linguistic), and assimilation of the concept from relevant concepts (logic). Key dimensions of the data (e.g., article information and inherent conceptual components of each principle) were summarized using a validated data extraction sheet (18) to permit effective access to dataset and to assist team interactions.

### *2.9. Data analysis*

The four principles of assessing pragmatic utility were used to analyze the data. The principles are 1) Principle 1: Be clear about the purpose of the inquiry, 2) Principle 2: Ensure validity, 3) Principle 3: Identify significant analytical questions, and 4) Principle 4: Synthesize results. MAXQDA 10 software was used for data management.

### *2.10. Methodological rigor*

To protect against bias and to confirm representative samples, the reflexivity approach was used, and the researcher read each document twice. To increase the validation of each entry further, the research team reviewed the original dates to ensure that the content of the sheet was correct. During the regular sessions, all members of the team research were challenged to cite proper evidence in support of their analysis of each principle.

## **3. Results**

### *3.1. Epistemology*

The epistemological principle was used to address the question of how clearly caring in nursing education was identified in the scientific literature. In 2005, MacNeil et al. conducted a study explicitly to define the concept of caring in nursing education, where caring in nursing education is known as a human relationship between faculty and student, i.e., “Caring in education involves how our humanism is ever present to that of the student. Humanistic caring involves relating to each other on a personal, equitable, and human level” (7). However, aside from one reference (7), caring in nursing education was not explicitly defined. There were some implicit meanings. For instance, Watson did not provide a clear definition of the concept of caring in nursing education. However, in her book (*Philosophy and Science in Caring*), she introduced a certain form of caring called “caritas” (loving and caring for others beyond one’s own interest), which was considered in the context of teacher-student interactions (20). Teacher’s human perspective towards students and attention to uniqueness of clients in transactions are features of the concept (20). Based on assumptions presented in the theory of “nursing as caring,” caring relationships in the

context of education are focused on the faculty's attention to the unique values of students and on providing help to each student in her/his own unique ways of living and growth. The consequence of this perspective is the provision of an opportunity for developmental caring for students (21). Caring for nursing students through their education is asserted, because it "empowers them to be confident" and "teaches them to develop a caring attitude towards others" (1). Among the nursing literature analyzed in this study, we encountered the definitions provided by Nel Noddings (a professor of the philosophy of education) in the field of caring and their position in ethics and student-teacher interactions (1, 7, 22). However, according to the criteria of the literature selected in the present study, we were unable to analyze her definitions and studies. It can be concluded that the concept of caring in education refers to student-teacher interactions, which are formed on the basis of human values and focused on the unique needs of the students. The result of student-teacher interactions is the development of students and teachers.

### 3.2. The Principle of Pragmatism

The literature review showed the diverse and numerous applications of the concept of caring in nursing education. Assessment of the studies showed that the concept of caring has been applied in the three areas of the designing curriculum based on the concept of caring (23-35), instrument development (5, 36), and as a criterion to measure caring behavior (9, 37, 38) (Table 1).

**Table 1.** List of Literature References Used in the Pragmatic Principle

Title	Type of information	Year	Pragmatic Category
How does the Nurse Educator Measure Caring?	Descriptive	2013	Applying caring in building instrument
Nursing Students' Perceptions of Instructor Caring: An Instrument Based on Watson's Theory of Transpersonal Caring	Descriptive	2006	
First- and third-year student nurses' perceptions of caring behaviors	Descriptive	2010	Caring as a criteria In measuring caring behaviors
The impact of nurses' education on the caring behaviors of nursing students	Descriptive	2009	
Application and Evaluation of a Caring Code in Clinical Nursing Education	Clinical Trial	2005	
Impact of a Caring Behavior Educational Program Based on Human Care Theory on Nursing Students' Perception of the Care	Quasi-experimental	2014	Caring concept as foundation in nursing curriculum
The design and testing of a caring teaching model based on the theoretical framework of caring in the Chinese Context: A mixed-method study	Mixed-method	2013	
Integrating Caring Theory With Nursing Practice and Education: Connecting With What Matters	Qualitative Study	2010	
Compelling teaching with the four Cs: caring, comedy, creativity, and challenging	Case study article	2010	
Teaching excellence in nursing education: a caring framework	Review article	2009	
Cultivating caring through caring group and ropes course experiences	Semi Experimental	2008	
Nursing students' perceptions of the importance of caring behaviors	Descriptive	2008	
Action Research on the Development of a Caring Curriculum in Taiwan: Part II	Action Research	2007	
theory- practice gap The CCARE model of clinical supervision: bridging the	Review article	2007	
Student understanding of culturally and ethically responsive care: implications for nursing curricula	Quasi experimental	2006	
Transforming Pedagogy in Nursing Education: A Caring Learning Environment for Adult Students	Case study article	2005	
Caring for self while learning to care for others: a challenge for nursing students	Quasi experimental	2005	

### *3.3. The Principle of Linguistics*

“The linguistic principle guided an in-depth evaluation of the consistency of use and meaning of the concept.” (17). In many references, the concept of caring in education refers to interaction or the relationship between faculty and students (1, 3, 5, 20, 27, 39-41). It should be noted that, in a portion of the nursing literature, caring in education has been introduced as a multi-dimensional concept that applies in student-patient interactions and finds meaning in those interactions (3, 42) and in interactions between teachers (43, 20) and between students (44). In the range of a caring relationship, attention to the natural environment (23, 32, 45) and community (32, 46) also were emphasized. As a result of this principle, consistency and uniformity in the meaning of caring in education can be found in the context of nursing. Caring has been conceptualized as an interaction between educator and learner. This interaction is based on a human approach. It should be noted that the greatest emphasis was placed on the teacher-student interaction. In other aspects of interaction, the meaning has been processed to a lesser extent. Given the extensive range and numerous aspects of caring, in its general meaning, there is a need for the development of the conceptualization of caring in other aspects of educational interactions.

### *3.4. The Principle of Logic*

Given the definitions of the concept of caring in education in the principle of epistemology (20, 21), only the second part of the question about the principle of logic is answered. A related concept to "caring in education" is the concept of "caring in nursing practice." In the literature we reviewed, the boundaries between caring in education and caring in practice were clear. The concept of caring in nursing practice is focused on a series of specialized tasks for the patient, such as providing healthcare, the administration of medication on a timely basis, and other similar specific duties. However, the concept of caring in nursing education is for nurse educators to display of helpful attitude towards the students, and this is demonstrated through guiding, counseling, training, welcoming, encouraging, listening, consulting, and controlling (1). It also should be noted that concepts related to caring, such as assistance, educational measures, attention, consistency, and support, co-occur in the two fields of education and nursing practice (1). Therefore, clear and specific boundaries of the concept of caring can be observed in both areas, i.e., nursing education and nursing practice. A critical review of the literature presented the concepts of "caring pedagogy," "value-based education," and "teaching excellence." Due to their significant overlap with the concept of "caring in education," it seems that these concepts also are comparable to the concept of caring in education. Caring pedagogy has been introduced in nursing education programs as a paradigm of human caring, with a critical perspective toward the paradigm of behaviorism. An equal relationship between teacher and student is emphasized in caring pedagogy, and its aim is to humanize the learning process. Caring pedagogy is a human interaction process between the learner and the teacher that takes place with knowing and the intention of learning (45). Highly interactive, connected, and trust are the other features of the caring pedagogy approach (33, 47). According to the mentioned dimensions and definitions, no significant differences were observed between caring in education and caring pedagogy, regarding meaning and aim. Nevertheless, no attempt has been made to use these two concepts interchangeably in the literature, and no dimensions were observed to distinguish the borders of these two concepts. Therefore, a more accurate comparison of these two seemingly-equivalent concepts seems necessary. Caring in nursing is a multi-dimensional concept. It can become operational in nursing education programs by focusing on professional values in the process of teaching and learning. The aim of value-based education is the development of character and ethics in the students. Value-based education requires a conscious connection between the teacher and the learner. In this interaction, the teacher helps the student experience general and specific professional values (40). In summary, value-based education is the "teaching of caring through training value." Since the concept of caring has been introduced and accepted as a value in nursing, value-based education in nursing is an approach that can be used to apply the concept of caring in the curriculum. It can be concluded that the concept of value-based education is a subset of the concept of caring in education with clear conceptual boundaries. Moreover, the development and clarification of its conceptual boundaries are possible. Another concept, comparable to the concept of caring in education, is "teaching excellence." In teaching excellence, a combination of philosophy and goals of the discipline, the general philosophy of education, and the ethics of caring organize the framework of nursing education. The purpose of nursing education is to train knowledgeable and skilled nurses and to provide good and optimal care. Teaching excellence is based on the fulfillment of this goal. Teaching excellence can make the aim of training operational using general principles and philosophical education in three areas, i.e., performance, research, and leadership. This can be done with a caring approach and provide the outcome of "the best caring for the patient" in society (28). It also can be concluded that the concept of "teaching excellence" has a higher level of the concept of caring in education, although the underlying concept is the moral principle of caring.

#### 4. Discussion

The aims of this concept analysis were to clarify the state of the science related to the concept of caring and to understand and use this concept in the field of nursing education. In this study, the concept of caring in education was described as an approach to teaching and learning processes. This approach is based on the interaction of human and moral principles between the teacher and students. In caring-based interactions, the actions and feelings of instructors and students are considered equally. The concept of caring in education was presented earlier by Noddings (48, 49), who believed that caring, as an alternative ethical approach in education, helps teachers to make educational decisions based on their moral responsibility and students' unique capacities (23). Emphasis on ethics and attention to the student's unique needs were the common aspects in Noddings' perspective and the present study on the concept of caring in education. A 2007 study by Kim showed that caring is a strategy that is focused on the relationship between the teacher and student and results in meaningful learning. This definition is close to the definition of the concept of caring in education, as described in the present study. In our study caring is defined as a human and ethical interaction that is consistent with findings of a 1991 study by Rogers and Webb (50). These researchers, by relying on the work of Noddings, believed that teachers, due to being faced with numerous challenges and critical decision-making, require the application of ethical principles in their own work. Emphasis on the human relationships between faculty and students is a common finding in Begum's article and our study (1). Ultimately, it is hypothesized that the students who are educated in this humanistic environment have the potential to carry this attitude into their practice (51). As can be seen, the concept of caring in the field of education has attracted the attention of many experts. Nevertheless, little effort has been made to transfer and utilize these findings in the area of nursing. Few definitions of the concept of caring in nursing education exist. It should be added that few studies have explained the underlying conditions, such as cultural and religious factors, for the emergence of caring behaviors in the learning environment. Furthermore, according to the literature, caring has been conceptualized mainly at the level of student-teacher interactions and was less considered at the levels of teacher-teacher and student-student interactions, or the caring attitudes of students towards the public. The conceptual boundaries among caring in education and its rival concepts that were mentioned earlier were not clarified. Moreover, several ambiguous points arose in the form of the following questions:

- 1) Can caring, as an educational approach, meet the needs of health caring professionals in nursing?
- 2) Can this approach, which is based on the teacher-student relationship, guarantee the necessary competencies for nursing students?
- 3) Is it not in conflict with the principles of education?

Regarding the limitations of the study we can say that the literature analyzed in this study was limited to the past decade, and other studies and literature exist for analysis in the future. Those studies were not included in this study due to the limitations in time, costs, and availability in Iran.

#### 5. Conclusions

In this article, the concept of caring in education was analyzed using the principle-based concept analysis method. Caring in nursing education was identified as an approach in the educational processes. The results of this study showed that a limited number of clear definitions of the concept exist. In addition, conceptual boundaries between the concept of caring in education and its rival concepts, such as value-based education, caring pedagogy, and teaching excellence, are ambiguous and need to be investigated further. A more accurate identification of the underlying causes of caring behavior and conceptualization of caring in other interactive areas should be considered. The use of this concept analysis for the concept of caring in nursing education has diverse implications for nursing education and concept advancement. In education, the findings of this analysis could be used to create a caring environment, improve faculty- student interactions based on values and the human perspective, help nursing experts with curriculum development. In addition, the power of this method enables researchers to present a theoretical definition of the concept, identify gaps in the current state of the science, and later to conduct research to advance the concept.

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#### Conflict of Interest:

There is no conflict of interest to be declared.

### Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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