Investigación y Educación en Enfermería
ISSN: 0120-5307
revistaiee@gmail.com
Universidad de Antioquia
Colombia

Pina Queirós, Paulo Joaquim
The knowledge of expert nurses and the practical-reflective rationality
Investigación y Educación en Enfermería, vol. 33, núm. 1, 2015, pp. 83-91
Universidad de Antioquia
Medellín, Colombia

Available in: http://www.redalyc.org/articulo.oa?id=105238622010

How to cite
Complete issue
More information about this article
Journal's homepage in redalyc.org

Scientific Information System
Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal
Non-profit academic project, developed under the open access initiative

The knowledge of expert nurses and the practical-reflective rationality

Paulo Joaquim Pina Queirós[1]

The knowledge of expert nurses and the practical-reflective rationality

Objective: To identify the characteristics of an expert nurse. **Methodology:** A group of 49 nurses starting their Master's degree was asked to answer the following question: "Which characteristics and skills distinguish a novice from an expert nurse?" The answers were analyzed and classified based on Bardin's content analysis. **Results:** Through a three-stage classification process, the competences and skills assigned to expert nurses were divided into 17 categories. These nurses showed wide-ranging skills and acquired meta-competencies. Expert nurses are characterized by their leadership, supervision and ability to manage change, as well as their communication and relational skills. They have the ability to act reflectively, plan, systematize and consistently assess; they also show more dexterity. They have more adaptive skills, confidence and achieve a broader view. They are competent while managing conflicts and stress, as well as articulating theory and practice; they create knowledge, make use of research, respond to complex situations and are capable of making decisions. **Conclusion:** Expert nurses have anticipation skills, insight, use detailed observation, take immediate action and are able to define priorities; they keep context in mind and have a tendency for specialization.

Key words: nursing; nursing education; knowledge.

El conocimiento de los enfermeros expertos y racionalidad práctico-reflexiva

Objetivo. Establecer diferencias entre una enfermera experta y una novicia para determinar las condiciones que caracterizan a la primera. **Metodología.** Estudio cualitativo en el que se preguntó a un grupo de 49 enfermeras que iniciaban los cursos de máster "¿Qué características y competencias diferencian una enfermera experta de una novicia?" Se analizaron y categorizaron las respuestas siguiendo la metodología de análisis de contenido de Bardin. **Resultados.** Luego de tres fases de clasificación se sintetizaron 17 categorías de competencias y capacidades

1 RN, Post-doctoral student of ICBAS-UP. Nursing School of Coimbra, Portugal. Email: pauloqueiros@esenfc.pt

Conflict of interest: none.

Receipt date: April14, 2014.

Approval date: August 25, 2014.

How to cite this article: Queirós PJP. The knowledge of expert nurses and the practical-reflective rationality. Invest Educ Enferm. 2015; 33(1): 83-91

asignadas a enfermeras expertas. Las enfermeras expertas se caracterizan por el liderazgo, las habilidades de supervisión, por la gestión del cambio y por unas habilidades comunicacionales y relacionales incrementadas. Tiene la capacidad de actuar reflexivamente, planifican, organizan, evalúan y tienen más destreza que las enfermeras novicias. Poseen, además, una mayor capacidad de adaptación, seguridad y tienen una visión más global. Son competentes en el manejo de conflictos, manejo del estrés, así como en la articulación de la teoría y la práctica; crean conocimiento mediante la investigación, responden a situaciones complejas, y tienen capacidad de decisión. **Conclusión.** Las enfermeras expertas presentan capacidad de anticipación, perspicacia, observación detallada, acción rápida y la competencia en la fijación de prioridades. Finalmente, tienen visión de contexto y tienden a la especialización.

Palabras clave: enfermería; educación en enfermería; conocimiento.

O saber dos enfermeiros peritos e a racionalidade prático-reflexiva

Objetivos. Conhecer o que caracteriza um enfermeiro perito. **Metodologia.** Perguntámos a um conjunto de 49 enfermeiros a iniciar cursos de mestrado "Que características e competências diferenciam um enfermeiro iniciado de um perito?" Analisámos e categorizámos as respostas seguindo a metodologia de análise de conteúdo de Bardin. **Resultados.** Através de três fases de categorização, sintetizámos em 17 categorias as competências e capacidades atribuídas aos enfermeiros peritos. Estes têm competências e capacidades aprofundadas, alargadas e adquiriram metacompetências. Os enfermeiros peritos caracterizam-se pela capacidade de liderança, de supervisão, de gerir mudança e por competências comunicacionais e relacionais acrescidas. Apresentam capacidade de agir reflexivamente, planear, sistematizar, avaliar consistentemente, têm mais destreza, maior capacidade de adaptação, segurança e conseguem uma visão mais global. São competentes na gestão de conflitos, em lidar com o stress, bem como articulam a teoria e a prática, criam conhecimento, utilizam a investigação, respondem a situações complexas e têm capacidade de decidir. **Conclusão.** Os enfermeiros peritos apresentam capacidade de antecipação, perspicácia, fazem uso da observação discriminada, rapidez na ação e competência na definição de prioridades, comportam uma visão do contexto e tendem à especialização.

Palavras chave: enfermagem; educação em enfermagem; conhecimento.

Introduction

The knowledge created and used by nurses in their clinical practices is acquired and developed based on cognitive knowledge and on the personal, professional and empirical experience. It is a progressive process of growth in which professionals evolve in stages, which were studied by Benner[1] and described as: novice, advanced beginner, competent, proficient and expert. The development of competences in a practical context is based on a practical-reflective rationality, which is distant and different from the technical rationality. According to Moya[2], "this practical reflective knowledge exists in the professional action, in an implicit and personal fashion, and is developed in a complex, uncertain reality saturated with values". Moya[3] argues that Benner's work confirms "the existence of an implicit knowledge which is activated by the nurse's action and allows for the instant recognition of problematic situations and intuitive answers that are intrinsic to an expert professional practice". We are facing an "eclipse of clinical knowledge by formal scientific knowledge".[4] The over-appreciation of evidence-based practices, in the search for disciplinary scientificity, help to recognize nursing as an applied science in which

practical work is mostly technical work. Due to their level of differentiation and confidence, the techniques are strongly attractive, turning nurses into real technicians, high performance doers who use a technical rationality in which the pattern of empirical knowledge becomes dominant over other types of knowledge. However, "the forms of positivist representation assign a much-needed certainty to the phenomena of health-care and its teaching".[5]

The obsession with evidence-based practice distorts and subordinates the clinical practice, the *savoir-faire* that is also based on the aesthetic, ethical, procedural, tacit and contextual knowledge. According to Schön[6], "there is an artistic rationale inherent to the practice of professionals who we recognize as especially competent". Moreover, Benner believes that clinical knowledge is shown by the recognition of patterns, understanding of changes in human responses over time, the ability to make qualitative distinctions, an often tacit recognition, and the identification of subtle changes, i.e., "the expert nurse is able to recognize what is salient in particular situations".[4] The nurse is "a practical-reflective professional whose action is based on a practical and tacit knowledge activated during the action and in which three components may be identified from a heuristic point of view: knowledge-in-action, reflection-in-action, reflection on the reflection-in-action".[3] "The key aspect here is reflection-in-action, since it is a mechanism leading to the professional (practical) knowledge which allows for the provision of competent care".[3]

The ability to act in situations of great complexity, variability and unpredictability "requires an integrated combination of science, technique and art, characterized by an artistic creativity and sensibility…This ability to act in unpredictable situations is based on a tacit knowledge that is inherent and simultaneous to the professional's actions".[7] A knowledge-in-action "shown in an intelligent and socially relevant know-how".[7] Schön refers to "the epistemology of practice as the result of the knowledge that professionals build from reflecting on their practices".[8] This epistemology of practice consists of "the individual's action in a given situation, in a dynamic that allows for the permanent interaction between action and reasoning, resulting in reflection".[8] Thus, we are facing "… a new epistemology aimed to develop an intentionally reflective action".[9]

This reflective approach has a constructivist nature and is based on the awareness of the unpredictability of professional contexts and, necessarily, on an understanding of the professional activity as an intelligent, flexible, contextualized and reactive action.[7] As for the epistemology of practice, Zeichner states "that it is not the practice that teaches, but the reflection on the practice".[9] Within this scope, it is important to systematize the knowledge resulting from the interaction between action and thought.[7] Grundy[10] highlights both action and reflection as integral components of the *praxis*. Praxis takes place not in the hypothetical world in the real world, the world of interaction, the social and cultural world. The praxis is a process of building meanings, the constructed world rather than the natural world.[9]

Regarding the expert nurses' professional knowledge and practices, "it is necessary to let it show… and build on it the know-how of the profession"[7]. Nowadays it has become essential to make this knowledge more visible. Shulman[11] states that this knowledge will only be truly recognized if it complies with the same requirements as the knowledge resulting from the research activities: a) be public; b) be exposed to peer review and evaluation and c) be accessible for exchange and use by others. The logic of the technical, objective and formalistic rationality is inoperative when confronted with the unpredictability that characterizes most of the day-to-day professional practice.[7] This day-to-day practice is characterized by the diversity of contexts and actors that "… are the substance of our own differences as professionals, the added value of our diversity, the unique mark of our personal and professional identity. It demands from us not the applicative, simplistic and mute competence, but a reflective and critical, intelligent and strategic meta-competence, that translates into knowing

how to think and the obligation of doing so at every moment of clinical practice".[9]

The sense of expertise derives from an overall understanding of the situation from a holistic and qualitative perspective, which presents three characteristics: recognition schemes (patterns); sense of prominence (highlight) and situation awareness.[12] Expert nurses have a vast experience, and grasp, now in an intuitive manner, the meaning of each situation directly without getting lost in a wide range of sterile solutions and diagnosis.[4] "The expert nurse perceives the situation as a whole, uses past concrete situations as paradigms, and moves to the accurate region of the problem without wasteful consideration of a large number of irrelevant options".[1]

Methodology

Using a qualitative methodology from an exploratory descriptive perspective of phenomenological nature and aiming to identify the characteristics of an expert nurse, on October 2013, we asked a group of nurses starting their Nursing Master's degrees (Child Health and Pediatrics; Maternal Health and Obstetrics; Rehabilitation; Mental Health and Psychiatry) at the Nursing School of Coimbra – Portugal to answer the following question in writing: "Which characteristics and skills distinguish a novice from an expert nurse?"

The nurses answered the question in a classroom after receiving information on the objectives, giving their informed consent and guaranteeing their confidentiality and anonymity. The group of informants was composed of 49 nurses who accepted to participate in a free and voluntary manner. Data were analyzed using a content analysis technique following Bardin's methodology.[13] The process for encoding the answers included the cut-up technique with registration of basic units (of registration), analysis of repeated, similar, ambiguous and group units, enumeration according to absolute and relative frequencies, and classification and aggregation into categories (without a priori categories); the findings were discussed and conclusions were drawn. The process of analysis comprised three stages. The first stage started with the reading of all answers in order to obtain an overview, followed by the reading of each answer separately, writing down in each one of them the respective basic units of registration that had been analyzed, resulting in the first categorization. On a second stage, the coded categories were compared with the textual cut-ups and the categories with each other so as to reduce the number of categories and rename them. On a third stage, the analysis was refined: the categories were again compared with the cut-ups, the number of categories was reduced and they were renamed.

Results

Of the 49 informant nurses, 8 were male (16.7%) and 40 were female (83.3%) (1 missing by age and gender). The mean age was 28.35 (minimum of 22 and maximum of 49), and the mean years in profession was 5.79 (minimum of 0 and maximum of 28). The first reading of all the answers allowed concluding on three aspects: i) a substantial volume of high-quality material; ii) generalized argumentation skills as to what distinguishes expert nurses; iii) a transversal and unequivocal notion that expert nurses have something more than novice nurses, with the clear and generalized use of the words "more" and "deep".

Following the reading of each answer, the basic units of registration were obtained. In total, 145 basic units of registration were listed and the corresponding textual cut-ups were recorded. The basic units were analyzed and, as a result, 35 categories were encoded. Each category had between 1 and 9 units (Table 1), which corresponded to relative frequencies between 0.7% and 6.2%. On the one hand, this showed a large dispersion and, on the other hand, a richness of the enumeration.

Table 1. Categories obtained in the first phase of analysis

Category	n
Broader view	8
Contextual view	4
Decision-making	7
Supervision	3
Systematization	1
Confidence	5
Therapeutic relationship	5
Realism	2
Speed of action	2
Procedural planning	5
Insight	3
Detailed observation	6
More theoretical knowledge	8
Leadership	7
Manage stress	3
Research	2
Individualization	1
Humanization	2
Conflict management	4
Example for the team	1
Specificity in the area of activity	4
Dexterity	9
Defines priorities	4
Creates knowledge	2
Deeper practical knowledge	9
Deepened knowledge	4
Communication skills	5
Differentiated capacity for response	7
Ability to anticipate	3
Consistent assessment	3
Articulation of theory and practice	3
Act reflectively	6
Agent of change	1
Adaptation	3
Update	3
Total	**145**

In the second phase of analysis, some categories were aggregated and renamed, thus reducing the number of categories from 35 to 20. These 20 categories naturally showed a greater concentration of empirical material, with absolute frequencies ranging between 3 and 13 basic units per category and relative frequencies ranging between 2.1 and 9.0%. Nevertheless, it still seemed appropriate to reanalyze the cut-ups and the categorization process, which resulted in a

third phase (Table 2). Some categories were then regrouped and renamed (Table 2). The process was concluded with 17 categories with relative frequencies ranging between 4 and 24 and percentages ranging between 2.8% and 16.6%. The large dispersion is clear; however, we believe that it did not lose its empirical richness.

Table 2. Process of refinement of categories

1st Phase of categorization (35)	2nd Phase of categorization (20)	3rd Phase of categorization (17)
Update	Theoretical update and deepening	Deepened knowledge
More theoretical knowledge		
Deepened knowledge	Deepened knowledge	
Deeper practical knowledge		
Adaptation	Adaptation and confidence	Adaptation and confidence
Confidence		
Individualization	To act reflectively	To act reflectively
Realism		
To act reflectively		
Articulation of theory and practice	Articulation of theory and practice	Articulation of theory and practice, create knowledge and research
Creates knowledge	Create knowledge and use research	
Research		
Insight	Insight and ability to anticipate	Insight and ability to anticipate
Ability to anticipate		
Communication skills	Added communication and relational skills	Added communication and relational skills
Humanization		
Therapeutic relationship		
Dexterity	Dexterity	Dexterity
Specificity in the area of activity	Specificity in the area of activity	Specialization
Conflict management	Conflict management and manage stress	Conflict management and manage stress
Manage stress		
Agent of change	Leadership, supervision and manage change	Leadership, supervision and manage change
Example for the team		
Leadership		
Supervision		
Detailed observation	Detailed observation	Detailed observation
Procedural planning	Procedural planning	Planning, systematization and consistent assessment
Consistent assessment	Systematization and consistent assessment	
Systematization		
Defines priorities	Definition of priorities and speed of action	Definition of priorities and speed of action
Speed of action		
Differentiated capacity for response	Response to complex situations	Response to complex situations
Decision-making	Decision-making	Decide
Contextual view	Contextual view	Contextual view
Broader view	Broader view	Broader view

The following categories corresponded to the characteristics and skills identified by the informants as important to distinguish an expert nurse from a novice nurse (Table 3), in order of decreasing frequency: expert nurses have deepened knowledge, and distinguish themselves by their leadership, supervision and ability to manage change, as well as their added communication and relational skills. They have the ability to act reflectively, plan, systematize and consistently assess. Furthermore, they also show more dexterity, more adaptive skills, are more confident and achieve a broader view. They are competent while managing conflicts and stress, as well as articulating theory and practice; they create knowledge, make use of research, respond to complex situations and are capable of making decisions. They have anticipation skills and insight, make detailed observations, are quick to act and able to define priories; they keep context in mind and have a tendency for specialization.

Table 3. Final categories

Category	Frequency
Deepened knowledge	24
Leadership, supervision and manage change	12
Added communication and relational skills	12
Planning, systematization and consistent assessment	9
Dexterity	9
To act reflectively	9
Broader view	8
Adaptation and confidence	8
Response to complex situations	7
Conflict management and manage stress	7
Decide	7
Articulation of theory and practice, create knowledge and research	7
Definition of priorities and speed of action	6
Detailed observation	6
Insight and ability to anticipate	6
Contextual view	4
Specialization	4
Total	**145**

It is possible to characterize and illustrate these abilities and skills in detail through the informants' textual cut-ups, such as:

The fact that experts have a contextual view is clear in the following statements: "to manage and adapt one's personality to the surrounding environment" (informant 7), "knowledge of the surrounding reality" (i46), "has a greater contextual view of the situations" (i7).

The *ability to anticipate* and the *insight* can be seen in the statements "capacity to detect problems" (i40) and a "more refined thinking towards action" (i38) "with more insight" (i42), "anticipation of possible scenarios" (i20) and "earlier identification of deviations from normality" (i39), which allows them to "identify potential problems at an earlier stage" (i42). Experts also show a *detailed observation*, "observing certain aspects" (i5), with "more detailed knowledge"

(i43), performing the "triage of situations" (i28) and "knowing how to look, see and listen" (i33). *Speed of action* was shown in the following cut-ups: "prompt response to several situations" (i17) and "faster reasoning ability" (i33). The capacity to *define priorities* was stated in the ability to "establish priorities" (i18, i31, i42) and in the "interconnection of all priorities" (i12).

Experts *create knowledge*, are "capable of adding knowledge" (i45) and "are able to create knowledge on their own" (i48). They make use of *research* (i45) and are able "to reflect on their area of expertise through practice-based research" (i6). Expert nurses respond to "*complex situations*" (i49), with "an ability to respond to the demands" (i24) and "to identify and act in situations of greater difficulty" (i42). They are also able to *make decisions* with "a greater capacity for response" (i14), "making most decisions autonomously" (i8), with "more problem-solving skills" (i15).

Expert nurses usually achieve a "*broader view* of the patient" (i41), a "more encompassing view" (i12) of "several features of the human being" (i8), a "broader capacity for response" (i38), which allows them to "look at the whole while acting on each part" (i41), where "extra-curricular training" (i11) with a "connection to other areas of knowledge" (i16) is common. The ability *to act reflectively* implies "allowing for moments of reflection" (i35) and "critical reflection on the daily work" (i15), the use of "critical thinking" (i17), acting "methodically and reflectively" (i48), taking advantage of the "experience acquired in different settings" (i46) and the "ability to compare facts and experiences" (i48) so as to "solve and overcome new problems" (i31) with "humbleness and awareness of the limitations and impact of their actions" (i49).

Expert nurses have *deepened knowledge*, "an awareness of lifelong learning" (i36), of the need for "updating" (i15, i44), with "matured knowledge" (i29), "deeper knowledge" (i13, i44) which "enhances their skills" (i7), through "practical experience" (i2), "new practical skills" (i19) and "knowledge acquired through experience" (i47). Expert nurses have more *communication and relational* skills which consist of their "ability to communicate with a multidisciplinary team" (I35), their "argumentation skills" (i17), "knowing how to argue" (i35) and a "more targeted communication" (i11), implying "greater sensitivity in contacting others" (i15). This contact "becomes more human and less technical" (i36) and is "able to build a bridge between human psychology and the emotional impact of the disease" (i41), resulting from their acquisition of "new relational skills" (i18, i19), thus building an "aid relationship" (i33), a "therapeutic relationship" (i34).

Discussion

Results show that informant nurses distinguished expert nurses from novice nurses based on the development of both competences and abilities in a three-stage process: enhancement, extension and acquisition of meta-competencies. The enhancement of competencies and skills is clear in what they identify as being increased dexterity, added communication skills, greater confidence and ability to adapt. These competencies are present among novice nurses, as a result of their professional clinical experience, and are quantitatively developed and enhanced. Their qualitative development is still not reflected in this process. This will only be possible after other activities have taken place, such as Benner's "reasoning-in-transition"[4], which is similar to Schön's "reflection-in-action"[6], as both processes strive both to clarify the uncertainty of action arising in the grey areas of practice and increase knowledge for the practice[4], which are identified in the literature on nursing theory as specific to expert nurses. On the other hand, a group of new skills is identified – extension process –, such as leadership and supervision. We believe that this is not yet the context for the discovery of knowledge embedded in practice that expands nursing knowledge.[14]

Finally, a group of competences and skills resulting from the practical-reflective process (reflection-in-action and reflection on the reflection-in-action) were mentioned and can be systematized. They reflect a process of acquisition of meta-competencies, such as the ability to make decisions, respond to complex situations, anticipate, take immediate action, and define priorities. These operations are based on "recognition schemes" and a "sense of salience" within the scope of tacit and intuitive knowledge, which is capable of issuing "an expert clinical judgment resulting from a global, rather than analytical, understanding of the situation".[12]

In short, expert nurses are characterized as nurses with enhanced and extensive knowledge, who have acquired meta-competencies. They distinguish themselves from other nurses (novice, advanced beginner, competent, and proficient nurses – according to Benner's classification[1]) by their capacity to lead, supervise, and manage change, as well as their added communication skills. They have the ability to act reflectively, plan, systematize and consistently assess, and they also show more dexterity. The have greater adaptive capacity, confidence, and achieve a broader view. They are competent while managing conflicts and stress, as well as articulating theory and practice; they create knowledge, make use of research, respond to complex situations and are capable of making decisions. They have anticipation skills and insight, make detailed observations, take immediate action and are able to define priories; they keep context in mind and have a tendency for specialization Therefore, the knowledge of expert nurses is a differentiated and constructed knowledge, which is only possible through professional experience and action, i.e., nursing clinical practice.

References

1. Benner P. De iniciado a perito: Excelência e poder na prática clínica de enfermagem. 2ª ed. Coimbra: Quarteto; 2001.
2. Moya JLM. De mapas y territorios. Formalización de los saberes profesionales en el curriculum. Rev Rol Enf. 2008; 31(7-8):533-6.
3. Moya JLM. Redescubrir el saber práctico de la enfermera. El difícil equilibrio académico y profesional en la España «preeuropea» (III). Rev Rol Enf. 2005; 28(7-8); 487-90.
4. Benner P, Tanner C, Chelsa C. Expertise in nursing practice: caring, clinical judgment & ethics. 2nd ed. New York: Springer Publishing Company; 2009.
5. Moya JLM, Esteban MP. La complejidad del cuidado y el cuidado de la complejidad: Un tránsito pedagógico de los reduccionismos fragmentantes a las lógicas no líneales de la complejidad. Texto Contexto Enferm. 2006; 15(2):312-9.
6. Schön D. La formación de profesionales reflexivos. Hacia un nuevo diseño de la enseñanza y el aprendizaje en las profesiones. Barcelona: Ediciones Paidós; 1992.
7. Alarcão I, Tavares J. Supervisão da Prática Pedagógica – Uma perspetiva de desenvolvimento da aprendizagem. 2ª ed. Coimbra: Edições Almedina; 2003.
8. Alarcão I. Escola Reflexiva e nova Racionalidade. Porto Alegre: Artmed Editora; 2001.
9. Sá-Chaves I. Formação, Conhecimento e Supervisão. Contributos nas áreas da formação de professores e de outros profissionais. Aveiro: Universidade de Aveiro; 2000.
10. Grundy S. Curriculum: Product or Praxis? London: The Falmer Press; 1987.
11. Shulman L. Course anatomy: the dissection and analysis of knowledge through teaching. In: Hutchings P editors. The course portfolio. How faculty can examine their teaching to advance practice and improve student learning. Washington: American Association for Higher Education; 1998.
12. Medina JL. La Pedagogía del cuidado: saberes y prácticas en la formación universitaria en enfermería. Barcelona: Laertes; 1999.
13. Bardin L. Análise de Conteúdo. Lisboa: Edições 70 Lda; 1995.
14. Noveletsky H. Reflective Practice: Empowering nursing knowledge. In: Andrist LC, Nicholas PK, Wolf KA. A History of Nursing Ideas. Sudbury: Jones and Bartlett Publishers; 2006. P.409-415.