



Intuition in Nursing Practice

- Knowledge, Experience, and Clinical Decision Making

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Abstract: Intuition is a commonly used aspect in nursing practice. As the evidence based practice is the prominent practice today, the intuition based practice is hidden and somewhat de-valued. Although it is difficult to define due to its nature, intuition is an essential part of effective clinical decision making. This research is an inductive qualitative content analysis that focuses on novice nurse and expert nurse, and their use of intuition based on knowledge and experience. Benner's From Novice to Expert theory as well as Carper's Fundamental Patterns of Knowing in Nursing theory form the theoretical framework of this research. Benner's theory talks about five stages of nurses' professional development, whereas Carper's theory focuses on the different ways of knowing in nursing profession. The aim is to define intuition, knowing, and clinical decision making. In addition, this research describes the impact of knowledge and experience on intuition and clinical decision making related to novice nurse and expert nurse. The research material consists of 20 scholarly articles, for instance from Sage and Research gate. Although intuition has been used by nurses in practice every day, the attention given to this kind of nursing practice is too little. Therefore, this subject area has not been researched enough. The research shows that intuition is a complex term to define. It can be seen as unconscious awareness of reasoning, a sixth sense, or a gut-feeling. It is used during nursing practice in clinical decision making. Intuition is mainly used by expert nurses, but unlike in Benner's model, also novice nurses can use it, especially if they have some previously gained life experience. Knowledge and experience are the most influencing factors on intuition. Therefore, gaining nursing intuition requires a good knowledge base and clinical experience. Other factors affecting successful clinical decision making are the different aspects of knowing that include, for instance, knowing the self, the profession, and the patient.	
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FOREWORD

As a nursing student, I want to develop my skills. During the practical trainings, I have paid attention to the way how experienced nurses make clinical decision. Therefore, I became interested in the use of intuition in nursing practice, and I believe that this research process has giving me a lot of knowledge that I can use in my career as a nurse.

I want to thank all my teachers and lecturers at Arcada University of Applied Sciences. They have provided me great support during my studies. I want to give special thanks to two people at Arcada who have guided me to write the thesis by supervising and identifying the idea. As my thesis supervisor, Dr Pamela Gray's enormous support and guidance were remarkable, especially by showing me the path to identify theories and find articles for this challenging topic. Moreover, I am thankful for Ms Satu Vahderpää for believing in me and my abilities when I was uncertain of my skills, and for forwarding me to an inspiring practical training place where I developed an interest for the topic that I chose later to be the topic of my thesis.

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1 INTRODUCTION

Intuition has been a part of human evolution. It has been used by human beings in everyday life unconsciously. That is because we make decisions and act without thinking about it since our experience comes into practice unintentionally. The way how a child, a teenager, a young adult, or a middle-aged person reacts in the same kind of situation may vary a lot because they have different levels of knowledge, skills and life experience. In professional life as well, an experienced person's decision making is faster and leads to good results while it takes more time for a novice to make a similar decision. When a person is working in the same field of work, they will gradually gain experience which will then become partly intuition.

Today in healthcare, although the evidence based care is recognised as the proper care, particularly a nurse needs to have a good knowledge and skills to be able to perform well in their work. The skills will be gained during the working life since the increased level of experience. One important thing a nurse will achieve during the working life is the experience-based intuition. The intuition can be defined as understanding of something so that a nurse can operate without consciously being aware of it (Kozier et al. 2004: p. 251). In order to use one's intuition a nurse should have knowledge base and experience in clinical practice. There are several factors that form intuition. Furthermore, a nurse with more experience may use intuition to reach correct conclusions faster compared to novices. (Kozier et al. 2004: p. 251; McCutcheon & Pincombe 2001: n.p.)

The motivation for me to choose this topic was initially arisen when I was working as a part-time nurse in an acute ward in a hospital in Helsinki. I sometimes wondered how experienced nurses could quickly assess the clinical situation, and prioritise the work in the best way for the patient, although that decision might not follow the usual protocol. At the same time, I was just acting according to the procedures I had learnt. I wanted to find out what could stand behind this intuitive thinking of the expert nurses. Therefore, I started to consider intuition as an interesting theme for a study. Finally, this topic was chosen for my thesis due to the

importance to study about this subject further, and an interesting but somewhat forgotten or ignored part of nursing. Intuition is something all the nurses develop during their working life and use unconsciously. Anyhow, the attention given to this part of nursing practice is not enough. Therefore, there should be more research done about intuition and its usefulness in nursing practice. This thesis was commissioned by Jari Savolainen, senior lecturer in nursing, Arcada University of Applied Sciences.

As the theoretical background, there are scholarly articles related to research questions studied. These will be introduced closely in chapters 5 (Methodology) and 6 (Results). Furthermore, internet sources have been followed and several books have been used to gain information. The research method used in this thesis is qualitative. There are two main nursing theories used in this research. They are, Barbara Carper's Fundamental Patterns of Knowing in Nursing theory and Patricia Benner's From Novice to Expert theory. The Results part consists of presenting literature related to the topic. For instance, intuition in nursing practice is presented in this part. The research material will consist of articles related to the research questions, so these are analysed in chapter 7 (Discussion). To narrow down the topic, in this research, the main focus is given to novice and expert stages.

2 BACKGROUND

In this chapter the background for the thesis is discussed and the central terms defined. Some of the terms defined here are based on the nursing theories used to support this research. Previous research regarding the topic is presented.

2.1 Nursing Theory

Nursing theory helps to develop nursing knowledge, and it gives basis to support nursing practice. The core of nursing practice is influenced by the models of nursing theories. Nursing theories are formed by sets of concepts. Nursing theory illustrates the interrelationship of these sets of nursing concepts, so therefore it also provides a systematic view of nursing-related events. Main objective of a nursing theory is to describe, explain, forecast and/or recommend. In the all phases of nursing care, the nursing theory is used, so it helps the nurse to organise, understand and evaluate the patient data during practice. Nursing theory also supports the nurse in decision making by providing organised and reliable way of thinking during the care process. When a nurse purposefully uses a particular theory to guide them in patient caring process, it is called theory-based practice. (Matney et al. 2015.)

2.2 Evidence Based Care

Evidence based care is careful, reliable, precise and cautious way of using best evidence to make clinical decisions about a patient in nursing practice. In evidence based care, the healthcare professional combines the best existing experience with the top knowledge the individual learnt by researching the theoretical knowledge. In evidence based care, the healthcare professional's expert knowledge, skills and experience and the patient's values are combined to make the decision. The patient's values, beliefs, hopes and preferences are strongly respected when making clinical decisions for that individual. The stages of evidence based care are assessing the patient, asking the questions, acquiring the

evidence, evaluation of acquired evidence, application of care plan and evaluating the outcome. (Duke University Medical Center 2017: n.p.)

2.3 Intuition and Insight, and How They Differ from Each Other

Intuition means the ability to quickly understand something without consciously analysing it first (Hornby 1989: p. 660f.). Another definition of the term sees intuition as understanding of concepts. This type of understanding is based on emotions, knowledge and experience. (McCutcheon & Pincombe 2001: n.p.) McCutcheon and Pincombe (2001: n.p.) continue that intuition cannot be explained in rational manner but that it has a great effect on outcomes for patients. A term closely related to intuition is insight. It can be defined as deep understanding of the true nature of something (Hornby 1989: p. 647). As intuition can be seen as a quick, unconscious understanding that has its base in feelings and experience, while insight means deep understanding that requires thinking, the main difference between these two terms is that intuition is unconscious and insight conscious.

2.4 Knowledge, Skills and Experience

According to Cambridge online dictionary (www), knowledge is the “understanding of or information about a subject that you get by experience or study, either known by one person or people generally”, and also “the state of knowing about or being familiar with something”. Skills are defined as “an ability to do an activity or job well, especially because you have practiced it”, according to Cambridge online dictionary (www). According to Dictionary.com online dictionary (www), skill means “the ability, coming from one’s knowledge, practice, aptitude, etc., to do something well”. Merriam-Webster dictionary (www) defines skill as “the ability to use one’s knowledge effectively and readily in execution or performance”, or the “dexterity or coordination especially in the execution of learned physical tasks”. It also says skill as “a learned power of doing something competently”. (Merriam-Webster.) Experience is defined in Cambridge online dictionary (www) as “the process of getting knowledge or skill from doing, seeing, or feeling things”.

2.5 Developing Intuition

Developing intuition is most likely to occur when our consciousness is relaxed, open, receptive, fully immersed in the present moment of experience, not cluttered and distracted by predetermined thoughts, presumptive beliefs, rigid expectations, other mind chatter, and related exaggeratedly egocentric emotional dramas.

(Hammer 2017: n.p.). Openness is an important player in developing intuition. It allows us to gain experience and argue what is right and what is wrong, what is true and what is false, and finally what is the best action to take at a given moment. Developing intuition allows us to understand ourselves better, for instance, it will show us what is genuine and precious in us and others around us. It will also give us opportunity to understand the real treasures in our real being. (Hammer 2017: n.p.)

Developing intuition will let someone to identify the personal skills better, revise older knowledge and update them with new knowledge and experiences. It will also change the old patterns of the way of thinking which no longer suit with today's new patterns. The awareness or gaining new knowledge and experience about the chosen field will become more adaptable, free, refreshed, inspirable, lively and encouraging. Openness and genuineness will let the intuition to move beyond new potentials or prospects which will unlock access to limitless explorations and rewarding changes in skills and abilities. Developing intuition will eradicate the person's sense of lack of confidence, instability and other weaknesses in the professional practice which are hindering the advancement of skills. A major part of the path to intuition is gaining new knowledge and experience. (Hammer 2017: n.p.)

2.6 Previous Research

There are a few studies related to intuition. For instance, Hemsall (1996) has conducted a research on intuition and decision making of critical care nurses. The material was gathered by a questionnaire in which 95 expert or non-expert nurses responded. Both expert nurses and non-expert nurses had similar education in nursing which enables the reliable comparison between these two groups. Hemsall defines an expert nurse as a person with minimum five years of

experience, and who is a charge nurse or acts as preceptor. A non-expert nurse does not have a role as charge nurse or preceptor. Their experience in nursing in years is not important. Hemsall concludes that expert nurses use intuition more than non-expert nurses. (Hemsall 1996 p. iv, 11, 30.)

Miller & Hill (2017) have studied the differences in using intuition by nurses working in either medical care, progressive care, or critical care. 98 nurses took part in this research. It shows that clinical experience improved nursing proficiency. However, the research shows that nurses in these three categories do not differ in how they use intuition. (Miller & Hill 2017: 1ff.)

Traynor et al. (2010) conducted a study that finds out how nurses see different things affecting clinical decision making. 26 nurses took part in the research. They claim that both indeterminate such as intuition and insight, and technical features such as protocols and evidence affect clinical decision making. Nevertheless, the nurses tried to avoid discussing intuition as part of clinical decision making. Instead, they linked intuition to experience and knowledge so that it would affect clinical decision making through these features. The reason for this include that clinical decision making is a rational process so it should not be influenced by irrational intuition. (Traynor et al. 2010: 1584ff.)

Ruth-Sahd & Tisdell (2007) examined novice nurses' use of intuition. 16 novice nurses took part in the research that concluded that there are three different dimensions that affect use of intuition. These include previous experience, connections, and time, space and touch dimensions. The study also found that novice nurses use intuition. (Ruth-Sahd & Tisdell 2007: 115ff.)

3 THEORETICAL FRAMEWORK

In this chapter, the nursing theories used to support the research are discussed. The theories used in this research are mainly Barbara Carper's Fundamental Patterns of Knowing in Nursing theory and Patricia Benner's From Novice to Expert theory.

3.1 Benner's From Novice to Expert Theory

Nurses can be divided into different groups according to their experience. There are five experience levels in Benner's (1984) model which is also called From Novice to Expert theory. These groups are called: novice, advanced beginner, competent, proficient, and expert.

A novice is a new nurse with no experience. Novices know the general rules so that they are able to act as nurses, but they are often inflexible, and they need exact guidelines according to which they can perform. On the second level, an advanced beginner has got some experience which will help them to formulate principles according to which they will perform. On this level, the nurses start to recognise some reappearing patterns, and they are able to react in an acceptable manner to these situations. On the next level, a competent nurse has already two to three years of working experience with similar everyday situations. They are able to understand the long-term goals, and they are more aware of their own actions so that their performance is more efficient. (Benner 1984.)

On the fourth level, a proficient nurse can understand the whole caring process which will then help them in decision making process. Their working experience helps them to interpret the situations or cases faster and better since they know what to expect in certain situations. They are also able to change their plans in a more flexible way. On the final level, an expert has a lot of experience on which they will rely on, instead of rules and guidelines, when choosing how to act in different situations. They can use intuition in different clinical situations which will make their performance very flexible and highly-proficient. (Benner 1984.)

This research focuses on intuition, experience, and knowledge of nurses. Benner's model is suitable for the study as it explains the different levels of nurses. Carper's model was chosen because knowing the patient and knowledge about nursing are essential in good quality patient care.

3.2 Carper's Fundamental Patterns of Knowing in Nursing Theory

Another theory used in this research is Carper's Fundamental Patterns of Knowing in Nursing theory. According to Carper's theory, the professionals from any field define what knowledge means in that specific field that they want to develop and use. The ways that gained knowledge could be organised, tested and applied are discussed in this theory. Carper claims that the gained knowledge provides a foundation for the nursing practice. This knowledge contains patterns, forms and structure, and understanding these is crucial to those involved in nursing practice. It gives opportunity to the nurse to comprehend the importance of understanding the questions that have come up, and find the proper knowledge which will help to answer them. Carper's model includes four different types of knowing. These are empirical knowing, esthetical knowing, personal knowing, and ethical knowing. (Carper 1978 p. 24f.)

The first pattern, the empirical knowing, means knowledge that is acquired through research, and this is organized into general laws or theories which describe illustrate and estimate different phenomena in nursing discipline. The rise of nursing research has made it possible for researchers to conceptualize health so that they can classify different stages of health and changes in it as well as recognise factors that may accelerate changes in health status. In the late 20th century, nursing science has experienced a shift from describing phenomena into theoretical invention of previously classified empirical facts. This has lead into development of more theoretical nursing vocabulary. (Carper 1978 p. 24f.)

Second, the esthetical knowledge refers to the art of nursing. Nursing art means that nursing practice requires certain manual or technical skills. These skills have been learnt in an apprentice-type education system which was long considered as a fault by those who wanted to introduce nursing as science using empirical

knowledge. The esthetical experience means that the knowledge is created through subjective expression of imagined possibilities. For instance, each nurse has their own style of providing care that should lead into desired results. A nurse can gain esthetical knowledge through empathy. This means that the nurse is able to experience other people's feelings. Understanding other people's feelings may help the nurse to choose among a large variety of methods the most effective way of providing care for a certain person. (Carper 1978 p. 25ff.)

Personal knowledge is the third type of knowing in Carper's theory. It is a very complex pattern of knowing but it is also very essential to teach and understand since it has the individual aspect to nursing. Relationship between nurse and patient as well as their interaction has a great effect on how the patient's health condition develops. In a therapeutic relationship, the nurse should see the patient not as an object but they should create an authentic personal relationship. However, the nurse may not be able to see the patient as an individual before they are getting to know their own self. (Carper 1978 p. 27ff.)

The last pattern of knowing in Carper's theory is ethical knowledge. Modern health care is facing the problem to being forced to choose between morally right and wrong actions in order to treat illnesses and promote health. For instance, a primary goal of restoration of health may be to help to patients to achieve a level where they can function independently. Nevertheless, this may result in a situation where the patient does not learn how to cope with physical or social dependence if necessary. Thus, these two states of health are in conflict. This pattern of knowing includes, for example, that the nurse should understand different kinds of philosophical positions that are related to questions such as what is good, what should be desired, and what is right. (Carper 1978 p. 29f.)

These four types of knowing in nursing together create a complex platform of nursing knowledge. They are all needed, and they do not shut each other out but instead that can interact and help nurses to become better in their profession.

4 AIM AND RESEARCH QUESTIONS

The research aim is to find out importance of intuition in nursing practice. The study describes how intuition is used by the nursing professionals from novice to expert. There are three main questions. The first question is related to intuition in nursing practice. This is related to Benner's model. This question also has four sub-questions that focus on different aspects of the main questions. The second question is to describe knowing in nursing practice. This is related to Carper's model. The last main question is designed to find out about the relationship between clinical decision making and Carper's and Benner's models. This question has three sub-questions. All the questions are given evidence to in the Results chapter, but the question "How to develop intuition" is given evidence to in chapter 2 (Background). The research questions are as follows:

Research questions:

1. What is intuition in nursing practice?
 - What are the barriers on intuitive nursing practice?
 - What is knowledge and experience in nursing practice?
 - How to gain nursing knowledge?
 - How to develop intuition?
2. What is knowing in nursing practice?
3. What is clinical decision making in nursing practice?
 - What is the impact of intuition on clinical decision making?
 - How do novice nurse and expert nurse use intuition in clinical decision making?
 - How can novice nurses improve their expertise?

5 METHODOLOGY

This research uses qualitative research method. This means, for example, that the research is descriptive as it defines the phenomena explained in research questions in chapter 4 (Aim and research questions), such as the use of intuition by nurses, and how they gain knowledge and experience. This research is a systematic literature review which means that it analyses and summarises scholarly articles related to the chosen topic. The research uses evidence-based approach as it uses evidence from the data to support any claims. The research is conducted with inductive approach which means that the process starts with specific data, and ends with a generalisation. (Gabriel 2013: n.p.)

5.1 Data Collection

The research material consists of 20 different articles related to the research topic. These articles were taken into this research based on how relevant they are. Articles were found with the help of internet sources such as Academia.edu, Research Gate, Sage.com, Pubmed, Google Scholar and wiley.com online library. These sources were used as they have a function for finding scholarly articles related to intuition in nursing.

In the search engine, articles related to intuition and nursing were looked for. Although intuition is not a broad topic, there are still various articles related to it. Therefore, it was necessary to first take a brief look at the articles before deciding which ones were suitable for this research. Search phrases used in the above mentioned sources were “intuition” and “intuition in nursing”. Several articles were found which created a need to narrow down and specify the topic. When reading through the articles that seemed suitable for the research based on their headings, the themes that were recurring were the different stages of nurses according to Benner’s theory as well as clinical decision making. Therefore, search phrases were modified, and for instance “novice to expert” and “clinical decision making” were added to the search phrases. After further reading of articles, it occurred that knowledge and experience are key themes affecting intuition. Therefore, another modification to the search phrases was needed, and phrases such as

“knowledge in nursing”, “experience in nursing”, and “knowing in nursing” were added.

The articles were chosen for the research firstly based on the heading that was related to intuition in nursing practice. Although the articles found using the search phrases were related to intuition in nursing practice, not all of them were related to the two chosen nursing theories. Therefore, the author went through the articles briefly to find the most suitable ones to the research. Secondly, the underlying themes of novice and expert nurse, clinical decision making, knowing, knowledge and experience were explored in the articles briefly. Of these articles, the suitable ones related to the main theme of intuition were taken into closer observation. Finally, the articles were read through carefully, and 20 articles were chosen for the research material based on their contents.

The inclusion criteria used in this research were full-text articles which contain empirical nursing research based on qualitative or mixed research methods. The articles were chosen if they were published only in English language. The exclusion criteria used to select the articles were not nursing related, not full-text available and based on brief study of the article, especially the abstract which did not match the themes mentioned above. As well, the texts which were not articles or journals were excluded. Furthermore, bachelor or master’s research were excluded.

The list of the chosen articles stands below in alphabetical order.

1. Baixinho et al. 2014, “The art and learning patterns of knowing in nursing.”
2. Bjørk & Hamilton 2011, “Clinical Decision Making of Nurses Working in Hospital Settings.”
3. Cioffi 1997, “Heurestics, servants to intuition, in clinical decision-making.”
4. Dijkstra et al. 2012, “Deliberation Versus Intuition: Decomposing the Role of Expertise in Judgment and Decision Making.”
5. Dreyfus 2004, “The Five-Stage Model of Adult Skill Acquisition.”
6. Gillespie & Peterson 2009, “Helping Novice Nurses Make Effective Clinical Decisions: The Situated Clinical Decision-Making Framework.”
7. Hassanian et al. 2015, “Knowledge Creation in Nursing Education.”

8. Hill 2010, "Improving Quality and Patient Safety by Retaining Nursing Expertise."
9. Hoffman et al. 2003, "Decision-making in clinical nursing: investigating contributing factors."
10. Holm & Severinsson 2016, "A Systematic Review of Intuition – A Way of Knowing in Clinical Nursing?"
11. Khomeiran et al. 2006 "Professional competence: factors described by nurses as influencing their development."
12. Mantzorou & Mastrogiannis 2011, "The Value and Significance of Knowing the Patient for Professional Practice, according to the Carper's Patterns of Knowing."
13. Nyatanga & de Vocht 2008, "Intuition in clinical decision-making: a psychological penumbra."
14. Radwin 1998, "Empirically generated attributes of experience in nursing."
15. Robert et al. 2014, "A Power in Clinical Nursing Practice: Concept Analysis on Nursing Intuition."
16. Rovithis et al. 2015, "Evaluation of Intuition Levels in Nursing Staff."
17. Rovithis & Parissopoulos 2005, "Intuition in Nursing Practice."
18. Saintsing et al. 2011, "The novice nurse and clinical decision-making: how to avoid errors."
19. Smith 2009, "Exploring the legitimacy of intuition as a form of nursing knowledge."
20. Zander 2007, "Ways of Knowing in Nursing: The Historical Evolution of a Concept."

5.2 Inductive and Qualitative Content Analysis

This research uses inductive and qualitative content analysis method. In qualitative content analysis, the empirical data will be gathered following secondary data such as text books, articles and journals. The empirical data will be gathered relevant to the nursing model used in the thesis. The data will be categorised and revised before using them. (Mayring 2000: n.p.) In this thesis, all the data were

found by using internet sources, research articles, journals and books, so all the data are secondary data.

In inductive data analysis, the aim of the research is first to observe data according to the topic of interest. Then the research material is gathered and analysed, and patterns and themes are recognised. Finally, a conclusion is made according to the findings. (DeVault 2017: n.p.) The conclusion of the research is reflected and compared with the two nursing theories that are used to support this research. These theories can be found in the chapter 3 (Theoretical Framework). The following chart gives a brief idea about inductive data analysis.

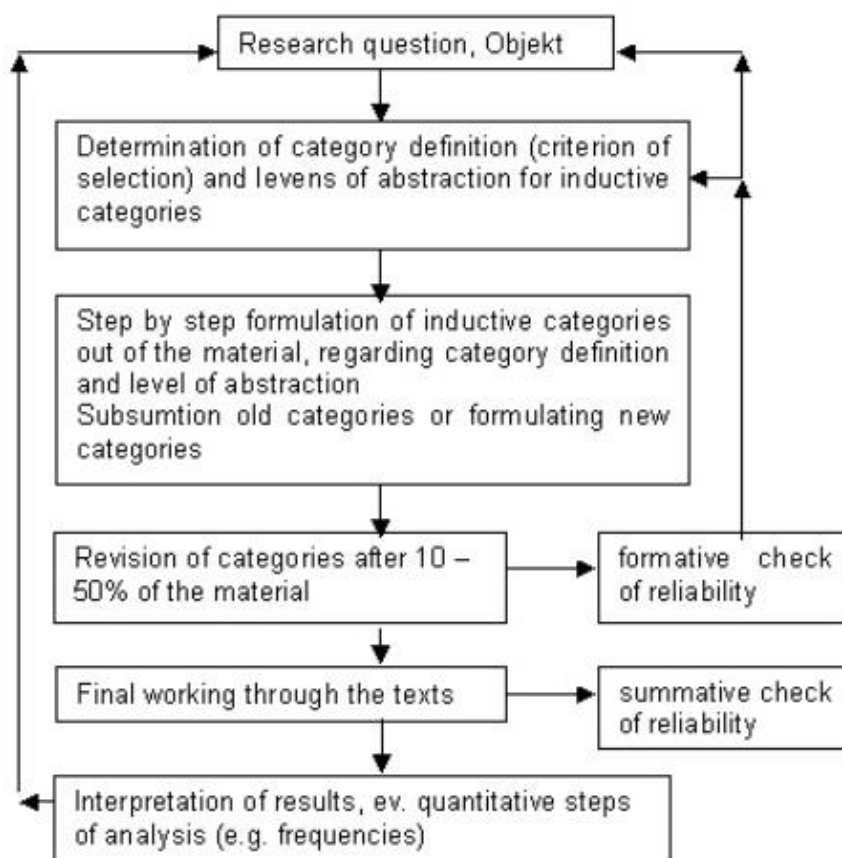


Figure 1: Inductive analysis. Source: Mayring 2000, *Qualitative Content Analysis*.

After the generating of the research idea, the research questions were created. Next, the research material is studied thoroughly, and all the relevant information was highlighted and divided into seven different categories based on the themes

that are explained in subchapter 5.1 (Data Collection). As the area of research and amount of information was broad, an adjustment to narrow down the research was made, and the theme of novice to expert was limited so that this research looks only at the novice nurse and expert nurse. Finally, the categories into which the information is divided are: intuition in nursing, knowing in nursing, experience, knowledge, clinical decision making, novice nurse, and expert nurse. Due to the slight adjustment of the categories, the research questions were modified as well, and the final research questions to be answered were decided (See chapter 4 Aim and Research Questions). Next, the gathered information from different articles was combined according to the categories to match the research questions. Finally, the findings were discussed, and conclusions and recommendations were made.

5.3 Ethical Aspects of the Research Study

“Research ethics are the set of ethics that govern how scientific and other research is performed at research institutions such as universities, and how it is disseminated”. The main aspects of research ethics are avoiding the breach of copyright, transparency and not using fabricated information to mention a few. The research ethics helps to improve the knowledge, collaboration between the researchers, fairness, accountability of information used and work done and trust. Following research ethics will help to avoid conflicts of interest, misconduct doing harm to others or their information. (SkillsYouNeed 2017: n.p.)

The topic for this research has been accepted by the Arcada University of Applied Sciences, Helsinki, Finland. The author has been careful not to use false information and plagiarism. Although the ideas of evidence based care and intuition are somewhat conflicting, the author has been careful not to discriminate the evidence base care process, as it is the prominent method of nursing practice today. The research has not been biased to any aspect of nursing, so the research has been done in a neutral manner. Openness, honesty and integrity of doing research has been taken into thorough consideration by the author. Finally, this thesis has been written according to the Arcada’s thesis writing guidelines.

6 RESULTS

This section is based on the articles used for this research. The information is gathered in relation with the main research question and the main nursing theories. Therefore, the relevant articles are presented here, and some other articles are used in some other chapter such as, background part of the research.

6.1 Intuition in Nursing Practice

Intuition is defined in several methods in different articles. It is seen as understanding without reasoning or judgement without reasoning. It can also be defined as merging or combining different forms of knowledge in a rapid grasp. As intuition in nursing is a combination of knowledge, skills and experience, it is considered to be the widest knowledge base. (Rovithis & Parissopoulos 2005: p. 1f.; Nyatanga & de Vocht 2008: p. 1; Rovithis et al. 2015: p. 1) In addition, Mantzorou & Mastrogiannis (2011: p. 255) define intuition as a sixth sense or an artful manifestation of nursing. Nyatanga & de Vocht (2008: p. 2) claim that intuition is defined as a sixth sense due to the difficulty to describe how it functions. Rovithis & Parissopoulos (2005: p. 3f.) and Cioffi (1997: p. 203) add gut feeling and hunch as other definitions of intuition. Nyatanga & de Vocht (2008: p. 3f.) support the use of gut feeling because the human abdomen has a complex circuitry that forms a part of our autonomic nervous system. This system is called the belly brain, and it is independent from the brain and spinal cord. Although we cannot formally think with it, the feelings and emotions can be remembered with it. It also has a connection with the brain so the feelings in the belly brain are transmitted to the head brain. When something is going wrong with a patient, a previous experience of a similar incident can be recalled, and thus the nurse will be able to make the correct decision without consciously understanding how. (Nyatanga & de Vocht 2008: p. 3f.) Nevertheless, Rovithis & Parissopoulos (2005: p. 2) and Robert et al. (2014: p. 344) state that intuition should not be linked with terms such as “gut feeling” or “mysticism” because of the negative image.

There are also other definitions to intuition. Rovithis et al. (2015: p. 1) describes intuition as a procedure based on silent learning which means that previous

experience that a person has deep in their mind comes to action during clinical decision making. It can also be seen as a process in which previous experience and knowledge are processed unconsciously, and turned into a feeling that helps in clinical decision making (Rovithis & Parissopoulos 2005: p. 1; Dijkstra et al. 2012: p. 285). Another categorisation of intuition includes cognitive intuition, transitional intuition, and embodied intuition. The first phase includes the subconscious assessment of the patient situation. This can be later detected rationally. In the second phase, the nurse becomes aware of physical changes or other behavioural changes that occur when they are interacting with patients. The last stage means that the nurse begins to trust their intuitive abilities. (Robert et al. 2014: p. 345.) Intuition is experienced individually: what one nurse feels as intuitive may not be intuitive to the other nurse (Cioffi 1997: p. 204). Finally, Nyatanga & de Vocht (2008: p. 37) see intuition not only as a cognitive skill but a multidimensional concept since it consists of emotional, physical, and spiritual parts.

There are some physiological changes and feelings that nurses may experience when using intuition. Nyatanga & de Vocht (2008: p. 3) and Rovithis et al. (2015: p. 1) claim that shivers down the spine, headache, and muscle tightness can be experienced when intuitive activity is functioning. Nurses may also be restless or uneasy, or have increased heart rate and racing blood flow. Furthermore, Holm & Severinsson (2016: p. 417) mention that nurses may feel nauseous if something is wrong with the patient. These changes are part of emotional awareness that can be developed when a nurse spends more time with the patient and develops a connection with them. When a connection is established, nurse's use of intuition can be explained as an ability to read patient's cues and feelings, or as an interest to try innovative treatment methods. In addition to the physiological changes, emotional awareness includes also feelings or fears that something bad will happen to the patient as well as reassuring feelings which make the nurse less worried about the patient's situation. (Holm & Severinsson 2016: p. 418f.; Rovithis et al. 2015: p. 1.)

When interpreting patient messages and cues, different forms of intuition can be recognised. These include cognitive interference, and gestalt intuition (Cioffi 1997: p. 204; Rovithis & Parissopoulos 2005: p. 3f.). Rovithis & Parissopoulos

(2005: p. 4) add precognitive function to these. Cognitive interference means that nurses suddenly analyse the visual and verbal cues without conscious thought, and fill in the missing parts to complete the pattern in gestalt intuition. Precognitive function as part of intuition means that the nurse foresees the situation. (Rovithis & Parissopoulos 2005: p. 4; Cioffi 1997: p. 204.)

6.2 Ethical and Legal Aspects of Using Intuition in Nursing Practice

There are ethical and legal aspects that can be a barrier to or discourage the use of intuition in nursing practice.

As evidence based practice has gained a prominent status in nursing practice, the use of intuition in nursing practice is devalued (Rovithis & Parissopoulos 2005: p. 1; Smith 2009: p. 38). Intuition as part of nursing practice is ignored as the standard way of evidence based practice has replaced it with assessment tools and checklists. (Rovithis & Parissopoulos 2005: p. 5). However, the use of these kinds of analytical tools is essential only for novice nurses' practice. Expert nurses who have a large knowledge base and experience do not often use such instruments because they are able to make decisions based on their previous experience. Thus, the use of only analytical tools in evidence based care prevents them from practicing their optimum skills. (Rovithis & Parissopoulos 2005: p. 5)

Intuition lacks this kind of scientific documentation, and it is in fact difficult to even define or measure. This creates a challenge for nursing professionals to use intuition as it does not contain empirical knowledge and legitimacy. (Smith 2009: p. 35; Rovithis et al. 2015: p. 2.) It can also cause frustration as nursing professionals would try to find empirical evidence for something that they cannot prove scientifically. Nurses are unwilling to share their intuitive feeling with others because of its lack of scientific evidence which would make them seem guilty for using unacceptable methods. Furthermore, the education system and the society prefer technologically and rationally oriented methods over intuition that they often see as inferior feminine trait. (Rovithis & Parissopoulos 2005: p. 5f.)

Nevertheless, some articles recognise the value of intuition. Although there is no empirical evidence for practicing intuition, nursing literature counts it as a source

of knowledge for nurses (Smith 2009: p. 35ff.). In addition, if nursing professionals were forced to abandon intuitive thinking, the opportunity for skilled nursing judgment would be lost. On the contrary, intuition is an essential part in practice, management, education, and research in nursing. (Rovithis & Parissopoulos 2005: p.1 ff.)

6.3 Knowing, Knowledge and Experience in Nursing Practice

Knowing, knowledge, and experience are key components in nursing practice related to use of intuition. Intuitive knowing is identified as the sudden knowledge about a fact, experience of feelings of knowing, or recognition of qualitative changes. It is linked to past, present and future with unconscious reasoning. (Rovithis & Parissopoulos 2005: p. 6; Cioffi 1997: p. 205.) There are five different types of knowing. The first is knowing the profession which includes nurses' knowledge of the different standards related to the work. These are related to practice, abilities, skills, and roles. Secondly, knowing the nurse's own strengths and weaknesses, skills, experience, and other needs. Next, knowing the case means that the nurse has knowledge about existing patterns in usual patient cases so that they are able to predict the path and understand patient cues. Knowing the patient is the fourth way of knowing. Here the nurse should have knowledge of the patient's clinical background and collected data. They should also be able to understand the physiological changes to the treatments. (Gillespie & Peterson 2009: p.166f.) Knowing the patient is an essential part in decision making. It requires a nurse to have experience so that they can generalise knowledge of similar cases as well as give individual care. Knowing the patient process happens when the nurse starts to understand the patient's condition, behaviour and feeling. (Radwin 1998: p. 591.) Finally comes knowing the person. This highlights the importance of having knowledge of the patient's personal experience related to health, individual responses to treatments as well as preferences. (Gillespie & Peterson 2009: p.166f.)

In modern society, knowledge is a valuable asset so there is a need to acquire knowledge and experience (Hassanian et al. 2015: p. 44). It is part of intuition in nursing practice alongside with skills and experience. (Rovithis & Parissopoulos

2005: p. 1) One definition of knowledge is a form of knowing which is possible to be conveyed to and exchanged with others (Zander 2007: p. 8). Nurses can develop their knowledge by reflecting upon their practice in a supportive environment, or discussing with similar level nurses in a forum where more experienced nurses share their experience. (Radwin 1998: p. 594; Khomeiran et al. 2006: p. 68.) Nurses gain knowledge by adjusting previously learnt theories and ideas when they are in an actual situation. Practising over years and dealing with different patient situations repeatedly give the nurse an opportunity to deepen their gained knowledge. This kind of practical knowledge gaining can increase use of intuition in a nurse. (Radwin 1998: p. 591f.; Zander 2007: p. 8.) In addition to this practical knowledge gaining, especially the early stage nurses can gain knowledge by using library resources, internet, and human resources. Outcomes of gaining new knowledge are personal growth, reducing uncertainty, becoming wise, and better decision making and problem solving. (Hassanian et al. 2015: p. 48ff.; Zander 2007: p. 8.)

Experience can be defined as a knowledge base, and it increases with the time spent in the field which means that a nurse can apply this experience in similar situations later while delivering patient care. If this knowledge was gained in practical settings, the experience enables the nurse to recognise subtle changes in patients' situation. Experience provides the nurse confidence, ease and feeling that they are in the right direction of decision making. For instance, the experience-based confidence gives the nurse an ability to intervene the patient care with a broader range of choices. (Radwin 1998: p. 590ff.) This is part of skilful execution of clinical procedures that also require multidisciplinary assessment of signs (Hill 2010). Moreover, with that experience the nurse understands what has happened and what is going to happen next in a specific patient situation. Experience allows the nurse to prioritise the patient situation rather than concentrating on monitor reading or technical factors. (Radwin 1998: p. 590ff.)

6.4 Ways of Knowing in Nursing Practice

Patterns of knowing was first developed by Carper (1978). It contains four kinds of knowing. These include empirical knowledge, ethical knowledge, personal

knowledge and esthetical knowledge. Nursing practice consists of objective general knowledge that can be measured and verified through testing frequently. (Zander 2007: p. 8.) Empirical knowledge involves the nurse's ability to provide care despite the missing parts of information. Because of the missing information, the decision making is a complex task that involves cognitive skills and intuition. (Mantzorou & Mastrogiannis 2011: p. 255.) Baixinho et al. (2014: p. 166) identifies three subcategories to empirical knowledge. These include scientific knowledge, tradition and nature of nursing care. Scientific knowledge is based on research and theories which try to verify phenomena, and that is objective. Tradition is giving knowledge about the history and evolution of care of human. It shows how care and caregivers have improved their skills since the past until the present day. The nature of nursing care observes varied perspectives to nursing such as information related to nursing equipment and attitudes of nurses.

Ethical knowledge introduces the moral side of decision making as caring includes choices and judgement that consists of ethical codes, rights and obligations. It calls for understanding of right and wrong, and it is affected by one's personal values, motives and intentions. Although moral principles are abstract, they can be used as guidelines in decision making in concrete everyday situations. (Zander 2007: p. 8; Mantzorou & Mastrogiannis 2011: p. 254.) Baixinho et al. (2014: p. 167) states that nurses should for instance have respect for all human beings and behave in a respectable manner. Ethical knowledge makes nurse to understand the value of life.

The third way of knowing, the personal knowledge, means that the nurses should be aware of themselves in relation to others. By knowing own self only, one can know about another person. One can know someone else without a common language as this relationship is subjective. (Zander 2007: p. 8.) In personal knowing, in therapeutic relationship with the patient, the nurses relate themselves with patient's situation to understand and fulfil the needs. It is possible to increase awareness of self by self-reflection and accepting feedback from others. There are four components of personal knowing such as wholeness, encountering, passion and commitment. (Mantzorou & Mastrogiannis 2011: p. 254.) Baixinho et al. (2014: p. 167) recognises four subcategories such as self-knowledge,

experience, reflective attitudes and relationship with others. Everyone has a subjective knowledge of self that affects how they see themselves and others. This also affects how people interact with others. Experience is an important part of personal knowledge, because it gives us more information about ourselves. It also helps to develop intuition. Reflective attitude is dependent on one's life experiences. The last subcategory involves seeing others.

Esthetical knowledge which identifies as art of nursing, can be explained as direct feeling and experience about a patient. It includes how a nurse understands their patient by using the knowledge and experience. Esthetical knowledge cannot be communicated by language, but it can be seen as art or act. (Mantzorou & Mastrogiannis 2011: p. 253; Zander 2007: p. 8.) Esthetical knowing helps the nurse to understand the total case from an evaluative viewpoint and guide to foresee the result of the nurse's creative implementation for a specific situation. Esthetical knowing is mostly subtle, and it is based on experience associated with nursing. (Zander 2007: p. 8.) Baixinho et al. (2014: p. 166) introduce three subcategories of esthetical knowledge. These are expressiveness, subjectivity and sensitivity. The expression refers to the interaction between the nurse and the patient. Subjectivity is expressed through individual perception of things such as by emotions and feelings. The sensitivity means that esthetical knowledge may have meaning of a certain moment, so it is both sensitive and fragile.

6.5 Novice Nurse and Expert Nurse, and Their Levels of Experience, Use of Intuition, and Clinical Decision Making

This chapter presents the findings on differences of novice nurses and expert nurses' practice in clinical environment. First, the clinical decision-making process is defined. Then, the three main themes that are focused on here are presented. These include level of experience, use of intuition, and abilities in clinical decision making.

Clinical decision making can be defined as nurses participating in their usual clinical practice that includes every day activities, wound care, medication administration, emotional support, and report giving (Hoffman et al. 2003: p. 55).

Another definition sees clinical decision making as the complex environment of nurse's decision making that needs wide knowledge base and experience. The decisions that the nurses make, will have a direct impact on patient's health situation, and it will also show the competence of the nurse. This shows that clinical decision making is one of the most important parts in nursing care. (Bjørk & Hamilton 2011: p. 1.) Hoffman et al. (2003) discuss the importance of different factors influencing clinical decision making. These are experience, level of education, value of the role played by the professional, area of specialty, hierarchy, stress, confidence, and personal beliefs. The outcome is that the value of role is the most influencing factor on clinical decision making. For instance, when there is a team of health care professionals, the one with highest title will have more power in the team to decide. This article also talks about that experience and level of education are not that influencing on clinical decision making. Instead it says that higher levels of appointment have more influence. According to this article, the higher levels of appointment are held by older and more experienced nurses, so therefore the novice nurses are not getting much chances to involve in clinical decision making, which affects negatively on novice's competence development. However, this article admits that there are many other articles that recognise experience and knowledge as the most influencing factors on clinical decision making. (Hoffman et al. 2003: p. 53ff.)

Effective clinical decision making needs the nurse to be more competent than just having good knowledge. It requires acquiring new knowledge about certain patient situations and updating old knowledge with new information, and using it. In clinical decision making process there are four stages which are called cues, judgement, decisions, and evaluations of outcomes. Cues are identified by, for instance, examining the patient and listening to the patient, assessing the laboratory test results, and using own experience and intuition. In judgement, the nurse will think what is happening with the patient and what can help, whom to consult for more help, and what to do first. In decisions the nurse will think to wait or to try something, or wait for consultation, and also think about what is the best to be done. In evaluation of outcomes, the nurse will evaluate the decision made and

think about what went right or wrong, collect further information, or to make another decision. (Gillespie & Peterson 2009: p. 164ff.)

Novice nurses view the clinical situation as abstract principles because they do not have enough concrete experience about these situations (Gillespie & Peterson 2009: p. 164). Their experience comes from formal training (Hill 2010) and they are only able to recognise context-free features in the beginning (Dreyfus 2004). When caring a patient, they focus on one task or procedure at a time so there cannot see the care process as a whole (Radwin 1998: p. 592; Rovithis & Parissopoulos 2005: p. 5). Novices nurses gain experience from experts in clinical decision making (Gillespie & Peterson 2009: p. 166).

Whereas novice nurses focus on a single task at a time, expert nurses view the clinical situation as a complete entity (Gillespie & Peterson 2009: p. 164). They have gained their experience over time (Radwin 1998: p. 590) so they know what to expect (Rovithis & Parissopoulos 2005: p. 3). In addition, expert nurses are patient-centered (Radwin 1998: p. 592) which means, for instance, that they evaluate the problem in a broader way than a normal physical assessment conducted by the novice nurse. Therefore, expert nurses can see what needs to be done in the patient situation, they know how to achieve the goal, and they not only evaluate the patient but also the family situation when needed (Dreyfus 2004; Mantzourou & Mastrogiannis 2011: p. 258.). Furthermore, a part of nursing expertise is knowing the patient: Expert nurses know what they need to ask to get the needed information, and they also ask more questions than novice nurses. In addition, they are making sure that everything is fine with the patient before discharging patient from the hospital. (Mantzourou & Mastrogiannis 2011: p. 256; Hill 2010.)

Novice nurses often require rational calculation, so they are unable to use intuition (Rovithis & Parissopoulos 2005: p. 5). However, there are certain groups that have ability to use intuition in nursing practice to some extent. These include “old” novices or people who have previous experience, those who have got social support, and those who have been hospitalised. This means that previous life experiences even if they are not related to nursing practice, help in development of

intuition. (Smith 2009: p. 37; Holm & Severinsson 2016: p. 413ff.) Rovithis & Parissopoulos (2005: p. 6) state that all nurses are able to use intuition, but the level of use may vary depending, for instance, on experience and the environment since nurses in clinical settings that support the use of intuition seem to use intuition more. (Mantzorou & Mastrogiannis 2011: p. 256; Holm & Severinsson 2016: p. 419.) Furthermore, the use of intuition is not related to success in studies: for instance, a student with high grades may not necessarily be intuitive, whereas a student with lower grades in the academic studies may be very intuitive (Holm & Severinsson 2016: p. 419).

Cioffi (1997: p. 204f.) mentions six aspects of intuition based on expert nurses' explanations. They are pattern recognition, similarity recognition, common sense understanding, skilled knowhow, sense of salience, and deliberative rationality. The pattern recognition means that the nurse is analysing patient's cues to understand how to act. The second aspect involves comparing similar and different cases of past patients in order to care a present situation with a patient. Next, in common sense aspect the expert nurse gathers information, for instance through observation, and interprets the variety of information in order to understand the patient's situation. Fourth, the expert nurse reflects upon the possible practical interventions of a patient. Then comes the understanding the important points and prioritising them accordingly. Finally, the expert nurse implements the selected care procedures according to the situation of the patient. (Smith 2009: p. 36; Rovithis & Parissopoulos 2005: p. 2; Cioffi 1997: p. 204f.; Mantzorou & Mastrogiannis 2011: p. 255.)

Intuition is based on experience, and it has been discussed as a feature of an expert nurse (Rovithis & Parissopoulos 2005: p. 1). It can also be seen as cooperation of knowledge and experience, and it is influenced by the nurse's personality, the environment, the nurse's willingness to use intuition, and the patient-relationship. (Hill 2010; Rovithis & Parissopoulos 2005: p. 6; Smith 2009: p. 37; Radwin 1998: p. 591; Holm & Severinsson 2016: p. 419.) The previous experience may contain information, for instance, on recognition of patterns and detection of clinical changes (Rovithis & Parissopoulos 2005: p. 1). Expert nurse's use of intuition includes anticipating problems, so they can quickly assess the patient

situation and make the relevant decisions (Robert et al. 2014: p. 343). They are also able to see the important aspects which will help them to understand how to respond in the patient situation. If an expert nurse is self-reflective, and open in patient-relationship which means they are also open for receiving information from the patient, they are probably more intuitive as well. (Rovithis & Parissopoulos 2005: p. 4f.). Finally, Holm & Severinsson (2016: p. 413) claims that women are more intuitive than men.

Clinical decision making relies on nurses' judgements. Novice nurses have weak intuitive abilities due to limited knowledge and experience which affects their decision making (Smith 2009: p. 35; Gillespie & Peterson 2009: p. 164). They follow protocols carefully and respond to patient complaints by action rather than reflection or thought. This happens due to their ability to focus on a single task or problem at a time. This, in turn, results in difficulties when functioning in complex or unfamiliar situations because novice nurses are unable to use multidimensional decision making. That will lead to lack of confidence and efforts to avoid decision making by asking help from experts. (Gillespie & Peterson 2009: p. 164.) Furthermore, the novice nurses tend to do more errors during their clinical practice and decision making due to above mentioned limitations. For example, novice nurses are making greater percentage of medication errors occurred in clinical settings, they are involved in more patient falls, and delay in providing care as well as causing wound infections. They may also make errors in documentation and communication. (Saintsing et al. 2011: p. 355ff.) If the novice nurse does not gain confidence, they are in risk of quitting as they feel that they do not have the necessary skills. (Gillespie & Peterson 2009: p. 164.)

Although evidence based nursing is the prominent way of nursing practice today and the intuition has been ignored, in clinical decision making it is still a main component (Rovithis & Parissopoulos 2005: p. 1). Intuition is not studied enough, but a better understanding of it would help clinical decision making process (Nyantanga & de Vocht 2008: p. 4). Despite this, the use of intuition is devalued because it can be seen as emotional and non-legitimate (Cioffi 1997: p. 204). Anyhow, the top level intuitive decisions may not always be perfect when tested empirically. Nevertheless, it should not be tested this way because it is a different

form of knowledge or understanding. (Nyatanga & de Vocht 2008: p. 4.) Holm & Severinsson (2016: p. 419), Smith (2009: p. 35) and Rovithis & Parissopoulos (2005: p. 5) state that expert nurses use intuition in decision making. As intuition is sudden understanding of the situation, the nurse can quickly make the appropriate decision (Holm & Severinsson 2016: p. 420; Robert et al. 2014: p. 345; Rovithis & Parissopoulos 2005: p. 6). The decision making is eased by the confidence that expert nurses possess. They also have lots of previous experience which helps their intuitive decision making where they unconsciously compare new stimuli with the present patient situation. This is very helpful especially in complex situations. (Mantzorou & Mastrogiannis 2011: p. 256f.; Radwin 1998: p. 592; Nyatanga & de Vocht 2008: p. 2; Rovithis & Parissopoulos 2005: p. 3ff.; Hill 2010; Cioffi 1997: p. 204.)

Furthermore, expert nurses reflect upon their previous experience and the factual patient situations, and compare these against theoretical knowledge found in books in order to come to a suitable decision. Another use of intuition in decision making is called the likelihood judgement. When expert nurses use this, they may avoid negative outcomes in patient care. In likelihood judgement, the expert nurse estimates the probability of success which is attached to the confidence of the nurse and uncertain patient situations. Assessing the probability is related to evaluation of previous similar situations before implementation. Finally, depending on the nurse's level of expertise, the decisions made using skilled clinical knowledge and experience are highly recognised. (Cioffi 1997: p. 205f.)

7 DISCUSSION

In this chapter, the research results are analysed. Main questions 1, 2, and 3 are answered respectively.

Question 1 – Intuition in nursing practice

Intuition has been an important part of professional nursing practice for a long time, according to the literature. Nurses, especially with large amount of experience and rich knowledge-base, have been using intuition in their work on a daily basis. The term can be defined in several different ways. In most definitions it is seen as unconscious cognitive activity where the nurse's previously gained experience comes into action (Rovithis & Parissopoulos 2005). Due to the difficulty of defining it precisely, many researchers say it is a gut-feeling or a sixth sense (Nyatanga & de Vocht 2008; Rovithis & Parissopoulos 2005; Cioffi 1997). However, one article in the research material (Robert et al. 2014) claims that gut-feeling brings a negative image to intuition and it should therefore not be used. As it is only one article stating this, the majority does not see a problem with the use of the term. Some other literature (Rovithis et al. 2015) claims that intuition is a way of silent learning. This means that the nurse's long time experience which has been stored in their mind, suddenly arises for instance in a similar situation where a patient's health is deteriorating but there is no answer for trouble that could be found rationally. In such a situation the sudden reaction of nurse's intuition can do a lot and the outcome will be very positive on the patient health wise.

This shows that intuition is different kind of knowledge from such that can be measured empirically. Although intuition does not seem important when measured empirically, the patient outcomes show that it has a great effect. Therefore, intuition should be promoted, and its use encouraged. Nurses should be able to talk about their intuitive feelings without a fear of getting ignored or blamed. As nurses could openly use intuition, it would encourage others to use it as well as novice nurses to learn it. Furthermore, intuition should be taught in academic level to nursing students so that they will understand the importance of it, try to use it themselves, and this will finally lead to a situation where intuition becomes

accepted as part of nursing practice. Then terms like gut feeling would not harm the image of intuition the way some see it do now, because intuition has not gained a solid base in nursing. To reach the ideal level where intuition is part of globally accepted clinical decisions, there should be changes happened on local levels such as hospitals, municipalities, and hospital districts, moving onto national levels, and becoming a global event in future.

Nurses can experience different kinds of physical changes when using intuition (Nyatanga & de Vocht 2008; Rovithis et al. 2015). Some nurses feel it like something bad is going to happen so they should apply some solution to avoid the adverse effect. Others may become nauseous, restless, or have shivers down the spine. These all may differ between nurses which shows that intuition is very individual. What one nurse sees as intuition, may seem not intuitive to another. Therefore, intuition does not grow simply by reading and studying, but it should be practiced as well.

Knowledge and experience have great influence on intuition (Rovithis & Parisopoulos 2005). Theoretical knowledge will be practiced in clinical settings, which will give experience. When the same kind of process is done many times with many different patients, that experience gained will be deeply absorbed to nurse's memory. After several years of practice, when the nurse has to handle patient with similar kind of situation, the nurse's gained experience will work in the form of intuition (Radwin 1998). Due to the nurse having practiced the same process many times in the past, they have met and overcome some mistakes previously. They have then identified all the adverse effects of the process and how to handle if any occurred. This means that the nurse has stored all the aspects of the process in their mind so that they can intuitively and unconsciously use it when the problem occurred next time. Due to this reason, the intuitive nursing practice is practically problem-free and more effective than simply the use of empirical evidence. As well, when the nurses gain better experience, it is possible for them to reach higher levels of the profession. Although most articles state that knowledge and experience are the base for gaining intuition and making clinical decisions, one article (Hoffman et al. 2003) discusses that knowledge and experience are not the most important factors for clinical decision making. Instead, it says that

the value of role and level of appointment are the most influencing factors. For instance, in a team of health care professionals, the members with higher titles will have more power to decide than others. This article also says that hierarchy has influence on decision making. It means that higher levels of appointment can decide more than lower levels. Although this can be true, logically higher levels of appointment people have gained by better education and better experience. Therefore, after all, the experience and education are the reasons behind the power of decision making.

Question 2 – Knowing

Knowing is an essential part of nursing practice related to intuition, alongside with knowledge and experience. Knowing process starts with knowing the profession. The nurse should know the profession well so that they can understand its limitations before practicing it (Gillespie & Peterson 2009). When the nurse knows the profession well, they should next think about what they know about it, how well they know it, and up to what extent they can practice it. This means that the nurse knows also very well about themselves so the nurse will not try to implement unsure and unsuitable procedures. Instead, the nurse will try to look for more information from relevant sources, or use human resources to get information. This way the nurse identifies their strengths and weaknesses.

When the nurse has understood properly their skills and abilities, they will try innovative ways of treating patients. This is something very important for the development of nursing science. Getting to know the patient in a broader way such as medical history, family background, and social background faster, will make it easier for the nurse to make clinical decisions, easier to plan care process, and the outcome will be better. Therefore, the satisfaction of both the nurse and the client will be higher. The nurse should also have good ability not only to care the patient itself, but also to guide the families and the society when needed. They also can provide essential information about the situations where a patient or their family members need further information about something happened during clinical treatment process. When the nurse knows well about themselves and their abilities, as well as the patient and patient's health situation, and further about the

environment and resources, it is easy for the nurse to make a proper clinical judgement.

Question 3 – Intuition in clinical decision making

In nursing practice, before implementing any action by the nurses on patient's health, a decision is made about what to carry out. This decision is the best one a nurse can make according to their knowledge and experience (Bjørk & Hamilton 2011). The nurse follows the patient's situation which means assessing the patient, patient's health history, present situation, and preferences of the patient. Then the nurse evaluates the gathered information, and decides what action should be taken. After implementing the action, the nurse does the follow-up, and evaluates the outcome.

Decision making is one of the most important parts in nursing practice, and it is also a complex process. Nurses have to have good or competent level of knowledge and experience to make a good decision where the outcome is as positive as possible (Bjørk & Hamilton 2011). The nurses with higher level of education and longer experience in clinical practice make better decisions than less experienced nurses (Gillespie & Peterson 2009). As the base for both intuition and clinical decision making lies in higher level of education, knowledge and experience, these two terms are closely related. Therefore, the nurses with higher level of intuition make better clinical decision in nursing practice than others. The reason is that the intuition brings unconsciously, and therefore also faster, solutions in the complex health problems of the patients. Intuition-based clinical decision making is believed to be faster and better compared to just rational, empirical calculations.

Some articles discuss that nurses in all levels use intuition in clinical decision making, but most articles claim that only expert nurses use intuition. Although novice nurses are more dependent on theories and evidence-based decision making, their age, and life experiences may give them ability to use intuition in an early stage of their nursing career. As the novice nurses continue working in the field, and involving in decision making constantly, they improve their level of

knowledge and experience which leads them to become expert nurses eventually.

Expert nurses are the ones using intuition most in clinical decision making. As they have greater amount of knowledge and experience in the field, they have gained the nursing intuition. When the experience-based intuition unconsciously helps the expert nurses to overcome with a solution to a complex situation, their level of confidence is high so their decision is very competent. Expert nurses have very good skills to understand the patient's problem such as patient's health history, emotional side, and social situation alongside with present health situation (Mantzorou & Mastrogiannis 2011). This helps a lot for the expert nurse to identify the patient's actual problem so it is easy for them to find the best solution and implement it. Therefore, expert nurse's practice in clinical decision making is based on experience and intuition so that the outcome is better.

Summary

Intuition has been one of the main parts in nursing practice. Although its place is not recognised well in evidence-based nursing, intuition has been used by the nurses in everyday practice. Knowledge, and the experience are the base for intuition. It is also important to know oneself, the patient, and the environment to make a proper clinical decision. Novice nurses are not commonly using intuition in practice but instead they are relying on theoretical knowledge and evidence. On the other hand, the expert nurses rely on knowledge and experience-based intuition. Therefore, the clinical decision made by expert nurses are always better and the amount of errors made are minimum compared to novice nurses. Finally, intuition is a very important aspect in nursing so it should be recognised and its practice should be supported by the health care systems globally.

8 CONCLUSION

This chapter discusses the conclusions of the research as a whole. The aim of the research is reviewed, and the estimation of how well the research aims were achieved is presented. In addition, recommendations are given, and possible need for further research is mentioned.

The aim of the research was to identify the use of intuition in nursing practice, so based on the goal, the research questions were generated. Although intuition is the main topic in this research, side topics that are closely connected to it, are studied as well. These include knowing, knowledge and experience in clinical decision making. The research has been done as a qualitative, secondary data analysis. 20 scholarly articles have been used to find out information related to the topic. To gather a broad amount of background information, books and internet sources have been used. In chapter 2 (Background), 3 (Theoretical framework), and 5 (Methodology) these sources have been examined closely.

The topic has been narrowed down by focusing on two main stages of nurses' professional development. These are novice stage and expert stage. The narrowing down of the topic gave a good opportunity to concentrate better on these two stages of nurses, so the author could stay focused on the research aim from the beginning of the process until the end. This also gave an opportunity to avoid repetition because the two chosen stages have a remarkable distance between them, so there is minimum amount of overlapping and similarities between these two stages. The articles chosen for this research are of quality which means that they include relevant information that could be used to answer the research questions. The ethical procedures of conducting research have been thoroughly taken into consideration. For instance, all the sources are mentioned in the relevant places, and plagiarism is completely avoided. These increase the quality and accountability of the study.

The weaknesses of the research include that intuition related to nursing practice has not been researched significantly. Therefore, finding relevant articles was one of the most challenging tasks. Although 20 full-text articles were chosen, after all only part of the information could be taken for the study which means that the

major part of the information had to be excluded. Another reason for this exclusion of the information was that only two stages of professional development of nurses were focused on.

According to the analysis of the information found, it can clearly be seen that intuition is used in nursing practice in general. Developing intuition is a time taking process based on gaining knowledge, skills, and experience. Therefore, the nurses in their early stage of practice do not commonly use intuition in decision making. Instead, they are using rational calculations and empirical knowledge. Nevertheless, the research shows that the novice nurses also use intuition to some extent, unlike in Benner's theory which states that intuition based practice can be seen only in expert nurses. Thus, the research presents a contrary idea to Benner's theory regarding novice nurses. Furthermore, intuition develops while practicing over years, which means that novice nurses will gain it gradually. Therefore, they do not need to worry about their skills or compare them with expert nurses. The nurses who have been in the field a long time, or in other words expert nurses, are commonly using intuition during the decision making process every day. As the intuition is based on high level of knowledge, skills, and experience, the decisions made using intuition are reliable. Therefore, the outcome of those decisions is good and positive.

A good clinical decision cannot be made using only intuition but also it needs knowing and identifying the clinical situation as whole. For instance, knowing the nurses themselves, and knowing the patient and background information related to empirical, ethical, social, and personal aspects are also important. These types of skills cannot be gained in the early stages of nursing profession, but only at the final stages of nursing profession. In other words, the expert nurse has the ability to identify the clinical situation best. Therefore, the expert nurse's clinical practice is highly recognised compared to that of novice nurses. Overall, the main reason behind the success of expert nurses practice is experience based intuition. In other words, the higher the level of intuition, the higher the knowledge and experience gained, so the better the decisions made and the outcome achieved. Therefore, the intuition in nursing practice should be one of the most important aspects.

Based on this study, it can be recommended that intuition should be recognised as part of nursing practice and clinical decision making. It should be placed on an equal position with evidence-based practice. As the intuition in nursing has not been researched enough, and taught enough in academic level, these two measures should be taken into consideration. As well, health care authorities should invest more to develop a system to evaluate the intuition based nursing practice. Then the nurses will be encouraged to use intuition openly and share it with others. Furthermore, nurses should focus on gaining new knowledge and updating old knowledge by using material and peer support. The schools should offer more courses to the student about intuition in nursing practice, and invest more on practice based studies such as simulations and workshops. Novice nurses should actively involve in decision making processes with expert nurses, and the nursing leaders should allocate novice nurses with expert nurses in pair work.

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