

On the application of novice to expert theory in nursing; a systematic review

Khodayar Oshvandi¹, Ali Sadeghi Moghadam², Mahnaz Khatiban¹, Fatemeh Cheraghi¹, Reza Borzu¹, Yaser Moradi^{1*}

¹Department of Nursing, Nursing and Midwifery School, Hamadan University of Medical Sciences. IRAN

²MS in nursing, School of Nursing and Midwifery, Dezful University of Medical Sciences, Dezful, Iran

*Corresponding author: E-mail: Yasermoradi1045@yahoo.com

ABSTRACT

Background and aim: Experience and proficiency is necessary for nursing practices. Experience would result in intuition, moral reasoning, and personal knowledge. Benner, as a nursing theorist, emphasizes on experience and the knowledge gained through experience. The aim of the present study was to address the application of Benner's novice to expert theory in nursing career.

Material and methods: SID, Iranmedex, Magiran, Irandoc, Scopuse, and PubMed were the databases used by the study for finding relevant studies. The keywords were "from novice to expert" and "Benner's theory". Several steps were carried out and finally eleven articles were included in the study. The quality of the paper were assessed using the STROPE Statement.

Findings: Out of 988 of initial articles, 31 ones were relevant to the subject of the study. The abstracts of these articles were carefully investigated and 11 ones which were totally relevant to the study were selected for further analyses. The results were presented in four main categories of nursing education, nursing management, nursing practice, and nursing researches.

Conclusion: The novice to expert theory can be used as a predetermined clinical guideline for conducting all practices associated with nursing career.

Keywords: Theory, Benner's theory, nursing

1. INTRODUCTION

As a scientific profession, nursing needs a scientific basis of theories. Theories provide a framework as well as goals for recognition and assessment of nursing practices (Mohammadi, 2015). The importance of nursing models and theories can be explained from different point of views. Such models provide a framework for nursing doctrine which make the practitioners enable to analyze various conditions in a more effective way and based on which organize their behaviors (Meleis, 2011). Regarding patient surveillance, nursing theories can be of high effectiveness in improving surveillance standards, reducing healthcare costs, and enhancing patients' lives quality (Roy and Jones, 2006, Rafat, 2015). In the same vein, the use of nursing theories in both research and clinical issues would expand the body of nursing science (Meleis, 2011). Patricia Benner's from novice to expert is known as one the most important theories in the field of nursing (Cash, 1995). Benner carried out extensive researches on methods of achieving, consensus, assessment, and intra professional evaluation during 1999 and explained that as well as practical applications, knowledge needs to be expanded constantly. Furthermore, he concluded that validation and interpretation of "Dreyfus model of skill acquisition" models are two important characteristics using which the scope of competency of nursing career can be defined (Benner, 2009). Benner had an especial emphasis on the perceptual acuity, clinical judgment, skilled know-how, and ongoing experiential learning (Alligood, 2013). The Benner model in its present form constructs a philosophical basis for nursing (Cash, 1995). This philosophy begins with nursing practice and understanding its practical terms (Meleis, 2011). Benner used Heidegger's phenomenological approach in his researches to describe what he understood from interviews, experiences, and observations (Hargreaves and Lane, 2001). Experience and proficiency are necessary for nursing practice. Intuitive experience would lead to moral reasoning and personal knowledge (Benner, 1996). Benner explained expertise as a road with five sections which should be passed through by a practitioner to become clinically skilled. These sections are as follows; (1) novice, (2) advanced beginner, (3) competent, (4) proficient, (5) expert. Parallel to the progressive movement of the practitioner from the novice level to the expert one, his/her performance and mind would be changed in four main areas; (1) practitioners will tend to use empirical experiences in their practices instead of relying on abstract principles, (2) they will appeal to intuitions rather than analytical or rule-based thinking, (3) they will be able to obtain a comprehensive understanding of various situations, and (4) their position will be changed from an outside observer to an individual which is fully involved in the situation (Alligood, 2013). In the present study, we aimed at examining the applicability of the novice to expert theory in explaining four scopes of nursing (education, practice, research, management).

2. MATERIAL AND METHODS

In the first step of the study, we reviewed the journal papers indexed by various databases, including SID, Iranmedex, Magiran, Irandoc, Scopus, and PubMed. Next, the criteria required for selecting the desired papers were specified. Accordingly, open access or free papers associated with the novice to expert theory and nursing scopes

which had been published from January 21, 2006, to January 21, 2016. "benners' theory" and "from novice to expert" were the only two phrases which were used for finding desired articles in the aforementioned databases. In the present study, the article searching process was carried out in three steps; in the first step, we conducted the process by searching the two mentioned phrases which resulted in 988 articles, then the title of these articles were assessed qualitatively and from them 31 ones which were relevant to the study were selected for further analyses. In the second step, the content of the remaining 31 articles were carefully studied and 11 ones which their subjects were totally relevant to the subject of the present study were included for further investigations. A summary of the final 11 articles is presented in Table 1. In the third step, we conducted a manual search process to find articles published in hard copy form and were not available online. In this regard, all journals and books presented in the libraries of various universities, such as Urmia University of Medical Sciences, Hamadan University of Medical Sciences, Tabriz University of Medical Sciences, and Tehran University of Medical Sciences were investigated. These investigations were not resulted in finding any further article. Therefore, the 11 articles selected in the previous steps were the foundation based on which the study was constructed. The quality of the articles were assessed using STROBE Statement. To assess the representational quality of results in an observational study, ten outstanding researches from various countries such as Netherlands, Switzerland, Germany, England, Denmark, and United States of America (USA) developed a checklist composed of 22 main issues which should be taken into account by a person who would like to assess the quality of a journal article. This check is known as STROBE Statement. Three main categories of observational studies have been considered by STROBE Statement; cohort studies, case-control studies, and cross-sectional studies (Poorolajal, 2009). The first item in this checklist is associated with the clarity and accuracy of the title and detectability of the study design. Moreover, the second and the third items on the checklist are associated with the aims of a study and literature review, respectively. Items are associated with the material and methods section, five ones aim to assess the results section, four ones are developed for assessing the discussion and conclusion sections, and the last item is related to acknowledging and the way by which the authors thank organizations supporting their study. In the present study, we used all the 22 items of the checklist to assess the quality of the articles.

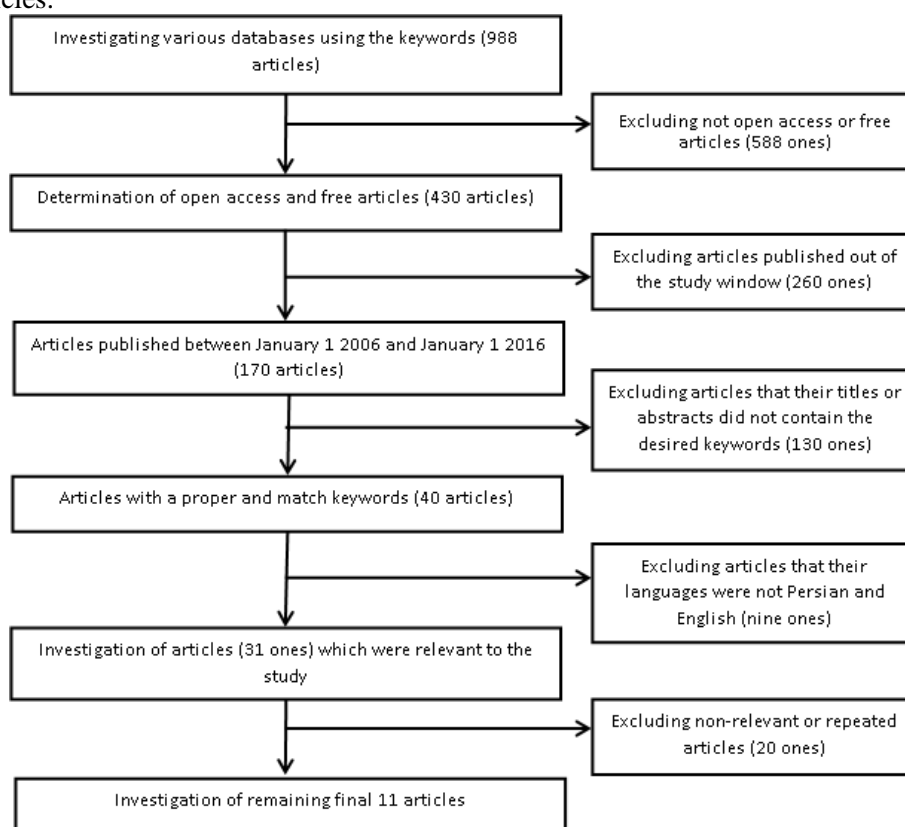


Figure.1. The steps of the study

3. RESULTS

The results of the present systematic review were categorized into four subsections and in each subsection the authors tried to address the application of the novice to expert theory in one scope of the nursing field (education, practice, research, management). Moreover, a summary of each article investigated by the present study is shown in Table 1.

Table.1.Summary of articles reviewed for the present study

Title	Type of study	Tool	Conclusion	Year	Authors
Explaining the concept of practice to master the banner: intuition in emergency nursing	Hermeneutic phenomenology	Interview	The application of intuitive decision making as a structure in describing "skilled clinical decision making practices" is validated and explained.	2008	Lyneham J & Parkinson C &Denholm C(Lyneham et al., 2008)
Delegation of knowledge and practice in rehabilitation nursing	Cross-sectional	A self-made tools	Knowledge of delegation is not necessary interpretable in nursing career, particularly when we would like to compare special tasks performed by nurses who have a recorded license with those performed by nurses who do not have a recorded one. The results of the study supported the idea that most responders (93.7 percent) need more discussion about delegation in various levels of practice.	2011	White MJ&Gutierrez A& Davis K& Olson R& McLaughlin C(White et al., 2011)
The use of novice to expert theory in infusion nursing	Review	Literature searching	Novice to expert theory is a basis for most development models. The level of student skill is a determinant factor of training methods and strategies which should be adopted by an instructor for training these students.	2012	Gentile DL(Gentile, 2012)
From novice to expert, the use of intuitive knowledge as a basis for nursing education	Review	Literature searching	The integration of Benner's model and nursing education programs can improve the intuitive knowledge as well as knowledge gained from practice of nursing practitioners.	1992	Ellen P Gatley(Gatley, 1992)
Using active training and simulated training methods, the movement of students from novice to expert level can be facilitated.	Review	Literature searching	Examining patients in classroom; use of theoretical frameworks in simulation of nursing education	2007	Magda H Waldner / Joanne K Olson(Waldner and Olson, 2007)
Innovative application of Benner's theory in an interactive patient care simulation	Intervention	Questionnaire and observation	Education of students by integrating Benner's model and simulated training techniques would provide students with a positive experience which make them enable to manage patients in a more	2006	Charles Larew, Sherrie Lessans, Debra Spunt, Dawn Foster, and Barbara G. Covington(Larew et al., 2006)

			proper manner and to cooperate with his/her colleagues in a more effective manner for solving issues related to patients.		
Competencies and tips for effective leadership: from novice to expert	Review	Literature searching	It is possible to use the novice to expert theory, developed by Benner, to assess the competency of people in performing special tasks and finding strategies for improving their performances	2007	Shirey, Maria R(Shirey, 2007)
Aesthetic leadership and its relation with the clinical nursing.	Review	Literature searching	Aesthetic leadership is a leadership style which is not in contrast with any of other leadership styles and is indicative of recognition of nursing from an aesthetic point of view. Aesthetic leadership theory can be used as a tool for differentiation of an experienced and expert leader from a novice one. The basis of Aesthetic leadership style is comparable with Benner's novice to expert theory.	2015	Mannix J, Wilkes L, Daly J(Mannix et al., 2015)
The first level clinical management is identifying direct reports from the first level of practice.	Descriptive		Using the Benner's model and familiarity of employees with the model, employees would be able to evaluate their performance and skill level and compare them with those of others. The novice to expert theory equips employees and managers with a metric to evaluate the performance of themselves and their subordinates	2013	M. Anne Longo Linda & Roussel Sandra L & Pennington C & heryl Hoying (Longo et al., 2013)
A scale of nursing competency; development and psychometric	Interview and literature review	Tooling	Benner's novice to expert theory is very effective in assessing the competency of nursing career in practice	2004	Riitta Meretoja & Hannu Isoaho & Helena Leino-Kilpi(Meretoja et al., 2004)
Self-reported competency is a strong tool for improving skills of expert employees	Cross-sectional	Questionnaire and checklist	The analyses of self-reported nursing expertise suggest that both groups of nurses have an acceptable level of competency and	1996	Garland GA(Garland, 1996)

			effectiveness. It is possible for nurses to do not cope all transition aspects from novice to expert at the same level		
--	--	--	--	--	--

The application of novice to expert theory in nursing practice and related clinical issues: In nursing practice, most studies have aimed at explaining the way through which practitioners acquire skill based on the five steps of the novice to expert theory and finding ways by which these steps can be passed in a faster and more efficient way. The important role played by intuition and intuition-based decision making in nursing practice are other subjects which have been discussed by these studies (Benner et al., 2009, Roy and Jones, 2006, White et al., 2011). Novice to expert theory can be employed as a strong basis for developing and improving nursing career in practice and clinical issues (Cash, 1995). Considering aims, scopes and practical characteristics of the theory, a bedrock can be constructed for thinking-based actions. Furthermore, the purpose of this model is to promote reflective thinking, determination of nursing expertise, and creating a system using which the performance of nurses can be evaluated and incentives can be applied based on the expertise and experience of them (Gentile, 2012).

The application of novice to expert theory in nursing education: According to Benner's theory, nursing practitioners would be able to expand their practical knowledge and skills through actual experiences. Moreover, according to this model, the movement from the novice step to the upper ones would occur over time and by gaining more experiences (by gaining more experiences). However, it should be noted that simulators are very useful training tools which can be employed in the novice and advanced novice steps for providing nurses with required skills. According to the theory, gaining experience through such tools is known as purified knowledge (Larew et al., 2006). Benner explained that moving up from the advanced novice to the component step is mainly a result of increasing self-confidence in practitioners, which is because of meeting various clinical conditions and the emergence of the feeling that they can rely on their skills (Benner, 1996). So, according to Benner's theory nursing instructors can use simulators to facilitate the progress of nursing students in gaining clinical competencies (Neil, 2009). In clinical educations, simulators can be of various forms, including written form, simulated patients, role playing, maquettes (Zaghari tafreshi et al., 2013). Lastly, it should be emphasized that simulators are strong, efficient tools with can be used for facilitating the educational process in complex situations (Weaver, 2011).

The application of novice to expert theory in nursing research: There have been a huge body of literature on the main concepts of Benner's theory, such as competency, proficiency, intuition and so on, in researches conducted in nursing domain. Moreover, there have also been studies which have tried to design and develop new tools based on Benner's theory (Garland, 1996, Meretoja et al., 2004). One of these tools is self-reporting competency tool for nurses which was developed by Garland et al in 1995 (Garland, 1996). The nurse competence scale also was developed and psychometric test by Riitta and et al based on novice to expert theory which is applicable to determine the competency level of nurses (Meretoja et al., 2004).

The application of novice to expert theory in nursing management: In this area there are articles which employed Benner's theory as a foundation for explaining and assessing how managers and practitioners can gain competencies in performing their tasks. The focus of these studies is mainly the concept of competency provided by the Benner's theory (Longo et al., 2013, Shirey, 2007). A study, moreover, has tried to develop an aesthetics management style for clinical environments. Aesthetics management is a management style that is not in contradiction with other styles of management and is indicative of how a nurse perceive art and aesthetics in general nursing. This style of management has an approach similar to that of Benner's theory (1984) with five steps from novice to expert and can be used for distinguishing novice managers from those with a higher level of competency (Mannix et al., 2015).

DISCUSSION

Novice to expert theory is a simple and concise model which explains five steps through which a person gains required competency for performing special tasks and, based on what was said by Brudzinski, the theory can be utilized as a guideline for determining various levels of nursing competency based on descriptive information provided by nurses themselves and observation of actual performance of them (Hargreaves and Lane, 2001). Although the theory is regarded as an easy to understand model, there still are some complexity when it is used for distinguishing various levels of competency and finding strategies using which the performance can be promoted (Cash, 1995).

By reviewing relevant literatures, it would become apparent that the theory has been well accepted by many researchers all around the world. Benner's theory has been proven to be a useful, effective tool by various related bodies, including nursing faculties, hospitals, community organizations, and Nursing Continuing Education Programs (Altmann, 2007). Benner's theory is a guideline using which instructors would be able to design their curriculum in a more effective manner for both students and graduated practitioners. Chiti (2005) in the book of professional nursing introduced the Benner's theory as a philosophy. Marriner-Tomey (1994) and Marriner-Tomey and Alligod (2005) in their books about nursing theorists introduced the Benner's theory as a "philosophy" or "philosophical theory" (Cash, 1995). On the other hand, we know that philosophy has been defined as exploring the effects in hidden reality through questioning the nature of things using a logic / reasoning rather than empirical methods (Meleis, 2011). Accordingly, it can be concluded that the aim of developing a nursing philosophy is to provide a guideline for nursing practice. Benner's theory does not have enough conformation with nursing process

in the care plan. Moreover, the role of education is not considered as important as it should be in this theory. The reason behind this deficiency is because the main focus of the theory is on gaining knowledge through experience rather than education (Altmann, 2007, Cash, 1995). Faculties are merely able to recognize and provide the situations which are necessary for practical and clinical development of students during an education course. Applying the Benner's theory principles in clinical scope and hospitals requires financial resource allocation for holding training courses and detection of situations through which knowledge of personells can be promoted. The integration of knowledge obtained from training courses and knowledge obtained from intuitive experience will improve the competency of practitioners in performing their tasks. It should be noted that there is no quantitative metric for measuring the levels in Benner's model and Benner himself used personal accounts of individuals without any empirical testing for developing her model, which can make it difficult to use the model for practical purposes (Cash, 1995).

Furthermore, there are also studies so far on the use of Benner's theory in research nursing domain. Benner's theory has been criticized for its non-empirical nature and researches associated with this theory have a qualitative or review nature as well (Alligood, 2013, Cash, 1995). Moreover, in nursing management domain, the theory is used for developing the career ladder, staff development plans, and reward programs (Cash, 1995).

4. CONCLUSION

Considering the facts that this theory is not in breach with regulations, values, and beliefs of Iran and Iranian people, it can be used as a guideline for conducting all fields related to nursing specially nursing education and practice.

ACKNOWLEDGEMENT

The authors would like to thank all professors who helped us in collecting and organizing the required data of the present study.

REFERENCES

- Alligood MR, Nursing theory: utilization & application, Elsevier Health Sciences, 2013.
- Altmann, TK, An evaluation of the seminal work of Patricia benner: theory or philosophy? Contemporary nurse, 25, 2007, 114-123.
- Benner P, A Response by P Benner to K. Cash, Benner and expertise in nursing: a critique". International journal of nursing studies, 33, 1996, 669-674.
- Benner PE, Tanner CA & Chesla CA, Expertise in nursing practice: caring, clinical judgment, and ethics, springer publishing company, 2009.
- Cash K, Benner and expertise in nursing: a critique. International journal of nursing studies, 32, 1995, 527-534.
- Garland GA, Self report of competence a tool for the staff development specialist. Journal for nurses in professional development, 12, 1996, 191-197.
- Gatley E P, From novice to expert: the use of intuitive knowledge as a basis for district nurse education. Nurse education today, 12, 1992, 81-87.
- Gentile DL, Applying the novice-to-expert model to infusion nursing .Journal of infusion nursing, 35, 2012, 101-107.
- Hargreaves J & Lane D, Delya's story: from expert to novice, a critique of benner's concept of context in the development of expert nursing practice. International journal of nursing studies, 38, 2001, 389-394.
- Larew C, Lessans S, Spunt D, Foster D & Covington BG, Innovations in clinical simulation application of benner's theory in an interactive patient care simulation. Nursing education perspectives, 27, 2006, 16-21.
- Longo MA, Roussel L, Pennington SL & Hoying C, The frontline clinical manager identifying direct reports' level of practice. Journal of pediatric oncology nursing, 2013, 1043454213493506.
- Lyneham J, Parkinson C & Denholm C, Explicating benner's concept of expert practice: intuition in emergency nursing. Journal of advanced nursing, 64, 2008, 380-387.
- Mannix J, Wilkes L & Daly J, Aesthetic leadership: its place in the clinical nursing world. Issues in mental health nursing, 36, 2015, 357-361.
- Meleis AI, Theoretical nursing: development and progress, Lippincott Williams & Wilkins, 2001.
- Meretoja R, Isoaho H & Leino-Kilpi H, Nurse competence scale: development and psychometric testing. Journal of advanced nursing, 47, 2004, 124-133.

Mohammadi E, Abbasi K, Saadati M, Barriers to implementation of nursing theories in clinical practice from the perspective of nurses. *Iranian journal of nursing research*, 10, 2015, 13-24.

Neil JA, Simulation I, nursing education. *Perioperative nursing clinics*, 4, 2009, 97-112.

Poorolajal J, Tajik P, Yazdizadeh B, Sehat M, Salehi A, Rezaei M & Holakouie Naieni K, Quality assessment of the reporting of cohort studies before strobe statement. *Iranian journal of epidemiology*, 5, 2009, 17-26.

Rafat S, Gharib A, Rafat S & Rahimi F, Related factors in medication error based on nurses' self-report in sanandaj, iran. *Der pharmacia lettre*, 7, 2015, 198-201.

Roy SC & Jones DA, *Nursing knowledge development and clinical practice: opportunities and directions*, springer publishing company, 2006.

Shirey MR, Competencies and tips for effective leadership: from novice to expert. *Journal of nursing administration*, 37, 2007, 167-170-

Waldner MH & Olson JK, Taking the patient to the classroom: applying theoretical frameworks to simulation in nursing education. *International journal of nursing education scholarship*, 4, 2007.

Weaver A, High-fidelity patient simulation in nursing education: an integrative review. *Nursing education perspectives*, 32, 2011, 37-40.

White MJ, Gutierrez A, Davis K, Olson R & McLaughlin C, Delegation knowledge and practice among rehabilitation nurses. *Rehabilitation nursing*, 36, 2001, 16-24-

Zaghari Tafreshi M, Rasouli M & Sajadi M, Simulation in nursing education: a review article. *Iranian journal of medical education*, 12, 2013, 888-894.