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Importance of Core Basic Nursing Skills Achievement by Nursing Students and Demand in the Incipient Stage of Clinical Practice as Perceived by Preceptors

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Abstract

Purpose: This study was designed to determine the level of importance assigned to core basic nursing skills achievement by nursing students who began clinical practice and to investigate the demand of preceptors for guidance on clinical practice.

Method: Data were collected from 54 preceptors at general hospitals and local hospitals of S City in South Korea from June to August 2013. Nursing students evaluated by preceptors were junior students who had completed the first two years of education under the 4-year curriculum of a nursing university and had begun their first clinical practice. The evaluation was designed to coincide with their completion of clinical practice in the first semester.

Results: The results of this study showed that vital signs was rated the most important core basic nursing skill that nursing students would need to achieve

in the incipient stage of clinical practice, whereas pre-operative and post-operative nursing cares were rated the least important. Facilitators of preceptors' instruction/guidance of clinical practice included positive attitudes of students toward clinical practice and adequate previous knowledge of students, while barriers included busy work environments, shortage of educational workers, and passive attitudes of students toward clinical practice. Additional core basic nursing skills required at community clinical sites included infection management and development of personality and professional attitude.

Conclusions and Implications: To expand core basic nursing skills capability of nursing students, it is to map out a joint strategy and develop a curriculum in such a way that cooperation between universities (educational institutions) and clinical organizations can be promoted.

Key words: core basic nursing skill, nursing student, clinical practice, preceptor

Introduction

Society has recently witnessed an increasing demand for professional nurses capable of responding positively to many different health needs of patients during nursing care, along with an increased role of nurses. This has occurred amidst diversification of the medical social environment, such as changes in disease patterns, a burgeoning elderly population, spread of the Internet, greater availability of health-related information, and increased public awareness towards health.[1-2]

Nursing science involves the application of academic nursing knowledge to clinical practice, with an aim to achieve the objectives of nursing education. Therefore, schooling based on theory and clinical practice has been the major focus in nursing science education.[3-4] However, nursing students have faced increasing restrictions in clinical practice in the midst of increased empowerment of patients as consumers, rigorous protection of patient's rights, and increased expectations of medical staff.[5-6] In addition, departments of nursing science have been established or expanded as part of an endeavor at the national level to address recent shortages of nursing manpower in Korea. As a result, the number of departments of nursing science increased from 132 in 2008 to 202 nationwide.[7] This has given rise to a lack of hospitals available for clinical field practice and resulted in disruption to the supply of professionals offering coaching/instruction/guidance. Furthermore, this has in turn necessitated examination of core nursing capabilities among graduate nurses and led to the issue of standardization.[8]

In response to such problems, the Korea Accreditation Board of Nursing (KABON) has identified 20 “core basic nursing skills” as criteria for certification and evaluation of nursing education. Core basic nursing skills include essential skills that must be learned during nurse training; these skills are frequently required and considered important in the course of performing nursing duties.[9] KABON requires

that nursing educational institutions ensure core basic nursing skills achievement of graduating nursing students, at or above a certain level, to help promote their adaptation to clinical sites and expand the capability of professional nurses.

The curriculum for nursing science in Korea is structured to ensure that students in early grades acquire theoretical knowledge related to skills through the "Fundamental Nursing" course. Moreover, nursing students can apply their knowledge during basic nursing practice (lab practice), and juniors and seniors can increase their capabilities through various clinical sites and community-based practice. Only 41 nursing educational institutions were found to have affiliated hospitals in Korea.[10] Many nursing educational institutions do not have educational hospitals, and therefore, rely on various community-based clinical sites for clinical practice. As a result, it is necessary to indicate the requirements of the clinical environment, and diverse regional characteristics of communities that form the clinical practice environment and nursing practice site, when core nursing capabilities of nursing students are strengthened.

Previous studies on the improvement of core basic nursing skills in nursing students cover the core basic nursing skills of new nurses,[11] core skills associated with women's health,[12] core skills associated with obstetrical nursing,[13] and others. International studies related to the improvement of core basic nursing skills in nursing students cover the basic nursing skills improvement of nursing students,[14] clinical skills and knowledge level of nursing students,[15] and clinical capability of nursing students.[16]

Studies related to the improvement of capabilities of nursing students enrolled in departments of nursing science have been developed and carried out in such a way that suits the characteristics of nursing education sites based on various themes and methodologies. However, few studies have investigated nursing students' accomplishment of core basic nursing skills by grade in conjunction with clinical practice. Core nursing capability is the minimum capability that must be achieved through nursing education at colleges/universities. However, it has been defined only as the capability that nursing students are required to achieve when they are graduating.[9] Thus, it is somewhat difficult to guide lab operation and basic nursing science subjects to help students achieve nursing skill capability primarily through clinical practice. In addition, different practical problems must be addressed to ensure that nursing students achieve core basic nursing skill capability at clinical sites in the community.

Thus, this study aimed to determine perceptions of the preceptor, who provides guidance to nursing students at the incipient stage of clinical practice to help strengthen core basic nursing skills. Perceptions were assessed in terms of the level of importance and demand for guidance with respect to core basic nursing skills. In particular, this study aimed to help guide nursing students to equip themselves with core nursing skills at the incipient stage of clinical practice. Specific purposes of this study are as follows:

1) Investigate the level of importance assigned to core basic nursing skills achievement by nursing students in the incipient stage of clinical practice, as

perceived by the preceptor who offers guidance on clinical practice in the community.

2) Investigate the demand (facilitators, barriers, and additional core nursing items that is needed to reflect specific community-based healthcare needs) as perceived by the preceptor for guidance on core basic nursing skills.

Methods

Design

In this study, we applied a descriptive investigative research method to determine the level of importance assigned to core basic nursing skills achievement and level of demand in the incipient stage of clinical practice as perceived by the preceptor.

Participants and data collection

Data were collected from 54 preceptors who provided clinical practice guidance to nursing students during employment at general hospitals and local hospitals of S City in South Korea from June to August 2013. Nursing students evaluated by preceptors were junior students who had completed the first two years of 4-year nursing programs at a university and had begun their first clinical practice. The evaluation was made to coincide with completion of clinical practice in the first semester. Preceptors who participated in this study were clinical nurses with more than one year experience in practical training of nursing students.

Ethical approval

Following the approval of this study by the Institutional Review Board (IRB) of S universities, written consent was received from subjects who expressed intention to participate voluntarily in the study. Consent was obtained after subjects were given an explanation of the purpose of the study.

Measures

Level of importance assigned to core basic nursing skills achievement

In this study, "level of importance assigned to core basic nursing skills achievement" means the importance of skills that nursing students need to achieve in the incipient stage of clinical practice. Higher scores indicate important items that nursing students must achieve in the incipient stage of clinical practice. Core basic nursing skills were measured using the 20 items presented by KABON, based on a 5-point Likert scale (1 = Not important at all, 5 = Very important).

Demand of preceptors for guidance on core basic nursing skills

In this study, we used semi-structured questionnaires that were self-administered by preceptors, to examine the demand of preceptors for guidance on core basic nursing

skills with a focus on 1) facilitators of guidance on core basic nursing skills at clinical sites, 2) barriers, and 3) additional core basic nursing skills that were needed more in the community to meet the specific community-based healthcare needs.

Statistical analyses

Data were analyzed using SPSS 18.0. To analyze data collected from questionnaires and determine characteristics of participants, descriptive statistics were used, such as percentages, means, standard deviations, minimums, and maximums. Data collected from semi-structured questionnaires were analyzed based on frequencies of responses.

Results

Characteristics of participants

General characteristics of participants are presented in Table 1. The participants of this study were 54 preceptors who were 39 years old on average and all women. Regarding educational background, those with bachelor's degrees (40.7%) comprised the largest proportion. In terms of occupation, 11 were staff nurses (20.4%) and 34 were head nurses (63.0%).

Table 1. Characteristics of Participants (N=54)

Variables		n	%
Age (mean±SD, years)		39.44±7.32	
Gender	Female	54	(100.0)
Education	Graduate	11	(20.4)
	Bachelor	22	(40.7)
	Associates	21	(38.9)
Position	Staff nurse	11	(20.4)
	Charge nurse	9	(16.7)
	Head nurse	34	(63.0)
Hospital type	General hospital	30	(55.6)
	District hospital	24	(44.4)
Clinical area	Internal medicine	13	(32.5)
	General surgery	8	(20.0)
	Intensive care unit	4	(10.0)
	Specialized	13	(32.5)
	Outpatient	2	(5.0)
Years of clinical experience (mean±SD)		16.06 (±6.48) (range, min 3.42–max 32)	
Years of clinical instruction (mean±SD)		7.44 (±7.01) (range, min 1–max 26)	

In relation to hospitals where subjects were employed, 30 (55.6%) were working in general hospitals. As for departments, 13 (32.5%) were working in internal medicine, and another 13 (32.5%) were working in special departments. Subjects had an average of 16 years of clinical experience and an average of 7 years of experience in clinical guidance (instruction) of nursing students.

Importance assigned to core basic nursing skills achievement by nursing students in the incipient stage of clinical practice as perceived by preceptors

Table 2 presents the results in relation to the level of importance assigned to core nursing skills required to be achieved by nursing students in the incipient stage of clinical practice as perceived by preceptors.

Table 2. Importance of Core Basic Nursing Skills Achievement by Nursing Students in the Incipient Stage of Clinical Practice as Perceived by Preceptors

No.	Basic Skills	Mean (SD) (min 1–max 5)
1	Vital signs	4.85 (0.52)
2	Oral medication	4.25 (0.98)
3	Intradermal injection	4.07 (1.19)
4	Subcutaneous injection	4.05 (1.12)
5	Epidermal injection	3.62 (1.28)
6	Intravenous infusion	3.80 (1.30)
7	Blood transfusion	3.81 (1.41)
8	Intermittent L-tube feeding	3.50 (1.24)
9	Nelaton catheterization	3.72 (1.01)
10	Foley catheterization	3.81 (1.06)
11	Enema intervention	3.77 (0.98)
12	Pre-operative care	3.40 (0.94)
13	Post-operative care	3.42 (1.19)
14	Admission management	3.83 (1.09)
15	Isolation management	3.92 (1.20)
16	Pulse oximeter & EKG monitor	3.82 (1.17)
17	Nasal O_2 inhalation	3.90 (1.12)
18	Tracheal suction	3.69 (1.25)
19	Tracheostomy care	3.62 (1.29)
20	Basic life support	3.77 (1.33)

Vital signs was rated 4.85 (out of 5), which was the highest score for level of importance, followed by administration via various routes such as oral medication, intradermal injection, subcutaneous injection, and intravenous infusion. The lowest scores for level of importance were for pre-operative nursing (3.40 out of 5) and post-operative nursing cares (3.42 out of 5).

Demand of preceptors for guidance on core basic nursing skills

1) Facilitators in the guidance of core basic nursing skills at clinical sites

Regarding the facilitators of guidance offered by preceptors at clinical sites, positive attitudes of students towards clinical practice and previous knowledge of students were found to act as facilitators most frequently, followed by positive attitudes of educators, cooperation between patients and medical staff, and proper numbers of students being guided in clinical practice. Specific results are presented in Table 3.

Table 3. Perceived Facilitators and Barriers Regarding Preceptors' Clinical Instruction (N=54)

Facilitators (n)*	Barriers (n)*
1. Positive attitudes of students toward clinical practice (18)	1. Busy work environment (14)
2. Adequate previous knowledge among students (17)	2. Shortage of manpower necessary for guidance of students (14)
3. Positive attitudes of educators (15)	3. Passive attitude of students in clinical practice (13)
4. Cooperation between patients and medical staff (11)	4. Inadequate previous knowledge among students (11)
5. Proper number of students for guidance on clinical practice (5)	5. Observation-oriented clinical environment (7)
	6. Inadequate understanding of patients towards clinical practice of students (7)
	7. Inadequate awareness of educators towards clinical training of students (4)

*Frequency of responses

2) Barriers hindering the guidance of core basic nursing skills at clinical sites

Regarding barriers hindering guidance offered by preceptors at clinical sites, a busy work environment and shortage of educational manpower were found to act as barriers most frequently, followed by passive attitudes of students in clinical practice, inadequate previous knowledge of students, an observation-oriented clinical environment, inadequate understanding of patients towards clinical practice of students, and inadequate awareness of educators towards practical training of students. Specific results are presented in Table 3.

3) Additional core basic nursing skills that are required to meet the community-based specific healthcare needs

Skills required during clinical training of nursing students other than the 20 core basic nursing skills included infection management, wound dressing and sore management,

changing position and patient transfer, personal hygiene care, fall prevention, spiritual care, discharge management, and emergency care.

Aside from core basic nursing skills, students were required to develop skills related to development of personality and professional attitudes, interpersonal relationships, and communication skills. Specific results are presented in Table 4.

Table 4. Additional Core Nursing Skills for Unmet Community-Based Healthcare Needs (N=54)

Additional Core Nursing Skills (n)*	Extra Nursing Skills (n)*
1. Infection management (12)	1. Development of personality and professional attitude (15)
2. Wound dressing and sore management (8)	2. Interpersonal relationships and communication skills (10)
3. Changing position and patient transfer (8)	
4. Personal hygiene care (7)	
5. Fall prevention (7)	
6. Spiritual care (5)	
7. Discharge care (4)	
8. Emergency care (4)	

*Frequency of responses

Discussion

This study aimed to propose measures, incorporating opinions of preceptors (clinical nurses from the community), to help expand and improve core basic nursing skills of nursing students. In addition, requirements of community clinical sites were identified to provide basic data for improving curriculum design in nursing science.

Results of this study showed that achievement of vital signs skills was rated most important among 20 core basic nursing skills that students were required to achieve during clinical practice in the first semester of their junior year. In terms of administration of medicine, achievement of skills such as oral medication, intradermal injection, and subcutaneous injection were rated as having high importance. Items rated least important in terms of achievement were pre-and post-operative nursing cares. In Korea, nursing students are required to attend 1,000 hours of clinical practice. Among the core basic nursing skills, pre- and post-operative nursing skills are somewhat difficult to achieve through lab practice at universities. Instead, these skills are primarily achieved by department of nursing science students in later years during clinical practice in operating rooms. Therefore, preceptors may have expected that some skills would be difficult for students to achieve during early clinical practice. In terms of intermittent gastric gavage/tube feeding, tracheostomy care, and intradermal injection, preceptors may have expected that highly advanced skills would be required and that patients requiring care that involved such advanced skills were likely to have several intertwined problems and therefore pose some difficulty to students who had

recently embarked upon clinical practice. Based on the results[11] of a study that investigated the confidence of new nurses in core basic nursing skills, vital signs was the skill demonstrating the greatest confidence among new nurses that had less than one year experience after graduation. In contrast, tracheostomy tube care was found to be the skill with the lowest confidence rating.

Core basic nursing skills capability can be achieved through practice using various methods over a long period, as well as practice in a lab. Guidance of clinical practice of nursing skills at hospitals during field practice can help increase nursing performance capability.[17] Non-invasive skills are less likely to pose a hazard to patients in the course of clinical practice. However, students must continuously polish their skills to improve their performance capability through clinical practice. Major core basic nursing skills, which students need to achieve prior to the start of clinical practice, should first be mastered through lab and simulation training. For skills rated less important in terms of achievement, acquisition prior to graduation by means of repetitive training throughout the two-year clinical practice is necessary; these requirements need to be incorporated into curriculum design.

Various factors were found to be facilitators or barriers when guidance on core basic nursing skills is provided to nursing students at clinical sites. Student factors included attitudes of students towards clinical practice and previous knowledge. Educator factors included perceptions and attitudes towards the education of students. Meanwhile, practice environmental factors included work environment of preceptors, shortage of workers, cooperation between patients and medical staff, and an observation-oriented clinical environment. Im (2012)[18] claimed it to be necessary to create an environment conducive to promoting preparedness of students for clinical practice and active involvement of students in clinical practice. Furthermore, this environment should ensure harmony in the roles of clinical professors and operation of organizations, etc., to help students achieve skills through clinical practice. In this study, we found that observation-oriented clinical environments might be a barrier impeding nursing performance capability of students. These results are consistent with those of Song & Kim (2013),[19] who investigated current guidance on clinical practice and found that 68.1% of hospitals allowed independent nursing by students within a limited scope, such as taking vital signs, 20.7% of hospitals allowed nursing practice under supervision, and 8.6% of hospitals allowed only observation. Kim, Kang, Park, & Ahn (2014)[12] found that it would be absolutely necessary to ensure cooperation between clinical practice sites and universities (educational institutions) with respect to the purpose and allowable scope of clinical practice for students, and to ensure close cooperation between professors of concerned subjects and those offering guidance on clinical practice under common guidelines. To expand core basic nursing skills capability of nursing students, various models need to be developed, which include joint strategies promoting cooperation between universities (educational institutions) and clinical organizations.

Skills other than the 20 core basic nursing skills presented by KABON included infection management, wound dressing and sore management, changing position and patient transfer. If these skills are considered alongside core basic nursing skills when providing guidance to students, cultivation of a nursing workforce

pursuing careers in the community will be facilitated. Moreover, there was demand for the inclusion of skills related to development of personality and attitudes in nursing education, professional views, interpersonal relationships, and communication methods, etc., in addition to core basic nursing skills. To ensure that nursing students acquire the knowledge and skills necessary for clinical practice and to become fully qualified, such requirements need be taken into consideration and incorporated into the curriculum.

Study limitations

This study was a cross-sectional study based on a convenience sample limited to specific regions. Therefore, its results cannot be generalized. There is a need for further research involving preceptors and nursing students of various regions in the future.

Conclusion

This study was designed to determine the level of importance assigned to core basic nursing skills achievement by nursing students who began to engage in clinical practice and to investigate the level of demand of preceptors for guidance on clinical practice. The results of this study showed that vital signs was rated as the most important core basic nursing skill that nursing students would need to achieve in the incipient stage of clinical practice, and pre- and post-operative nursing cares were rated least important.

Facilitators of preceptors' instruction/guidance of clinical practice included positive attitudes of students toward clinical practice and adequate previous knowledge of students. Barriers included busy work environment, shortage of educational workers, and passive attitudes of students toward clinical practice. Additional core basic nursing skills required at community clinical sites were found to include infection management and education for development of personality and professional attitudes.

To expand core basic nursing skills capability of nursing students, it is vital to map out a joint strategy and develop a curriculum in such a way that cooperation between universities (educational institutions) and clinical organizations can be promoted.

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