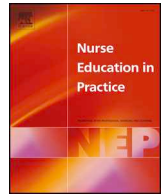




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Doctorate Studies

Essential clinical skill components of new graduate nurses: A qualitative study

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ABSTRACT

Today it is a growing challenge for nursing schools to prepare students with quality education to provide them with essential clinical skills to practice as graduates. A number of studies report that graduate nurses feel under-prepared with adequate skill levels to perform in the real world of clinical practice. In Thailand, these matters are of great concern, hence this first-time study on the topic. We report on the qualitative phase of a larger mixed methods study. A qualitative descriptive approach was used with the sample, 12 nursing educators, 24 registered nurses, 24 new graduate nurses, and four members of the Thailand Nursing and Midwifery Council committee. The participants were purposely selected for 12 semi-structured focus group discussions, and 12 were later invited for in-depth interviews. Using content analysis, four skills themes were extracted: fundamental, health promotion and disease prevention, rehabilitation, and skills in specialty areas. These skill components can be used to inform the development of a framework of essential clinical skills of graduate nurses for generating nursing practice to ensure patient safety and quality of care. Furthermore, these components can inform training guidelines for nursing student practice activities in subjects and policies to support nursing students in practice.

1. Background

Nurses make up the largest segment of the healthcare workforce, and their clinical skills directly affect the quality, safety, and efficiency of their nursing practice for all clients (Ingwell-Spolan, 2018). Clinical skills refer to any specific nursing care that has a measurable impact on clinical outcomes, and this includes technical, non-technical and cognitive skills, for example clinical assessments, coordination and communication or decision-making skill respectively (National Health Service Education for Scotland, 2008). Possessing essential clinical skills enables new graduate nurses with less than one year of clinical practice experience to perform frequent patient care activities using technical, non-technical, and cognitive skills.

It is of great concern that studies and reports from around the world reveal that nursing programs, especially those of clinical education, do not always sufficiently prepare students for the demands of working as a professional registered nurse. A systematic review found that newly graduated nurses felt unprepared for work and lose their ability to trust (Monaghan, 2015) and believed there was not enough time in their practice to develop clinical skills. This view is echoed by Hussein et al.

(2017), who described new graduate nurses as being thrown into the deep end of their first job. In addition, such nurses believed their nursing education was not able to provide them with sufficient clinical preparation to prioritize or organize their direct patient care, or to be able to synthesize data from many sources for decision-making (Huston-Shaikh, 2015). Such feelings ultimately manifest themselves in a high attrition rate of newly graduated nurses, at a time when healthcare systems have critical nursing shortages.

In Thailand, a study on the clinical skill deficiencies of new nurses (Gaesawahong, 2014) found that their work problems could be categorized into four areas of difficulties: firstly, clinical knowledge was one of the top three most frequently reported difficult areas. New graduate nurses are often unable to write nurse notes; have insufficient competence in nursing assessments and are unable to predict patient symptoms and to change assessments in line with current patient symptoms. Secondly, they have deficient interventions for intravenous administration, the discharge process, basic life support and cardiopulmonary resuscitation. Next, there are problems with anxiety. The work performance of new graduate nurses was found to be negatively affected by temperamental colleagues and feelings of failure caused by working

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inefficiently and experiencing difficulty in adjusting themselves to the work environment. Lastly, they have leadership and communication difficulties, including lack of confidence to work as a nurse who needs to provide information to work colleagues, and do not respond well to unexpected problems. Nursing education faces a significant challenge in designing and implementing learning activities that provide students with opportunities to successfully develop their clinical skills (Eslamian et al., 2015) while also incorporating principles of patient safety (Lee et al., 2019). However these issues need to be balanced against the desire of health systems and the profession for new nurses to unfairly be able to “hit the ground running” on graduation.

Whilst the [Thailand Nursing and Midwifery Council TNMC, 2012](#)) stipulates and regulates registered nurses competencies, there is no agreement across the country from the profession about what clinical skills that students have to acquire during their training, nor from the health industry about what skills they should possess on their graduation. Therefore, this study is important for Thailand to try to bridge the gap between reality and practice. Essential clinical skills components are critical to guide nursing practice and nursing education in order to achieve patient safety and the quality of nursing care. Moreover, the identification of components of essential clinical skills for Thai nurses can provide a way to recruit graduate nurses with sufficient clinical skills and help administrators to better manage the nursing workforce for complicated client populations. Evidence related to the significance of graduate nurses' essential clinical skills for clients, healthcare organizations, and healthcare systems could then be further identified and used to guide future professional development initiatives for the nursing profession. Additionally, clarifying components of essential clinical skills of Thai graduate nurses would inform the development of a framework to guide educational nursing interventions and curriculum design, as well as to develop the clinical skills of graduated nurses, as well as contribute to the global area of clinical practice. Thus we embarked on a mixed method study of two phases: firstly we embarked on a qualitative phase of the study aiming to explore the essential components of clinical skills among Thai new graduate nurses. This used interviews and focus group discussions with open-ended questions and the findings are presented here. The second phase was quantitative consisting of a survey with the aim of developing the essential clinical skill statements of a graduate nurse. Our intention is to write a second paper on the quantitative phase that draws connections with this phase, and provides over-arching study findings. The clinical nursing skills frameworks used by the [TNMC \(2012\)](#), The Requisite Skills and Abilities Becoming a Registered Nurse in British Columbia ([College of Registered Nurses of British Columbia, 2018](#)), The General Skills of Registered Nurse ([Singapore Nursing Board, 2018](#)), and 4) The Apprentice Nurse Skills List (The [Nevada State Board of Nursing, 2016](#)) were used to inform a theoretical framework for this study.

2. Method

2.1. Design

This phase of our mixed method study adopted a qualitative descriptive approach to provide robust descriptions of participants' perceptions and experiences regarding the essential components of clinical skills of Thai new graduate nurses. This was considered the best method to get an overview picture of the phenomena, to identify what the participants think and behave in the way that they do ([Treharne and Riggs, 2015](#)). This approach gives a straight-forward, qualitative description of the phenomena without the researcher delving deeply into the meaning of that phenomena in the way that some other qualitative approaches do ([Sandelowski, 2016](#)), such as phenomenology.

2.2. Participants and setting

We used purposive sampling to recruit: 1) 12 nursing educators with

at least five years of clinical supervising in surgical, medical, pediatric, obstetrics and gynecology, psychiatric, or community departments in northern and southern Thailand, 2) 24 registered nurses (RNs) who had at least five years of working in the same departments as the nursing educators, and 3) 24 new graduate nurses who working less than one year, also in the same departments, and 4) four members of the Thailand Nursing and Midwifery Council (TNMC) committee responsible for the country's nursing licensing examination.

2.3. Data collection

Both focus group discussions and in-depth interviews with individuals were used to triangulate the data. Using both types of data collection enhances the validity and trustworthiness of findings in mixed method studies ([Lambert and Loiselle, 2008](#)), helping to identify group and individual contexts of the phenomenon. Focus group discussions and in-depth interviews were undertaken using a same semi-structured guideline including the following: “What is your perception of what should be the essential components of clinical skills of new graduate nurses?” and “What are some examples of required essential clinical skills among new graduate nurses?”. Probing questions were also used. There were 12 focus groups held, with six groups each from northern and southern Thailand. Each group included 5 participants ([Krueger, 2002](#)) comprising two new graduate nurses, two RNs, and one nursing educator in the same working department. Discussions ranged from 90 to 150 min. Eight participants were selected from eight focus groups and four members of the TNMC committee for the 12 in-depth interviews, held for 60–90 min.

2.4. Ethical considerations

The Research Ethics Committee, of the Faculty of Nursing, Chiang Mai University in Thailand gave approval for the study, as well as the participating institutions. Written consent was obtained from all participants prior to the start of interviews and we protected their rights throughout the study. This included their being able to withdraw from the study at any time, as well as confidentiality and anonymity. All participants gave permission for their interviews to be audio-recorded.

2.5. Data analysis

The focus group discussion and in-depth interview data was analyzed using conventional content analysis ([Graneheim and Lundman, 2004](#)). This process consists of six steps: (1) familiarization with the data: listening to and transcribing audio files, reading and re-reading the stories of the participants, interpretation of the initial ideas, (2) generation of the initial codes, word-by-word and line-by-line coding, (3) thematic search: condensing the codes into possible themes, (4) reviewing themes: similar themes, extracted codes and a collection of data, (5) defining and naming themes: ongoing research, refining themes, creating clear definitions and names for each theme, and (6) producing a report: providing a final analysis, switching between transcripts and themes, and selecting vivid stories for each theme. The themes were summarized and interpreted for meaning based on the conceptual framework of the essential clinical skills of new graduate nurses. High-frequency items were selected to include each component of the essential clinical skills of new graduate nurses.

2.6. Rigor and trustworthiness

Trustworthiness of the findings was assured by following the principles of [Lincoln and Guba \(2000\)](#). Credibility was obtained by peer debriefing and member checking. Peer debriefing was accomplished from checking of the content of transcript by experts and confirmation by participants to ensure the accuracy of the recorded data. Furthermore, data triangulation was performed by collecting data using the

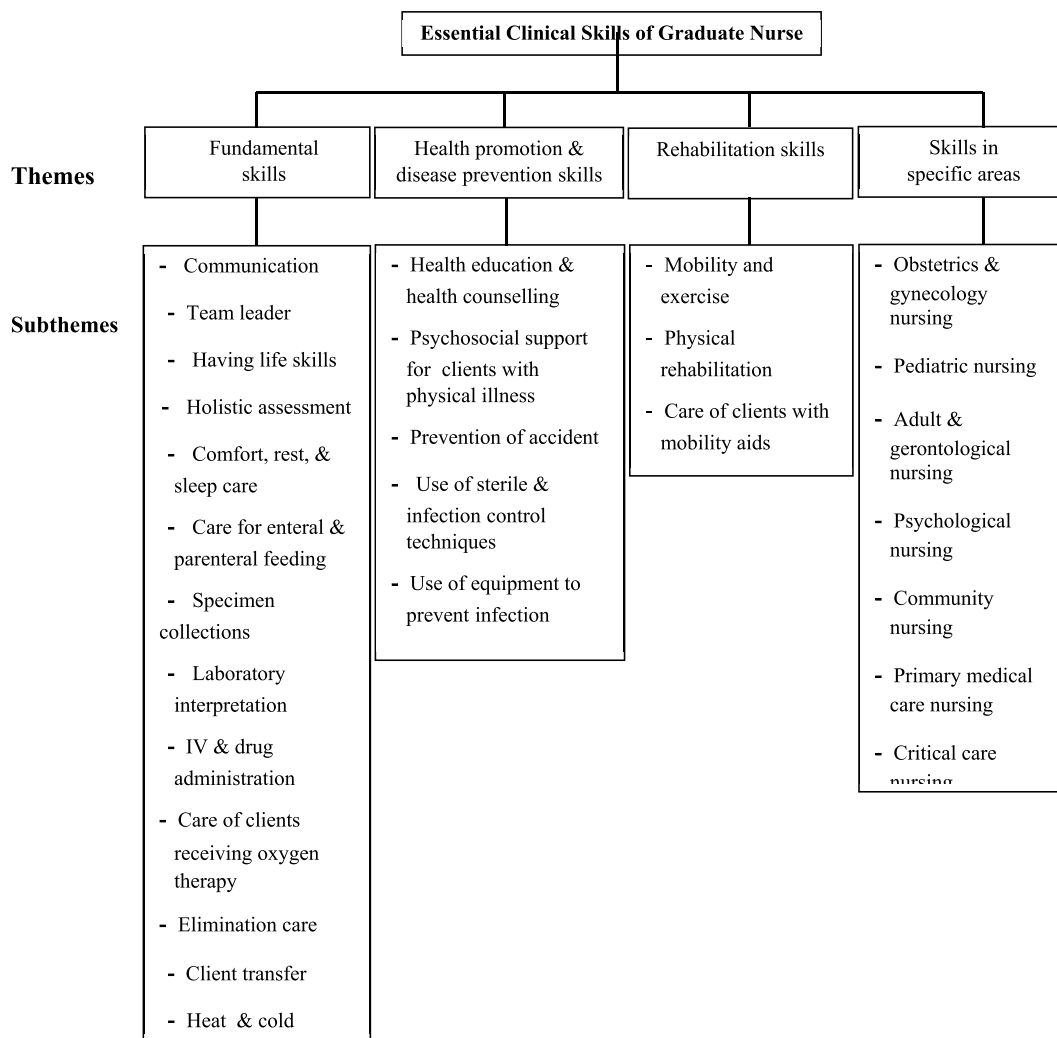


Fig. 1. The Essential Clinical Skill Components of a Graduate Nurse.

same guide for focus group discussion and in-depth interviews, and from participants in both northern and southern Thailand; and using the different methods to ask the same questions, and improve the credibility and validity of findings. To ensure the accuracy of the recorded data, four members checked the data following each focus group discussion and interview and their thoughts were taken into consideration in the final analysis.

3. Findings

The 64 participants in this study were 60 females and four males, whose ages ranged 22–56 years and clinical experience ranged 1–34 years. Analysis of data highlighted the essential components of clinical skills among Thai new graduate nurses and generated four themes as outlined in Fig. 1 below.

3.1. Theme 1: Fundamental skills

Twelve sets of fundamental skills were identified by participants (Fig. 1). Seven of these are briefly described below, and examples of participant quotes given.

Firstly, *communication skills* are vital for new graduate nurses to understand patients and their experiences, and what concerns the patient. A nurse must convey to the patient that they understand and accept them; in some ways this is a reflection of nurses' knowledge about themselves and what they think and feel about their capabilities.

Additionally, new nurses should have skills in presenting information and patient reports to the health care team.

“If the new nurses are unable to understand and communicate with patients, they are unable to implement any care and any response from this. So newly graduated nurses should have communication skills in an effective way.” (IDI-RN3)

Having *life skills* is also vital for new nurses, and are revealed in graduates' ability to help individuals manage conflicts, stressful life situations and health problems, such as depression, alcoholism, interpersonal problems, and loneliness.

“In a hospital, I would like a new nurse to have anger/stress/anxiety management skills, and have the problem-solving capability to face difficult situations and to solve the problems appropriately.” (IDI-NE2)

“New nurses should have counselling techniques, assertiveness behavior, and positive thinking to cope with such difficult situations.” (FGD-4)

Holistic patient assessment skills are required to inform the nursing process, and to underpin care of patients. If nurses use an holistic approach then the physical, social, psychological, spiritual, cultural and psychological needs of the patient are addressed. Having a holistic view of patients underpins the development of an holistic assessment and what important factors should be incorporated into the nursing process.

“New nurses should have psychosocial assessment skills for evaluation of

the family relationships and of social and economic status, evaluating culture/customs/traditions/ values affecting physical health, assessment of body growth and development, assessment of thinking process, and also an assessment of stress/coping/emotional expression.” (FGD-2)

Providing comfort, rest, and sleep care to patients is vital. Patient cleanliness and comfort, and the quality of rest and sleep have a significant impact on a client's health, including physical well-being, mental status, and effectiveness of coping mechanisms.

“The basic but very important clinical skills that a new nurse should do is personal hygiene caring such as complete/partial bed bath, shampooing, perineal care, and linen change.” (IDI-RN1)

Enteral and parenteral feeding skills were considered vital for a new nurse. Providing proper nutrition to patients has become a primary focus in hospitals. Whether it is provided by hospital food or nutritional support, the impact of adequate food on patient outcome now needs to be well documented.

“The routine clinical skills of new nurses are oral feeding, such as NG/gastrostomy/jejunostomy tube feeding, parenteral feeding, venipuncture/discontinuing IV therapy, and adding a drug to IV fluid.” (IDI- RN2)

Correct intravenous and drug administration is an essential skill for new nurses: it is vital they correctly administer drugs. This requires knowledge of pharmacology, anatomy and physiology, and legal issues.

“A new nurse should have skills for oral medicine administrations, both pills and liquid form, intradermal/subcutaneous /intramuscular/intravenous injections and applying topical drugs to the skin too.” (IDI-NGN4)

New graduates need skills in the care of clients obtaining oxygen, which is widely used in clinical settings and is certainly life-saving. Its use needs to be carefully considered. Like any drug, it may cause harm if it is misused:

“Today, we found out that a new nurse has insufficient training for care of clients receiving oxygen, a lack of familiarity with oxygen delivery devices, a lack of understanding of the effects, role and dangers of oxygen therapy that may be the cause of problems and dangers to the patients.” (IDI-RN1)

3.2. Theme 2: Health promotion and disease prevention

This theme is comprised of health education/health counselling skills, psychosocial support for clients with physical illness, prevention of accident, use of sterile and infection control techniques and equipment to prevent infection. A new nurse plays a vital role in *health education and health counselling* and promoting public health. This is focused on disease prevention and changing the behaviors of individuals that impact on health. However, new graduates' roles in health are complicated, and take time to develop, but they need to have multi-disciplinary knowledge and experience of health education, and health counselling in their repertoire of nursing skills.

“New nurse should have health promotion activities exhibit a holistic approach in their health promotion practice ... concentrate on activities such as helping individuals or families to make health decisions or supporting people in their engagement with health promotion activities.” (FGD-3)

New nurses also need to provide *psychosocial support for clients with physical illness* and know how important it is to have a strong social support network of relationships, that connects various facets of health and wellness. If a person has poor social support they are more likely to be isolated and depressed, which can in turn lead to higher risks associated with suicide, cardiovascular diseases, using drugs and impaired brain function.

“In my view, a graduate nurse should have skills for psychosocial care that consists of providing holistic care, spiritual care to support the patient and family members”. (IDI-RN3)

Use of sterile and infection control techniques are essential facets of health promotion and disease prevention, reducing effects of chronic diseases, through cost-effectiveness and helping to improve clients' interest in health care services. Nurses using proper sterile infection control techniques can help clients' knowledge about self-management of their illness.

“People employed by the primary health care service, especially a new nurse ... should be educated about the standard principles of infection prevention and control, and be trained in hand decontamination, the use of personal protective equipment, and the safe use and disposal of sharps in their practices.” (IDI-NE3)

3.3. Theme 3: Rehabilitation skills

This theme includes clinical skills regarding *mobility and exercise, physical rehabilitation, and care of clients with mobility aids*. New nurses need to be able to assist clients with a disability or chronic illness to attain and maintain maximum physical functioning, and assist them to adapt to an altered lifestyle if using mobility aids, and to help enhance their therapeutic environment. Participants agreed that new nurses should be able to design and implement clients' self-care and treatment strategies underpinned by holism and scientific theories, including during rehabilitation. The essential clinical skills identified addresses the new nurse's ability to help patients to regain functioning after suffering a health breakdown. It is vital that a new nurse plays a role in measuring the efficacy of different interventions to promote rehabilitation, and provide *physical rehabilitation* for clients in both hospital and the community as this is often a significant part of care provided.

“In the community, I think a new nurse should have skills to lead the exercise programs for clients in both individual and group settings and this may include strength, balance, functional retraining and aerobic exercises. Group exercise also provide an opportunity for social interaction and may help prevent loneliness among older person.” (IDI-RN1)

“In the community, we usually meet the client with many health problems that resulted in disabilities. If a new nurse has the skills to achieve the maximum of the client's function impacted by injury, each of these sites of care will be further described in greater detail regarding the amount and type of rehabilitation services offered in these settings, and associated outcomes based on the complexity of the clients and the appropriateness of services provided to meet the client's needs.” (IDI-RN2)

As the ageing community grows, so too does the number of clients using mobility aids. New nurses need knowledge and skills to adjust these, and check the aids for any damage, which may create a fall hazard. Many mobile walkers have a specific weight capacity, and it is important to ensure clients meet these requirements to help keep them safe.

“From my experience, I think a new nurse should be trained for the care of the client who uses a cane, crutches, or walker because our community has many clients using equipment aids for walking.” (IDI-NGN4)

3.4. Theme 4: Skills in specific areas

Hospitals vary widely in the services they offer and therefore, in the departments they have. Nursing services are considered one of the most critical aspects of providing hospital-based care, and therefore new nurses should have essential clinical skills in specific areas for their working life in various hospital departments. Participants seemed to concentrate on four specific areas of practice where new nurses require

skills.

In *obstetrics and gynecology nursing* new nurses need knowledge and clinical skills to care for clients in preconception counselling, during the pregnancy period, during labor and delivery time, mothers and newborns in the post-partum period, emergency and complication in obstetrics period.

“Nurses work in many different areas of healthcare, and the roles often vary within each area. In obstetrics, new nurses have clinical skills to assist and care for women during all stages of their pregnancies, as well as women already pregnant and those that have given birth. However, the duties and responsibilities of obstetric nurses will typically vary depending on where they work.” (FGD-10)

Participants identified that in *pediatric nursing* new graduates should be able to undertake health and vital signs assessment in infant/pre-school/school age, growth assessment, assessment of child development, body cleaning, infant/young children positioning, feeding children, drug administration, tepid sponging, care of pediatric clients and their families using many techniques too numerous to mention here.

“Nursing of children must take into account changes in size, shape, and complexity in the function of the body that grows with age. Therefore, child nurses must be aware of the differences between children in each age range. The functions of various organs of the body, the level of immunity to the disease responding to the effects of the illness, including the development of children in each age, size of medication used to treat drug tolerance, cognitive ability, and movement.” (IDI-NE2)

Adult and gerontological nursing. Here a new nurse should have clinical skills in the care of clients receiving special investigations, assisting physicians in diagnosis/treatment, client care during many interventions at pre/post-operative stages, including wound dressing, tube drain and stoma care, central line catheters and others, as well as care of clients with health problems in any body system, in critical emergencies, with terminally ill clients, and care of clients after death.

“In my view, all nursing students have to practice in every department of the hospital especially medical and surgical wards that have the largest number of patients in the hospital. They should have skills for caring for the adult through to older people to plan and provide nursing care to those suffering from a wide variety of medical conditions and illnesses, supporting their treatment, recovery and well-being.” (IDI-NE4)

Within the arena of *psychological nursing* the new graduate nurse needs knowledge and skills in the therapeutic use of self, self-awareness, therapeutic communication, therapeutic nurse-client relationships, and care of patients with psychiatric problems, including assessment, intervention and evaluation.

“In my view, the graduate nurses should have skills at the basic level for psychiatric clients. They should assess the mental health needs of individuals, families or groups, and help patients regain coping abilities. They have to use the nursing process to care for patients and develop a plan of care that describes what actions should be taken to help the patient regain their health.” (IDI-RN1)

In *community nursing* new nurses need to provide care for children, healthy adults and elderly clients and collaborate with the community and other networks, school health care, occupational health care, planning and implementation of a health development project in the community, and family care.

“For community nursing jobs being a new nurse can be high pressure because nurses work in environments which change from day to day and lack many of the resources available in a hospital. Community nurses should have excellent communication and listening skills. They should train to perform a variety of nursing procedures which may include: basic care - such as checking temperature, blood pressure and breathing, administering injections, and dressing wounds.” (FGD-8)

4. Discussion

Data analysis resulted in the identification of four themes of clinical skills components that participants from both northern and southern Thailand perceived to be “essential” for new graduates of nursing to have: fundamental skills, health promotion and disease prevention skills, rehabilitation skills, and skills in specific areas of nursing practice. It is possible to group the essential clinical skill components and statements according to their meaning. *First*, technical skills include holistic assessment; care for comfort, rest, and sleep; care for enteral and parenteral feeding; specimen collection; laboratory interpretation; IV and drug administration; care of clients receiving oxygen therapy; elimination care; client transfer; heat and cold therapy; health education and health counselling; psychosocial support for clients with physical illness; prevention of accident; use of sterile and infection control technique, use of equipment to prevent infection; use of precaution technique; mobility and exercise; physical rehabilitation; care of clients with mobility aids; and essential clinical skills in specific areas. *Second*, non-technical skills consist of communication skills. *Third*, cognitive skills cover having life skills and decision-making in all situations of nursing practice. From these findings, the technical skills are very much significant to the graduate nurse as they play a vital role in saving the life of the clients, and play a crucial role for the graduate nurses (Lubbe and Roets, 2014; Brown and Crookes, 2016).

The framework of essential clinical nursing skills was derived from the nurse/professional practice of nursing organizations, as most nursing practice frameworks are defined by various laws and regulations of various boards of nursing. In comparing the components of clinical skills for graduate nurses with those of the Singapore Nursing Board (2018), the Nevada State Board of Nursing for Apprentice Registered Nurses (2016), and the College of Registered Nurses of British Columbia (2018), it was found out that common elements included skills of infection control/universal precaution, care of patient units, admission-transfer-discharge of clients, vital signs, specimen collection, bed-making, personal hygiene and skin care, cold and heat application, body mechanics and mobility, nutrition and metabolism, elimination of gastrointestinal and urinary tract problems, medication administration, inhalation, and wound care. The clinical skills list of the Singapore Nursing Board also mentioned holistic care and included all dimensions of nursing care (caring-promotion-prevention-rehabilitation), while the Nevada State Board and The College of Registered Nurses of British Columbia highlighted clinical skills related to the patient's body, environment, and caring dimensions.

However, the essential clinical skills for Thai graduate nurse differ from those expressed by the above boards of nursing because, in Thailand's nursing context, professional practice for nurses means nursing practice with individuals, families, and the community through the following actions: 1) provide information, guidance, and encouragement as well as solutions to health problems; 2) help people, both mentally and physically in their environments, through solving health problems, alleviating symptoms, preventing the spread of diseases, and providing rehabilitation; 3) giving primary medical care and immunization; and 4) assisting the physicians in the provision of treatments (TNMC, 2012). Accordingly, the scope of Thai nursing involves holistic care (mind-body-spirit-emotion-environment) in all dimensions of nursing care (caring-promotion-prevention-rehabilitation) and at all levels of health care facilities (primary-secondary-tertiary hospital).

The clinical skills of new graduate nurses are an essential part of enhancing the quality of care in the healthcare system in their transitional period as professional nurses. However, studies report that new graduate nurses lack adequate skill levels that are needed in the real world of clinical nursing practice (Walker and Costa, 2017; Lee et al., 2019; Mirza et al., 2019; Wardrop et al., 2019), and that this adds to their high levels of stress during the first 1–2 years of practice (Labrague and McEnroe-Petitte, 2018). Therefore, nursing programs

should provide nursing students with the expertise, skills and attitudes needed for their professional practice, at a time when it is understood that nursing education institutions are facing challenges in producing graduates with sufficient clinical skills to meet health care needs around the world. Newly graduated nurses may have the requisite clinical skills to enter the workforce as professional nurses; but, due to the extensive curricula at colleges, they have not been able to translate their theoretical knowledge into clinical practice fully. They, therefore, have a knowledge gap, a significant issue in nursing (Abulrub and Abu Alhaja'a, 2019). Novice nurses need more experience and guidance from more experienced nurses during this transitional period to help establish a useful source of emotional support. Such support will play a key role in reducing stress and anxiety, growing self-confidence and creating a positive relationship between them and other trained nurses. Nursing training also relates to critical thinking and the significance it has in everyday clinical nursing practice. Graduate nurses should learn some of the strategies and cognitive skills required for evaluation, problem-solving and decision-making in their attempts to incorporate critical thinking. The clinical environment is one of the most valuable experiences for new graduate nurses. Training is an effective and analytical process, and simulation enables procedures to be performed as often as is necessary in order to gain trust and experience from a student to a professional nurse.

The findings of this study yielded a clear description of essential clinical skills among Thai graduate nurses from the expert opinions of nurses from different levels of practice. The implications for the findings are in practice, education and research. For nursing practice, to provide the framework of essential clinical skills of a graduate nurse so that safety for patients and quality of nursing care are maximised. For nursing education, to provide training guidelines for students to practice activities in all subjects and be supportive of students in practice during pre-post conferences, nursing rounds, care planning, journal clubs, and assignments. Nursing research needs to advance to provide more studies to help improve the essential clinical skills of graduate nurses, to reduce their theory-practice gap, reduce their anxieties and stress, and hopefully reduce their intention to leave practice.

5. Conclusion

The findings from this study have identified the essential clinical skills components that new nurses should possess when entry to practice in the hospital: fundamental skills, health promotion and disease prevention skills, rehabilitation skills, and skills in specific areas. These components can help inform nursing interventions and curricula design to prepare graduates in Thailand for work in a range of settings, as well as inform the range of skills taught in various programs in the country and elsewhere. Essential clinical skills components are critical to guide nursing practice and nursing education in order to achieve patient safety and the quality of nursing care. Moreover, components of essential clinical skills of graduate nurses could provide a way to assess and recruit graduate nurses with sufficient clinical skills and help administrators to better manage the nursing workforce for complicated client populations. Evidence related to the significance of graduate nurses' essential clinical skills for clients, healthcare organizations, and healthcare systems could then be further identified, which could be used to guide future professional development initiatives for the nursing profession. Clarifying components of essential clinical skills process contributes to the global area of clinical practice and those of graduate nurses in the nursing context of Thailand. This study focused on a sample of nurses from northern and southern Thailand, and it is important that further studies are undertaken across other regions of the country to ensure that a clear picture of the essential skills are identified or confirmed using different methodologies. Additionally it is important that benchmarking of clinical skills in Thailand is undertaken with other countries to ensure that nursing practice is achieved at an internationally acceptable standard.

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CRedit authorship contribution statement

Sirirat Vichitragoonthavon: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing - original draft, Writing - review & editing. **Areewan Klunklin:** Funding acquisition, Supervision, Validation, Writing - review & editing. **Orn-Anong Wichaikhum:** Supervision, Validation, Writing - review & editing. **Nongkran Viseskul:** Supervision, Validation, Writing - review & editing. **Sue Turale:** Writing - review & editing.

Declaration of competing interest

There is no conflict of interest reported by the authors.

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References

- Abulrub, R.F., Abu Alhaja'a, M.G., 2019. Perceived benefits and barriers of implementing nursing residency programs in Jordan. *Int. Nurs. Rev.* 66, 43–51. <https://doi.org/10.1111/inr.12452>.
- Brown, R.A., Crookes, P.A., 2016. What level of competency do experienced nurses expect from a newly graduated registered nurse? Results of an Australian modified Delphi study. *BioMed Centr. Nurs.* 15 (45), 1–8.
- College of Registered Nurses of British Columbia, 2018. *Scope of Practice for Registered Nurses*. BC College of Nursing Professionals. Canada.
- Eslamian, J., Moeini, M., Soleiman, M., 2015. Challenges in nursing continuing education: a qualitative study. *Iran. J. Nurs. Midwifery Res.* 20 (3), 378–386.
- Gaesawahong, R., 2014. The development of nurse residency program. *Bang. Med. J.* 7, 25–31.
- Graneheim, U.H., Lundman, B., 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ. Today* 24 (2), 105–112.
- Hussein, R., Everett, B., Ramjan, L.M., Salamonson, Y., 2017. New graduate nurses' experiences in a clinical speciality: a follows up study of newcomer perceptions of transitional support. *BioMed Centr. Nurs.* 16 (42), 1–9. <https://doi.org/10.1186/s12912-017-0236-0>.
- Huston-Shaikh, C.J., 2015. *Self-efficacy and Competence for Clinical Skills in Nursing Education*. Doctoral Dissertation. Retrieved from ProQuest Dissertations and Theses. UMI Number: 3707656.
- Ingwell-Spolan, C., 2018. Chief nursing officers' views on meeting the needs of the professional nurse: how this can affect patient outcomes. *Healthcare* 6 (56), 1–10.
- Krueger, R.A., 2002. Designing and conducting focus group interviews. <http://doi.org/10.1037/0022-3514.82.2.189>.
- Labrague, D.M., McEnroe-Petite, D., 2018. Job stress in new nurses during the transition period: an integrative review. *Int. Nurs. Rev.* 65, 491–504. <https://doi.org/10.1111/inr.12425>.
- Lambert, S.D., Loiselle, C.G., 2008. Combining individual interviews and focus groups to enhance data richness. *J. Adv. Nurs.* 62, 228–237. <https://doi.org/10.1111/j.1365-2648.2007.04559.x>.
- Lee, S.H., Kimb, J.H., Jung, D., Kang, S.J., 2019. Educational needs for new graduate nurses in Korea. *Nurse Educ. Pract.* 34 (January), 167–172.
- Lincoln, Y.S., Guba, E.G., 2000. Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin, N.K., Lincoln, Y.S. (Eds.), *The Handbook of Qualitative Research*, second ed. Sage, Beverly Hills CA, pp. 163–188.
- Lubbe, J.C., Roets, L., 2014. Nurses' scope of practice and the implication for quality nursing care. *J. Nurs. Scholarsh.* 46 (1), 58–64.
- Mirza, N., Manakil-Rankin, L., Prentice, D., Hagerman, L., Draenos, C., 2019. Practice readiness of new nursing graduates: a concept analysis. *Nurse Educ. Pract.* 37, 68–74. <https://doi.org/10.1016/j.nepr.2019.04.009>.
- Monaghan, T., 2015. A critical analysis of the literature & theoretical perspectives on theory-practice gap amongst newly qualified nurses within the United Kingdom. *Nurse Educ. Today* 35 (8), 1–7.
- National Health Service (NHS) Education for Scotland, 2008. *Partnerships for Care. Taking Forward the Scottish Clinical Skills Strategy. Executive Summary*. NES, Edinburgh.
- Nevada State Board of Nursing, 2016. *Apprentice Nurse Skills List*. World Press, Las

- Vegas.
- Sandelowski, M., 2016. What ever happened to qualitative description? *Res. Nurs. Health* 23, 334–340.
- Singapore Nursing Board, 2018. Core Competencies and Generic Skills for Registered Nurse. SNB, Singapore.
- Thailand Nursing, Midwifery Council, 2012. Thailand Nursing and Midwifery Council Competencies of Registered Nurses. Ministry of Public Health, Bangkok.
- Treharne, G.J., Riggs, D.W., 2015. Ensuring Quality in Qualitative Research. *Qualitative Research in Clinical and Health Psychology*https://doi.org/10.1007/978-1-137-29105-9_5.
- Walker, A., Costa, B.M., 2017. Transition into the workplace: comparing health graduates' and organizational perspectives. *Contemp. Nurse* 53 (1), 1–12. <https://doi.org/10.1080/10376178.2016.1254050>.
- Wardrop, R., Coyne, E., Needham, J., 2019. Exploring the expectations of preceptors in graduate nurse transition: a qualitative study. *Nurse Educ. Pract.* 34, 97–103. <https://doi.org/10.1016/j.nepr.2018.11.012>.