

Concept Analysis of Clinical Judgment in Nursing Students: A Hybrid Model

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Received 2017 January 04; Revised 2017 February 14; Accepted 2017 February 18.

Abstract

Background: Clinical judgment (CJ) is a complex process and is one of the most important concepts in the domain of education of the nursing students. Despite the special importance of its concept in nursing, this term still has not created an equal perception in the minds of many experts in the nursing education and no study has been done in order to define and explain this concept by concept analysis of the “CJ” in the educational domain.

Objectives: The current study was done with the purpose of determining dimensions and features of this concept in the domain of clinical education of nursing students in Iran.

Methods: The design of this study is qualitative with concept analysis method and hybrid model approach. It was done in three phases that were described by Walker and Avant. In the theoretical stage, reviews on the related and valid articles were accomplished. The articles were assessed and analyzed in order to present the working definition. In the stage of field work, the interview was done with 17 participants including 7 nursing students, 6 teachers, and 4 clinical instructors. In the final stage, the general analysis was done and the antecedents, attributes, and the consequences of the concept were extracted.

Results: According to the final analysis, CJ for the nursing students is a cognitive and reasoning process, in order to achieve which, the nursing students by guidance of teachers in a secure clinical environment, assess the patients' needs, interpret, and evaluate the patients' response to the clinical practice and then reflect and perform the critical evaluation of the patients' conditions. In the meanwhile, making effective clinical decisions, increasing the trust of patient and quality of care, the necessary conditions for the promotion of their professional competence will be provided.

Conclusions: In the concept analysis of CJ, some of the needed conditions for CJ in the nursing students have not been reported in the studies.

Keywords: Clinical Judgment, Nursing Students, Qualitative Study, Baccalaureate Nursing Education, Clinical Competence

1. Background

Clinical judgment (CJ) is a basic skill for the nurses. The nurses with the help of their knowledge and experience assess the needs of the patients and decide about the continuance or adjustment in taking care of them in a cognitive and reasoning thinking process (1, 2). As it is one of the key factors in the education of nursing students (3), the role of nursing educators has been emphasized in the development of the students' CJ (4-6). In order to create such competence in students, nursing education systems must enhance the conceptual understanding of CJ (7). Despite the agreement about the importance of the CJ in nursing education, there are some disagreements about the definition and the nature of this concept which can be due to its complexity and changeability in different contexts (4-6,

8). The absence of a common language and the presence of the ambiguity of the concept in nursing education resulted in weakness in the development of the students' CJ. One study reported that only 24% of new nursing graduates meet CJ expectations (9). The analysis of the concept will clarify the ambiguous points, therefore, it will help in the perception of its similarities and differences and in creating the common language among nurses (10). This concept, in a general view, can overlap with a number of the concepts like clinical decision making, critical thinking, clinical reasoning, intuition, and problem-solving; but in fact, these concepts are linked together and act as the antecedents or consequence of CJ. Assessing the knowledge and the attributes of the concept in a variety of health-care contexts enables the clinical teachers to better deal with the realities of the patient care and to apply educa-

tional methods for the development of the nursing students' CJ (11). Van Graan et al. (2016) showed that major structural and environmental transformations in nursing context are important factors in the changing concept of CJ in nursing education (7). In the recent years, the context of clinical nursing education in Iran has been influenced by the transformations obtained from changing the educational policies and limitations such as increasing the capacity of nursing student admission, shortage of teachers, restrictions on clinical educational spaces, using the real clinical learning environment (12, 13), and the lack of simulation application in the development of thinking and practical skills (14). Therefore, with regard to the effect of contextual transformations on the change and development of the existing phenomena in each context, the researchers sought to analyze the CJ concept and search its features in the context of nursing education in Iran, empirically. Despite the many studies that have been done in other countries about the development of CJ in the nursing students, no study has been done about the nursing students' CJ or its analysis and clarification in the field of education in Iran. Also, there is no agreement about the analysis and segregation of this concept from other similar concepts in this field. Clarifying this concept will help in the development of valid tools for the nursing students. The purpose of this study was to create a deep perception of the CJ in nursing students' educational context in Iran.

2. Methods

2.1. Study Design

This was a study with a qualitative design and concept analysis method with hybrid model approach in three phases: theoretical, fieldwork, and a final analytical approach with the help of deductive-inductive reasoning (15). Using the method that was described by Walker and Avant (2005), the authors clarify the concepts that are vague and have multiple meanings in different contexts. In the theoretical phase, the researchers, according to an integrative review, searched about the kinds of theoretical and empirical literature (16). In addition to the manual search, available databases such as Ovid, Pub Med, Science Direct, SID, and Google scholar were searched from 2000 to 2016 and the texts of 65 studies were used. In the fieldwork phase, a qualitative content analysis was conducted and in the final analytic stage, findings of two previous phases were compared and a definition of the concept was obtained.

2.2. Setting and Participants

With regard to the interactive nature of this concept (5), deep interviews were done with 7 nursing students, 6

teachers who were faculty members, and 4 clinical instructors from Guilan University of Medical Sciences (a university in the north of Iran). Semi-structured interviews were done in a quiet room in the school of nursing and midwifery in Rasht city from January to March 2015 until the data saturation was achieved. Inclusion criteria for joining the study were: being a second to a fourth-year student, and undergoing clinical placement at the different units. Participants were excluded if they did not like to continue their participation. No one of the participants was excluded from the study.

2.3. Ethical Consideration

We received the ethical permission from the ethical committee of the University of Social, Welfare, and Rehabilitation Sciences in Tehran with the ethics code No.: R.USWR.REC.1394.387. Written and informed consents were obtained from all the participants.

2.4. Data Collection and Analysis

MAX-Q-DA (version10) software was used to collect the data. In the fieldwork phase, our method in data collection was the semi-structured individual interview and, also, field notes. We used purposeful sampling technique with maximum variation sampling method. Lincoln and Guba indicated that for the diversity in sampling, 12 to 20 samples are sufficient (17). After obtaining written or oral informed consent, face to face interviews were done in the nursing school. The interviews were started with a general question such as: "Can you say what you know about the concept of CJ? The Interviews lasted for 30 to 67 minutes (51 minutes on average). According to the participants' agreement, their voices were recorded. All the interviews were conducted by the main researcher (first author who is a PhD candidate in nursing). After achieving a thick description of the participants' experiences and the data saturation, the sampling was finished. For data analysis, we used qualitative content analysis based on Graneheim and Lundman method (18). According to the method, after the digital recording and the transcription of the data, by determining the meaning units and extracting the codes, the categories emerged and the relation between them was determined. This process was done by the first author, then three other authors assessed the meaning units, revised the codes, and examined the similarities and differences of the final categories.

2.5. Trustworthiness

For credibility, member checking (to ascertain the findings of the interviews by the participants) and dependability (submitting the original data to a theme by team members) were conducted. A random section of the transcripts

was reviewed by an external reviewer (experienced in qualitative research) to distinguish the themes from the data. The consensus was reached after a discussion about the differences. To facilitate transferability, methods of selection of the participants, process of the data collection, analysis and findings with appropriate quotations were explained in the current article (18).

3. Results

In the current study, in the theoretical phase, firstly the attributes and definitions of CJ, then antecedents, main attributes and consequences in the related studies were collected from different data bases and references.

3.1. Review of Literature: Theoretical Phase

3.1.1. Characteristics and the Definition of Concept

CJ has different meanings and attributes in different contexts. In the Dehkhoda dictionary, the word “judgment” has been defined in the form of judging between two persons or among several people (19). In medicine, it is a cognitive, deductive, and intuitive reasoning in order to carry out problem solving and clinical decision making (20, 21). In Robert’s French dictionary, judgment means to have a belief following reflective thinking (22).

In the review of literature, 6 attributes from the elements of CJ concept were extracted as follow (Table 1).

The first attribute was “assessment of the patient’s clinical situation and the identification of the problems and deviated patterns”. CJ is the precise assessment to identify evident and hidden data in different situations and to interpret their means (6, 24) by a non-linear and changeable pattern (23).

The second attribute included “nursing interventions which are flexible and are according to the clinical knowledge and experience”. Teachers, in this stage, create learning opportunities and develop analytical thinking in the changeable situations (5).

The third attribute was “judgment”. There are 4 kinds of judgment in nursing which are: Casual judgment, descriptive judgment, evaluative judgment, and predictive judgment (25).

The fourth attribute was “to prioritize and interpret the data by the use of cognitive and reasoning processes”. CJ is a combination of reasoning, and analytic, intuitive processes (23, 24).

The fifth attribute was “proper interaction with patient”. The nurse’s CJ will be effective if a proper interaction is created between the nurse and the patient (5).

The sixth attribute was the “reflection and critical evaluation”. In the reflection phase, the nurses analyze their

Table 1. Attributes of CJ Concept in Nursing Students in Theoretical Phase

Attributes of Clinical Judgment Concept	Cases of Literature Review
1. assessment of the patient’s clinical situation and identify the problems and deviated patterns	Lasater (2011): CJ accuracy depends on nurses’ assessment and analysis of a patient’s situation. It refers to the ways in which nurses come to understand the problems, issues, or concerns of clients/patients (23).
2. Nursing interventions which are flexible and according to the clinical knowledge and experience	Lasater (2007): CJ needs to be flexible, not linear, using a variety of ways of knowing, including theoretical knowledge and practical experience (24).
3. Judgment	Tanner (2006): The first step of CJ is recognition or noticing of a problem or issue (5). Yuan et al. (2014): CJ is a process that Nurses recognize subtle variations in clinical situations and interpret what they observe (6).
4. Prioritize and interpret the data by use of cognitive and reasoning processes	Rhods and Curran (2005): Critical thinking and clinical reasoning are central parts of CJ (1). Tanner (2006): CJ encompasses the following steps: (1) recognition or noticing of a problem or issue; (2) interpretation of the situation in an analytical and intuitive fashion, based on the salient information within the situation; and response to the situation in the form of taking action that is both competent and patient centered (5).
5. Proper interaction with patient	Tanner (2006): Sound CJ Rests to Some Degree on Knowing the Patient and His or Her Typical Pattern of Responses, as well as Engagement with the Patient and His or Her Concerns (5). Shin et al. (2015): CJ is defined as “The art of making a series of decisions in situations in a way that allows the individual to recognize salient aspects of or changes in a clinical situation, interpret their meaning, respond appropriately, and reflect on the effectiveness of the intervention” (4).
6. Reflection and critical evaluation	Tanner (2006): Reflection on practice is often triggered by a breakdown in CJ and is critical for the development of clinical knowledge and improvement in clinical reasoning (5).

interventions independently and evaluate the probable points of their decisions exactly (24).

3.1.2. Consequences of Concept

With the development of CJ, the nursing care quality will be promoted (7). CJ is a reliable tool to achieve

professional competence. It can lead to creating effective health care interventions and promotion of the health in patients. In the present study, the consequences are showed in [Table 2](#).

3.1.3. Working Definition

Definition of CJ in the nursing students according to the critical attributes is as follow: "In CJ process that is a cognitive and reasoning process, the students must establish professional ethics and the appropriate communication with patients. They, with the help of their knowledge and experiences, assess the patients continuously to identify their problems and needs. Moreover, they use cognitive and reasoning processes like critical thinking intuition and clinical reasoning to interpret the data to achieve the best judgment using reflection and critical evaluation of the patients' conditions. The result will be the promotion of the quality of care and clinical competence in the students".

3.2. Fieldwork Phase

In this phase, we interviewed 17 key participants. The mean age of students was (24 ± 2) and that of the teachers was 42 ± 8 . A total of %88.2 of participants ($n = 15$) were female and 40% of teachers had the educational experience of 8 to 13 years. A total of 60% of teachers had a Master's degree in nursing ($n = 65$) and their major was Medical-Surgical nursing (62.5%). The attributes of the CJ were as follow ([Table 3](#)).

3.2.1. Establishment of Therapeutic Communication

According to Tanner's model, in "Noticing" stage, the nurses need an interaction with their patients to achieve the most proper information in addition to their observations ([5](#)). A student stated this:

"Due to establishing a good communication with my patient, I could attract the patient's trust and he could explain about his addiction to alcohol (student 5).

3.2.2. Holistic Assessment

In a holistic assessment, the nurse should collect the objective and subjective data to be able to recognize the patterns of deviation from normal ([8, 24](#)). A student stated:

"Well, some patients are not Conscious, we should be careful about the correct judgment, for example, I look at the urine bag to control his/her urine output" (student 3).

3.2.3. Scientific Effective Interventions Dependent on the Situation

All nursing interventions should always be accomplished according to the personal knowledge, scientific

references and evidence or a combination of them ([5, 7](#)). An instructor said:

"We believe that nursing is a science which is related to medicine, namely a nurse should increase his/her science in order to make a good CJ" (instructor 2).

3.2.4. Comprehensive Judgment

In all the steps of CJ process, the nurse should have the ability to interpret it and judge according to the special conditions of the patient ([7](#)). A student stated:

"Whatever problem has occurred for the patient has some background which should be included in my judgment" (student 6).

3.2.5. Continuous Comparison and Reflection

Reflection is the mental concentration and movement of mind from a situation to a combination of situations and its evaluation ([21](#)).

"I was in the situation that besides the practical work, the clinical discussion was done and I learned from those conditions and committed them to my memory" (student 1).

3.2.6. Inquisitiveness and Perseverance

The personality factors like diligence and perseverance have a significant role in the educational performance. A teacher reported this:

"I see that a student who asks me more questions and has more perseverance, he/she also has the necessary precision in the process of patients' nursing care" (teacher 4).

3.2.7. Influencing Factors of CJ (Antecedents of the Concept)

All of the antecedents of fieldwork phase were conformed to the theoretical phase. It was as follows:

3.2.7.1. Patient Assessment Skills

This antecedent resulted from two subcategories of "objective data search" and "subjective data search". One of the skills of nursing students in "Noticing" phase is to search the objective and subjective data ([24](#)). It is essential for CJ. A teacher stated:

"A student who doesn't have the data search and collection skills, cannot present a good CJ" (teacher 4).

3.2.7.2. The Influencing Factors of Clinical Situation Analysis

Strengthening the critical thinking and clinical reasoning is essential for creating CJ in students ([3](#)). A student stated:

"Questions and responses of the teacher in the ward of psychiatric chronic patients provided a base for our judgment." (student 4).

3.2.7.3. *The Influencing Factors of Nursing Students' Clinical Education*

The cultural and social context, application of experience, and clinical environment are of the effective factors on creating the CJ in nursing (5, 8). Our empirical data, also, confirmed this issue as follows:

"... In the same hospital, the traffic and presence of physicians at the patient's bedside was more. Well for judgment, we should have information, but it was not accessible" (student 2).

3.2.7.4. *Specialized Knowledge and Studies*

CJ is one of the important consequences of nursing educational curriculum. The students, for strengthening the judgment power, need to apply the evident and hidden knowledge (21). A teacher said:

"I usually introduce the nursing clinical guidelines, therefore they are more successful in their decisions" (teacher 4).

3.2.7.5. *Ethics in Nursing Care*

Ethical judgment and the promotion of ethical knowledge could develop CJ (5). A student stated:

"...my patient said that he doesn't want me to do his injection, and I didn't do it because it prevented the effective communication between him and me" (student 5).

3.2.7.6. *The Individual Characteristics and Abilities of Clinical Teachers*

Clinical instructors and their competence have an important role in the development of students' reasoning (3).

"In many wards, I am satisfied with the care I provide. Since my teacher trusts in me, I have no stress" (student 7) (Table 4).

3.3. *Features Derived from the Review of the Literature and Fieldwork (Analytical Phase)*

In this study, the features of CJ in the nursing students are shown in Table 5.

4. Discussion

In the current study in analyzing, six attributes were extracted as follows:

One of the themes extracted was "establishment of therapeutic communication". It is compatible with the attribute of "proper interaction with patient" in the theoretical phase and studies existing in Iran. Since most of the participants in this study emphasized the importance of effective communication with nursing staff and patients in the development of students' CJ, this theme was created. The

first step in CJ is patients' assessment, so CJ will not happen without the establishment of therapeutic communication in patients and their families. This attribute is the same as "clear communication" that was extracted from the study of Lasater (2007). The effective communication with clinical colleagues and team cooperation reduces the clinical errors and promotes the security of the patients (24).

The second theme was "holistic assessment". Lasater (2006) in his rubric explained that to create effective noticing that is the first stage in CJ, nursing students should focus on the situation, assess the patients for subtle patterns and deviations from expected patterns, and record their observations (24). In this study, many participants said that for an effective decision making the students need to do a continuous and comprehensive assessment. Other investigators, also, defined the CJ as the nurses' skill and their flexibility in the assessment of different aspects of a changeable clinical situation (5).

The third theme was "scientific effective interventions dependent on the situation". In current study many participants reported that without basic knowledge, students cannot diagnose clinical problems, so performing an effective intervention and the formation of CJ is impossible. This theme is harmonious with the attribute extracted from theoretical phase entitled "nursing interventions which are flexible and according to the clinical knowledge and experience". This performance is one of five necessary components of them for presenting the effective care (5). In this regard, other studies also stated that CJ is not a linear process. This skill was created in students with using a bunch of theoretical and practical knowledge and clinical experiences (7, 9).

"Comprehensive judgment" was the fourth attribute derived from the data. The teachers, through education and creation of feedback, can promote the judgment power of students (8, 21). This theme is consistent with the meanings of two attributes extracted from the review of the literature including "judgment", and "prioritizing and interpreting the data by the use of cognitive and reasoning processes". The literature review revealed that nurses use a variety of reasoning and intuitive patterns for judging. However reasoning strategies can vary in nurses based on care contexts (7). A comprehensive judgment occurs if nursing students are able to extract key data and interpret them.

The fifth theme is "continuous comparison and reflection" which conformed to the attribute of "reflection and critical evaluation" in the theoretical phase. Most of the participants preferred to think and assess the situation by the use of knowledge and deep thinking. Reflection is a thoughtful assessment. It creates confidence in nursing students and enhances data prioritizing in CJ (24). There-

fore, “continuous comparison and reflection” was selected as the most proportional attribute for the intended category. It has been stated in other studies, too. According to the studies reflection-in-action, reflection-on-action, and reflection-beyond-action are the last step in CJ and the essential factor in the development of clinical knowledge (5).

4.1. Unexpected Results

Due to the confirmation of most of the participants, the sixth and last theme, that none of the literatures of this study mentioned, was “inquisitiveness and perseverance” which is counted as one of the necessary components of critical thinking for the nursing students. An inquisitive person is one who acquires the information precisely and is interested in learning and developing specialized knowledge. It corresponded with Tanner’s CJ model that introduced noticing and tendency to develop knowledge, also, the ability of data collection and reasoning as the most important skills of nursing students for the creation of an effective CJ (5). The other unexpected result was “the individual characteristics and abilities of clinical teachers” that is one of the antecedents of the current study. Educators through developing teaching strategies encourage the advancement of critical thinking skills by their students.

4.2. Limitations of the Research Study

Due to the limitation of access to databases in Iran, we reviewed the accessible studies and it could enrich the identified attributes and the theoretical definition. The other limitation was inadequate studies on the nurses’ and nursing students’ CJ in Iran. This study is the first one in the nursing education field. It is recommended that further studies of the concept in clinical practice and education be done.

4.3. Conclusions

The concept of clinical judgment in the nursing education due to its dependency on the factors related to the context can be changeable. In conclusion, according to the results of theoretical and fieldwork phases of this study, definition of clinical judgment in the nursing education is as follows: “Clinical judgment is a cognitive and reasoning process which, in order to achieve, the nursing students with guidance of teachers and in a secure clinical environment establish a proper communication with patients and clinical staff then by use of a comprehensive and inquisitive assessment identify the patient’s problems and needs. In the next step they interpret and process the data by utilizing the ability and skill of clinical teacher, theoretical knowledge, nursing interventions standards, professional ethics codes, clinical experiences and thought skills like

critical thinking, intuition and clinical reasoning. This process with evaluation of patient’s response to the clinical interventions, reflection and critical evaluation of patients’ conditions is continued. Consequently the effective clinical decision making, quality of care and promotion of students’ professional competence will be provided”.

Acknowledgments

The cooperation of all the participants in the accomplishment of this research is highly appreciated. This research is part of the first author’s doctoral dissertation.

Footnotes

Authors’ Contribution: Moluk Pouralizadeh, Hamid Reza Khankeh, and Abbas Ebadi designed the study. Moluk Pouralizadeh collected and organized the data. Moluk Pouralizadeh, Hamid Reza Khankeh, Abbas Ebadi, and Asghar Dalvandi analyzed and interpreted the results of the data. Moluk Pouralizadeh drafted the manuscript. Hamid Reza Khankeh, Abbas Ebadi, and Asghar Dalvandi critically reviewed and revised the manuscript and MP prepared the final manuscript.

Conflict of Interest: The authors declare no conflicts of interest.

Funding/Support: The authors would like to thank the University of Social, Welfare and Rehabilitation Sciences of Tehran for the financial and technical support.

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Table 2. Some of Studies Conducted on Meanings, Antecedents, Attributes and Consequences of CJ

Author	Study Context	Attributes	Antecedents	Consequences	
Tanner (2006) (5)	Design of CJ in nursing	-CJ as a developmental process, which includes four stages: Noticing, Interpreting, Responding, Reflection-in-action and reflection-on-action	-CJs require various types of knowledge	-Students learned to think like a nurse	
		- Reasoning patterns	-CJs Are Influenced by the Context in Which the Situation Occurs	-Nursing Diagnosis	
		-Nurses' relationship with their patients as central to what nurses notice	-Practical reasoning		
			-Knowing the patient as a person.		
			-Educational practices		
			-Sense of responsibility		
			-Helping students to understand and develop of moral agents.		
			-Good CJ requires a flexible and nuanced ability to recognize salient aspects of an undefined clinical situation		
			- Focused observation	Known patterns include:	-Commitment to improvement
			-Recognizing deviations from expected patterns	-Nursing knowledge base	-Confident manner
Lasater (2007) (24)	CJ Development and to Create an Assessment Rubric	-Information seeking	-Research	-Promote scholarly thinking	
		-Prioritizing data	-Personal experience		
		-Clear communication	-Intuition		
		-Well-planned intervention/ flexibility			
Yuan et al. (2014) (6)	Nursing students' CJ in high-fidelity simulation	- Evaluation/self-analysis			
		-CJ is demonstrated through a variety of reasoning processes,			
		-Interpretation of patient situation	-Knowledge and clinical experience	-To make the appropriate decisions	
		-Recognize subtle variations in clinical situations	-Well-developed observational and reasoning skills		
			-Integration of critical thinking and clinical reasoning		
Seidi et al. (2013) (8)	Structure of CJ of Nurses	-Communication	-Assessment	-Nursing diagnosis	
		-Data gathering	-Use of knowledge and experience	-Decision making-	
		-Processing of information	-Professional ethics	Improve patient care	
		-Reflection and feed back	-Critical thinking	-Improving professional nursing	
			-Use of evidence		
			-Clinical reasoning		
			-Intuition		
			-Observation	-Informed opinion	-Reflective thinking
	-Assessment	-Clinical context	-Appropriate response,		
	-Salient pieces of information	- Clinical experience,	- Problem solving		
	-Interpretation	-Patient assessment	- Decision-making		
	- Reasoning	- Actual patient observation			

Table 3. Demographic Characteristics of the Participant

Participant's Code	Age	Gender	Professional Status	Educational Level	Work Experience, y	Interview Time, min
T1	28	Female	Faculty member	MSc in nursing	2	61
T2	52	Female	Faculty member	MSc in nursing	25	58
T3	43	Female	Faculty member	PhD in nursing	8	66
T4	53	Male	Faculty member	MSc in nursing	17	67
T5	40	Female	Faculty member	PhD in nursing	10	57
T6	41	Female	Faculty member	MSc in nursing	14	50
S1	26	Female	Student	Semester 8	-	40
S2	23	Female	Student	Semester 7	-	46
S3	29	Male	Student	Semester 5	-	55
S4	23	Female	Student	Semester 7	-	51
S5	23	Female	Student	Semester 8	-	45
S6	25	Female	Student	Semester 6	-	30
S7	24	Female	Student	Semester 8	-	40
I ₁	33	Female	Clinical instructor	MSc in nursing	10	57
I ₂	50	Female	Clinical instructor	MSc in nursing	5	61
I ₃	43	Female	Clinical instructor	BSN in Nursing	18	40
I ₄	38	Clinical instructor	Clinical instructor	BSN in Nursing	13	45

Table 5. Features Derived from Review of the Literature and Fieldwork (Analytical Phase)

Theoretical Phase	Fieldwork Phase	Analytical Phase
1. Proper interaction with patient	1- Establishment of therapeutic communication	1- Establishment of interaction and proper therapeutic communication
2. Assessment of the patient's clinical situation and identify the problems and deviated patterns	2- Holistic assessment	2- Comprehensive assessment of patient's problems and clinical situation changes
3. Nursing interventions which are flexible and according to the clinical knowledge and experience	3- Scientific effective interventions and dependent on the situation	3- Nursing interventions depend on situation and according to the clinical knowledge and experience
4. prioritize and interpret the data by use of cognitive and reasoning processes	4- Comprehensive judgment	4- Comprehensive judgment according to interpretation obtained from
5. Judgment		
6. Reflecting and critical evaluation	5- Continuous comparison and reflection	5- Continuous analysis and reflection
-	6- Inquisitiveness and perseverance	6- Inquisitiveness and perseverance