Development of a Competency Assessment Scale for Head Nurses in Community Hospitals

Kanjananat Tongmuangtunyatep, Wipada Kunaviktikul, Raymoul Nantsupawat, Thitinut Akkadechanunt

Abstract : Competent head nurses are essential for the achievement of healthcare improvement. There are no functional competency scales to evaluate head nurses in Thai community hospitals. The purpose of this study was to develop and examine the psychometric properties of the Competency Assessment Scale for Head Nurses in Community Hospitals. The conceptual framework for the scale was based on the 2013 Head Nurses' Competencies of Thailand Nursing and Midwifery Council. One hundred twenty-five competency items were generated. After achieving a scale content validity of .94 assessed by a panel of six experts, 55 items remained. After reliability testing with 30 head nurses, Cronbach's alpha coefficient for this scale was .99. Field testing was conducted with 614 head nurses working in Thai community hospitals.

After exploratory factor analysis, the Competency Assessment Scale for Head Nurses in Community Hospitals was composed of five factors with 52 items: leadership; healthcare environment management; policy implementation and communication; management; and professional ethics. Each factor accounted for ≥60% of the total variance and Cronbach's alpha coefficients ranged from .93 to .96. Testing of a contrast group of new nurse graduates was found to be significantly different when compared with head nurses. The scale that was developed demonstrated acceptable levels of reliability, content validity, and construct validity. Therefore, the scale holds promise as a useful instrument that can be used to evaluate head nurses in Thai community hospitals.

Pacific Rim Int J Nurs Res 2015; 19(2) 122-134

Keywords : Community hospital; Competency; Head nurses; Leadership; Nursing; Psychometric testing

Introduction

Functional competency is a set of specific competencies or work characteristics possessed by experts needed in their roles as individuals in working groups. Their competencies can be demonstrated by their superior performances.[1] Functional competencies are important for professional nurses as they differentiate the essential competencies for each category of worker.

Correspondence to:*Kanjananat Tongmuangtunyatep**, *RN, PhD (Candidate) Faculty of Nursing, Chiang Mai University, Muang, Chiang Mai, Thailand.* ***E-mail: *taknack@yahoo.com*

Wipada Kunaviktikul**, RN, PhD. Professor and Dean, Faculty of Nursing, Chiang Mai University, 110 Intawaroros Road, Muang, Chiang Mai, 50200 Thailand.* ***E-mail: *wipada.ku@cmu.ac.th*

Raymoul Nantsupawat**, RN, PhD. Associate Professor, Faculty of Nursing, Chiang Mai University, 110 Intawaroros Road, Muang, Chiang Mai, 50200 Thailand.* ***E-mail: *raymouln@yahoo.com*

Thitinut Akkadechanunt**, RN, PhD. Assistant Professor, Faculty of Nursing, Chiang Mai University, 110 Intawaroros Road, Muang, Chiang Mai, 50200 Thailand.* ***E-mail: *thitinut.a@cmu.ac.th*

The success of an organization, the influence of healthy environments in the workplace,[2,3] the provision of standard care, the satisfaction of the staff, and the provision of quality healthcare for clients all depend on the competencies of head nurses.[2] Additionally, the maintenance of competency is a challenge for head nurses because they are not encouraged to continue this proficiency.[4]

Thai healthcare services are classified by geographical information systems, or by network healthcare services that include primary, secondary, and tertiary care. Secondary care is divided into 5 levels consisting of newly built small, small, medium, large, and node community hospitals.[5,6] Each level is classified by the number of patient beds and resources available. Almost three quarters of all Thai community hospitals (72.25%) are medium-sized 30 to 90-bed hospitals,[5,6] which provide inpatient and out-patient care for patients with less complicated conditions than higher level hospitals. These medium-sized hospitals collaborate with those at primary care level.[7] Thus, the largest number of head nurses in Thailand are located in community hospitals. In addition, the Thai Ministry of Public Health has a policy to provide health services in a seamless network covering promotion, prevention, cure, and rehabilitation. Therefore, healthcare providers must be encouraged to enhance their competencies to provide quality services.

Head nurses in community hospitals have broader roles and responsibilities than those in hospitals at other levels.[8] These nurses have to coordinate with both multidisciplinary teams and the members of the community,[9] and handle a wide variety of roles with limited resources.[8] Most head nurses were thus not prepared for their positions.[11] In addition, many community hospitals are located in remote settings with limited resources.[4,12] Additionally, their community populations may have unique characteristics, widely varying diagnoses, and patients of all ages cared for together in inpatient units.[13] Several studies have examined the competencies of head nurses in Thai general, regional, and university hospitals except community hospitals.[1,10] One study focused on the assessment core and professional competency of all head nurses, but did not assess functional competencies.[1] Because of these limitations, it has become necessary to develop a functional competency assessment scale for head nurses in community hospitals. In developing such a scale the appropriate psychometric properties must be achieved which will assess knowledge, skills, and abilities of head nurses in community hospitals. This scale will then be used for preparation to become a competent head nurse, and to use as a tool for selection of future head nurses.

Review of Literature

The competency of a head nurse is defined as her or his behavior resulting from the integration of knowledge, skills and underlying characteristics to achieve success at work.[14] Competency is associated with performance in the workplace. Knowledge is the information and learning a person possesses in specific content areas. Skills refer to a person's ability to perform a certain physical or mental tasks. Underlying characteristics are composed of motives, traits, and a person's self-concept. Motives refer to emotions, desires, and physiological needs that stimulate action an individual consistently thinks about or wants. Traits refer to physical characteristics and consistent responses to situations or information; self-concept refers to a person's attitudes, values or self-image. Visible competencies are relatively superficial characteristics and are easy to develop, such as knowledge and skills.[14]

The competencies of head nurses can be evaluated to reflect individual performance[15] relating to quality of care and can be used by nurse administrators to develop their practices.[16] The essential competencies for nursing administrative practice in a community hospital includes financial management, leadership, workforce management, cross-disciplinary management, integration of need-based community services, and

maximizing resources.[8] The Thailand Nursing and Midwifery Council [TNMC] in 2013[10] defined five essential general competencies for head nurses, which were used as a conceptual framework for this study:

Leadership: behaviors of head nurses that influence the healthcare team to achieve goals. These include conceptual skills, analytical thinking, decision making, change management, negotiation and conflict management, and creative thinking.

Management and quality improvement: behaviors of head nurses integrating vision and mission to plan strategy, set goals, prioritize, and formulate an action plan associated with staff, supply, and quality services in order to achieve goals.

Communication and relationships: ability to communicate clearly and concisely with internal and external customers using both verbal and nonverbal communication, to build relationships with the workforce and other disciplines to collaborate in healthcare service, and use the computerized information resources to effectively manage the patient care setting.

Code of professional conduct, ethical and legal practice: behaviors in human and patient rights advocacy, problem solving and nursing management based on ethics and law, as well as acting as a model for team members, healthcare team, network, and community.

Policy and healthcare environment: ability to understand healthcare policies about workplace environments and determinants of health and then communicate these to perform and control environmental factors including biological, physical, chemical psycho-social, and spiritual factors, and facilitate the climate for healthy healthcare team and a good workplace environment.

Competencies can be divided into two types: core competency and functional competency. Functional competencies differentiate characteristics of nurses at each level.[1] Functional competencies are used to evaluate and reflect individual performance that relates to quality care,[15] and are guides for nurse administrators to develop their practice.[16] Competencies for head nurses should be considered in regard to their roles which differ in each health service level depending on the environment and context.[5,17,18] In the literature there is no description of an appropriate competency assessment scale for head nurses in Thai community hospitals. One other Thai study stated that some essential competencies of a community head nurse were similar to those of a general head nurse. However, this study noted that were some differences such as cross-disciplinary management and integration of need-based community services which were practiced by head nurses in the community.[19] A review of the literature about Thai head nurse competencies found somewhat similar results.[1,10,20,21] However, some results differed[1,10,20,21] and these studies were broader in scope than community hospitals.

Competency assessment is an important process in nursing management for human resources, productivity, selection, training, career planning and rewards.[14,15] Its constructs cannot be assessed directly.[22] To increase the quality of a scale, multiple methods to measure any given variable must be employed with a well-designed measurement process.[23] The development steps of a measure utilize various concepts, but the main steps of development are similar across tools. DeVellis[22] has clearly identified a development of a measure and his processes were used with modification in this study.

Study Aim

This study aimed to develop and examine the psychometric properties of the Competency Assessment Scale for Head Nurses (CASHN) in Community Hospitals.

Research Question

What are the components and psychometric properties of a competency assessment scale for head nurses in community hospitals?

Methods

Design: This instrument development study used modification of the instrument development process of DeVellis[22] that included five phases: 1) determining the construct of the measure, 2) generating an item pool, 3) determining the format for measurement, 4) initial item pool reviewed by experts followed by pretesting, and 5) administering items to a development sample and evaluating the items (Figure 1).

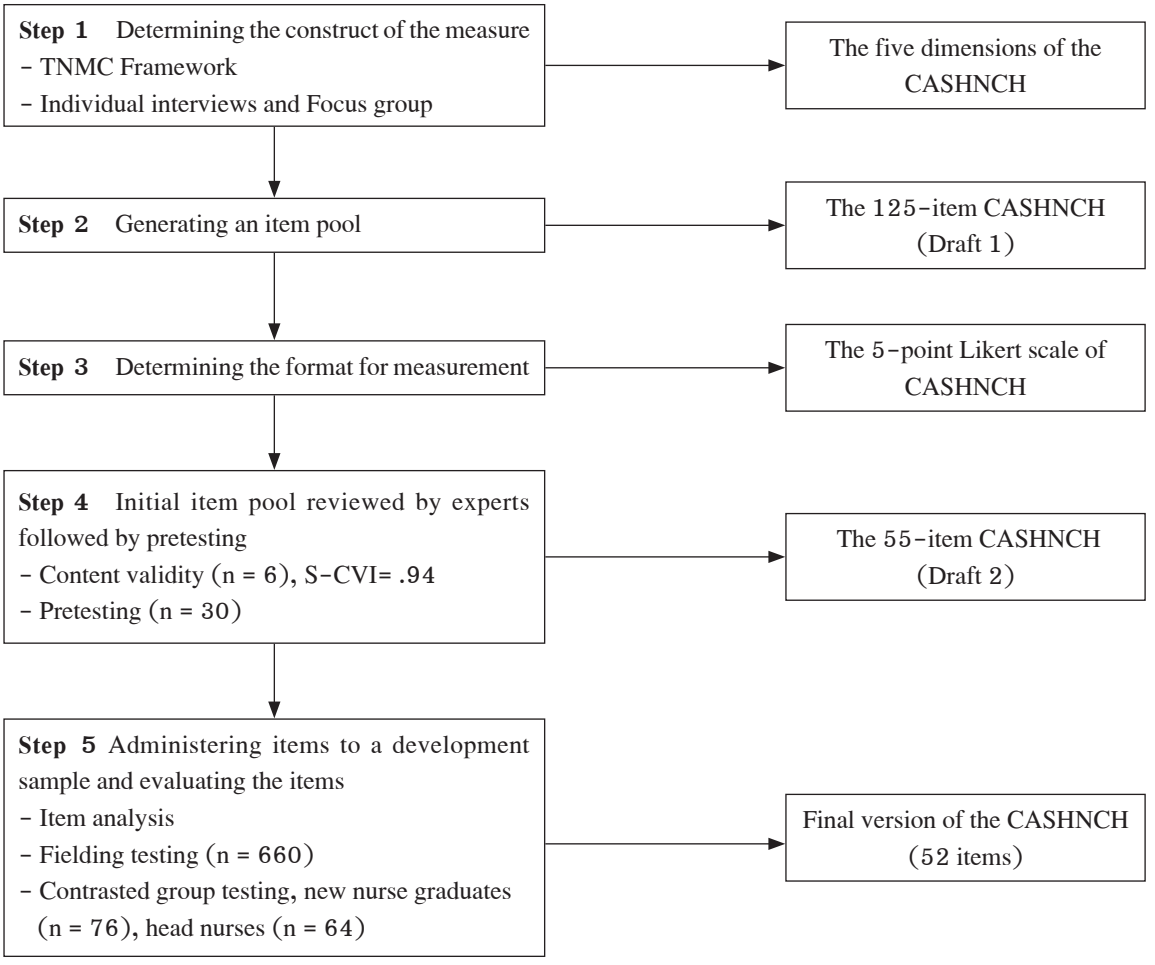

Figure 1 Procedure for development of the CAS for Head Nurses in Thai Community Hospitals

Setting: The study was conducted in clinical settings at 30-to 90-bed community hospitals in Thailand.

Ethical Considerations: The study was approved by the Research Ethics Review Committee of the Faculty of Nursing, Chiang Mai University. Data collection permission was obtained from the director of nursing at each hospital. Participants received oral and written description of the purposes, methods, and benefits of this study, and were assured of their rights. All of them signed the consent form.

Procedure, Sample, and Data Analysis

Step 1: Determining the construct of the measure. After purposive sampling, in-depth interviews were conducted with three directors of nursing services and

a head nurse, and one focus group discussion including one director of nursing services and five head nurses from 30-to 90-bed community hospitals. Ages of those interviewed in-depth ranged from 48-55 years (Mean = 50.3), while ages of focus group participants ranged from 38-55 years (Mean = 56.7). All participants in the in-depth interviews had master degrees; their experiences as a head nurse ranged from 2-12 years (Mean = 6.5). All focus group participants had bachelor degrees and experiences as a head nurse ranging from 6-13 years (Mean = 8.5).

The specified domains of the CASHNCH were based on the competency framework by TNMC,[10] a review of the literature, and data received from individual interviews and one focus group discussion. Examples of interview questions were "Which competencies do you think are the most essential for head nurses in a community hospital?" and "Could you please describe the meaning of each of those competencies, and give empirical examples?" The resulting audiotapes were transcribed after interviews and qualitative data analyzed using content analysis. Concept clarification and definitions of terms were done using the framework of competency for nurse managers developed by TNMC.[10] The words or sentences with the highest frequency were selected.[24] The resulting data were validated by the directors of nursing service and nurse managers, then the data were analyzed and interpreted by faculty advisers and the researcher. If two significantly different data interpretations occurred, the data were discussed until we reached a consensus. In addition, the data were confirmed by field notes.[24,25]

Step 2: Generating an item pool. An item pool of 125 items was generated from five domains. The identification in step 1 consisted of 43 items in leadership, 45 items in management, 14 items in communication, 9 items in professional ethics, and 14 items in policy and healthcare environment. Each item was identified as the achievement of behaviors that included a set of competency dimensions: skills, knowledge, and underlying characteristics.[14]

Step 3: Determining the format for measurement. A 5-point Likert-type scale was applied for the CASHNCH, which reflects the frequency of actions ranging from 1= "hardly ever done" or "never done," 2= "seldom done,"3= "occasionally done,"4= "almost always done," and 5= "always done".

Step 4: Initial item pool reviewed by experts followed by pretesting. The panel of six experts comprised four nurse instructors in nursing faculty who were knowledgeable in the area of this study, one nurse instructor from a nursing faculty who was knowledgeable about scale development, and one nurse executive from a community hospital. They reviewed the initial draft in two rounds. A content evaluation form consisting of a four-point rating scale: 1= "not relevant", 2= "somewhat relevant", 3= "quite relevant", and 4= "very relevant" was mailed to each of the six experts. The scaled items were computed by I-CVI and S-CVI. Thus, a CASHNCH with 55 items was retained for further study.

Pretesting was conducted with 32 head nurses in eight community hospitals of the fourth health region. Thirty head nurses responded (93.75%). Most (70.0%) had graduated with bachelor degrees and (30.0%) with master degrees. The head nurses in these four regions had work experiences of 2-26 years (Mean= 10.6, SD= 6.0). Only 20.0% of participants had attended an administration training course. This step tested for clarity, readability and reliability of scale. Cronbach's alpha coefficient was tested for the reliability of the total scale; each domain was acceptable above .70.[26]

Step 5: Administering items to a development sample and evaluating the items. The study was conducted in randomly selected clinical settings, at 30-to 90-bed community hospitals from the 12 health regions. Four health regions (1, 2, 3, and 5) were randomly chosen, consisting of 165 community hospitals and 660 participants who were head nurses working in 30-to 90-bed community hospitals. The researcher calculated at least 10 participants per item.

Since there were 55 items, therefore, sample size should be at least 550 participants.[26,27] Their ages ranged from 25-58 years (Mean= 44.5, SD= 6.1). Most (87.1%) had a bachelor degree. Most (65.5%) worked in 30 bed community hospitals. Only 23.9% had attended an administrative training course. Six hundred and forty participants returned the questionnaires (96.97%) of which 614 were complete (93.03%).

Field testing evaluated the item analysis, discrimination about power items, and internal consistency. Item analysis was examined using Pearson product-moment correlation with acceptance levels higher than .30.[28] The discrimination power of items indicated that the low scoring group responded to all items of this scale differently from the high scoring group, significant at p-value < .001. All 55 items were retained. Exploratory factor analysis was used to explore the dimensionality of the CASHNCH, and supported construct validity using the principal components method, oblique rotation with oblimin, because it was hypothesized that the factors in this scale would be correlated. Factor analysis for the data was supported when the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .50 or above, and the Bartlett's test of sphericity was statistically significant (sig< .05).[26] The criteria for determining factor solutions included: variables having communalities >.50; Eigenvalues having a cut-off point > 1; and weights for factor loading with a single or few variables related to the cluster of variables with the minimal acceptable cut-off point of .30.[26]

Contrasted group testing of 76 new nurse graduates took place to continue evaluation of the construct validity of the scale. It was expected that these scores would differ from those of head nurses who had administrative competency. The contrasted group was recruited by stratified sampling. They had <1 year experience and worked in 30- to 90-bed community hospitals. The estimated sample size was computed by G*Power 3 program[28] and the effect size in a two-group test of mean difference was estimated at .50 (medium), alpha value of .05, and power of .80.[29] Their ages ranged from 21-25 years (Mean= 22.8, SD= .80). Sixty four head nurses were recruited using systematic random sampling from a total of 614 head nurses administered in field-testing (k/n, 614/64). A non-response rate of 20% of new nurse graduates was estimated. Contrasted group testing demonstrated the discriminative function of the competency level of the CASHNCH between newly nurse graduates and head nurses in community hospitals. It compared the mean scores between new nurse graduates and head nurses using an independent t-test with level of significance at .05.

Results

The CASHNCH presented the average of I-CVI ranging from .83 to 1.00 and the S-CVI was .94. For reliability testing in pretesting, Cronbach's alpha coefficient of overall scale was .99. Cronbach's alpha coefficient of the overall scale in field testing was .98 (.93 to .96). However, the interitem correlation matrix was examined and no items had a correlation that exceeded .80 with any item.[26] Therefore, 55 items were sustained. Kaiser-Meyer-Olkin was used to test sampling adequacy and Bartlett's test was used to assess sphericity. The factorability of the data was supported by a Kaiser-Meyer-Olkinvalue of .98, which is considered marvelous for a large sample, additionally, the significance of the Bartlett's test ($p < .001$) indicated that the correlation matrix was not an identity matrix. Eigenvalues as representations of the amount of variance captured by one component were greater than 1. Factor loadings were correlation coefficients between the items and factors. For this study, criteria for inclusion of an item on a factor were a minimum loading of .30 and a cross-loading no more than a few factors.[26]

After examining those solutions, the final CASHNCH comprised five factors with 52 items. The communalities of all variables of more than .60 indicated a good proportion of common variance within a variable. Three items which were cross loaded more

than 3 factors because of redundancy and high correlation with other factors were deleted. Factor 1 was composed of 15 items named "leadership", explaining 52.55% of the total variance. Factor 2 was composed of 7 items named "healthcare environment management", explaining 61.02% of the total variance. Factor 3 was composed of 13 items named "policy implementation and communication", explaining 64.79% of the total variance. Factor 4 was composed of 8 items named "management", explaining 67.56% of the total variance. Factor 5 was composed of 9 items named "professional ethics", explaining 69.89% of the total variance. The raw score of some items were subtracted rather than added in the computations because these items are negatively related to the factor; as a result, negative values appeared in domains three and five[30] (Table 1).

Table 1 Factor, Factor Loading, and Communality Value of 52-item CASHNCH(n =614)

Item no.	Item Statement	Factor Loading
Factor 1: Leadership		
1	Use negotiation strategies and mutual agreement to assist with achievement of practice.	.90
2	Make systematic decisions through participation with related persons/ partners.	.86
3	Monitoring and evaluation practice through mutual agreement.	.84
4	Collaborate with workforce to regulate the practice guideline regarding conflict for goal achievement.	.80
5	Analyze problems and situations of the whole unit, networks and community clearly.	.78
6	Manage conflicts in unit and community to satisfy both sides.	.74
7	Forecast future of nursing services in the hospital and community.	.73
8	Persuade nursing team and networks to develop quality and effective innovation in nursing services.	.64
9	Encourage nursing team to provide nursing services using evidence-based practice.	.59
10	Apply knowledge of nursing and related sciences appropriately for quality care development.	.53
11	Plan objectives, vision, and mission in participation with nursing team in unit, workforce in the network and community.	.52
12	Motivate nursing team to use new nursing service in unit and community.	.51
13	Transfer new nursing care knowledge to team, networks and community to apply in practice.	.47
14	Apply practice nursing care in medium community hospital.	.47
15	Supervise nursing team and network in nursing service leading to goal achievement.	.36
15 items with Eigenvalues= 27.33, % of total variance= 52.55, Cronbach's alpha coefficients= .96		
Factor 2: Healthcare environment management		
16	Manage supplies for infection control in unit and community sufficiently.	.77
17	Regulate plans for infection control in unit and community effectively.	.74
18	Act as a consultant for infection control to team members, networks, community and clients.	.72
19	Manage environment to supporting good health of providers and clients.	.70
20	Manage the workplace environments in unit and community to efficient and safe work practices.	.69

Table 1 Factor, Factor Loading, and Communality Value of 52-item CASHNCH (continued)

Item no.	Item Statement	Factor Loading
21	Manage physical, chemical and biological factors affecting health providers and clients in unit and community to effect a safe physical, psychological and social environment.	64
22	Promote a conducive atmosphere nursing and healthcare teams networks and community.	.53
7 items with Eigenvalues= 4.41, % of total variance= 61.02, Cronbach's alpha coefficients= .94		
Factor 3: Policy implementation and communication		
23	Organize meetings consistently within unit, and with other units, networks and community.	-.85
24	Party with other units, network and community continuously to maintain good relationships.	-.81
25	Effectively supervise team members who refer patient to other units and other hospitals.	-.71
26	Present information to team members, healthcare team, network and community by effectively from technology.	-.68
27	Investigate information about nursing improvement effectively from technology.	-.61
28	Persuade team members to explore information for nursing improvement by using technology effectively.	-.57
29	Transfer the nursing care policy to team members for appropriately practice.	-.55
30	Coordinate with other units, networks and community effectively.	-.47
31	Communicate verbally and non-verbally with team members concisely to achieve planned objectives.	-.40
32	Effectively plan knowledge management systematically in unit, networks and community.	-.40
33	Coordinate continuously the evaluation of nursing outcomes with healthcare team and networks.	-.34
34	Establish two-way communication with honesty and open mind with team members, networks and community.	-.34
35	Improve proactive nursing care in unit and community that is appropriate with healthcare trends.	-.34
13 items with Eigenvalues = 1.96, % of total variance = 64.79, Cronbach's alpha coefficients = .95		
Factor 4: Management		
36	Allocate human resources in unit and community effectively.	.83
37	Plan relevant continuous education for nursing team in unit and community.	.79
38	Allocate budget and supplies in unit and community effectively.	.78
39	Control and evaluate planning performance correctly and continuously.	.51
40	Plan short and long performance strategies in unit and networks consistent with organizational policy.	.49
41	Motivate nursing and healthcare teams to participate in continuous quality improvement.	.49
42	Regulate goals, indicators, and outcomes of nursing service in unit and community.	.46
43	Analyze strengths, weaknesses, opportunity, and threats in unit.	.41
8 items with Eigenvalues = 1.44, % of total variance = 67.56, Cronbach's alpha coefficients = .93		

Table 1 Factor, Factor Loading, and Communality Value of 52-item CASHNCH (continued)

Item no.	Item Statement	Factor Loading
Factor 5: Professional Ethics		
44	Manage as unit leader with honesty, transparency, and as a good role model.	-.90
45	Be punctual and responsible in unit, network and community.	-.86
46	Take actions related to code of professional conduct and nursing standards.	-.84
47	Make decisions on problems with justice, morality and ethics.	-.71
48	Advocate for patients' and providers' legal rights appropriately.	-.69
49	Persuade team members to feel committed to their units and advocate the benefits of the organization.	-.62
50	Effectively regulate the administration of guidelines for patient rights.	-.45
51	Regulate guideline for primary nursing care consistent with organizational policy.	-.40
52	Take action as a nursing consultant for nursing and healthcare teams and network for ethics, code of professional conduct and law.	-.36
8 items with Eigenvalues = 1.21, % of total variance = 69.89, Cronbach's alpha coefficients = .94		

The internal consistency reliability derived from factor analysis ranged from .93 to .96, with an overall alpha coefficient of .98. Evaluation of the construct validity of the CASHNCH continued with the analysis of the contrast group testing, finding that there was a significant difference in the scores for the new nurse graduate group (Mean = 151.38, SD = 24.70) and the head nurse group (Mean = 212.75, SD = 18.56); $p < .001$. This was high enough to provide further support for the construct validity of the CASHNCH.

Discussion

Assessment of the CASHNCH assured both currency and psychometrical soundness. In this study the assessment yielded required attributes developed using the TNMC framework, the viewpoints of nurse managers and directors of nursing services in community hospitals, and a review of the literature. The CASHNCH is composed of 5 factors: "leadership," "management," and "professional ethics" were similar to the pre-specified components. Two factors, "healthcare environment management" and "policy implementation and communication" differed from the pre-specified components. Every pre-specified component focused on an activity of the head nurse in a unit, in networks, and in communities, but the TNMC noted the activity of head nurse in a unit only. In agreement with this study, nurse managers in communities should integrate and collaborate with people and resources in their communities.[19,31]

The first factor, leadership, comprises shared vision, systemic thinking, be coming an agent of change, and negotiation and conflict management; these were all similar to the TNMC framework.[10] This finding indicated that head nurses in community hospitals have to lead and influence team members, the total healthcare team, networks, and communities to drive for goal achievement. As mentioned in the literature review, leadership competency is essential for head nurses to get their work achieved.[10,19,32,33,34] However, the CASHNCH identified that head nurses in community hospitals should be competent in using a caring model. This model was not located in the TNMC. This is consistent with a replicated study about head nurses that found that technical skills and nursing care are essential competencies for head nurses.[35,36]

The second factor, healthcare environment management, had items reflecting the management behavior of the healthcare environment. This affects

the health of both the patients and providers in the unit, in networks, and in the community. Consistent with this result, other studies noted that management in physical, environment resource, and personal safety should be performed by head nurses.[10,19,37] On the other hand, the TNMC has simultaneously focused on both policy and healthcare environment.

The third factor, policy implementation and communication, are essential competencies for head nurses in community hospitals; each item reflects policy implementation in the unit and effective communication. Currently, Thai healthcare policy, focuses on participation between government and community, the health care environment, strong community, holistic integration, and human-centered care.[38] However, the TNMC noted that policy only affected the health care environment. Head nurses have to understand healthcare policy environments and the determinants to health, and communicate verbally and non-verbally clearly and concisely.[39] Other studies also identified the role of standards for nurse administration, including communication skills and relationship building,[19,34,35]participation in nursing organizational policy construction, and the ability to effectively communicate policies to team members.[15,40] Previous studies found that head nurses must provide effective communication that positively supports the units, as a result, the organization can reach achievement by cooperation.[32, 34]

Management was the fourth contributing factor to competency for head nurses in Thai community hospitals. The items in this factor reflect the ability to plan, organize, direct, coordinate, and control resources, quality and knowledge. The literature review disclosed that head nurses should plan strategy and set goals associated with persons, supplies, and quality services in order to achieve these goals.[10,19,24,37,40]

The fifth factor, professional ethics, refers to the ability of head nurses to work appropriately regarding morals, ethics, and the law. Head nurses must be concerned with human rights as well as advocate for the patient, solve problems, and apply nursing management based on ethics and the law.[10] In agreement with this study, respecting individual rights is one of the standards for nurse administration; integrity and awareness of regulatory requirements are essential for head nurses.[35,40]

This new CASHNCH demonstrated that quantified validity and reliability testing in psychometric evaluations is possible and available for the assessment of the competencies of head nurses in Thai community hospitals. Of course, further research is required using this scale in other studies, and it may need modification. Moreover, the findings of this study can be used as guides for further research to develop other scales for assessment of competencies of head nurses in other levels of hospitals.

Limitations

The limitations of this study involve both participants and scale development. First, the number of participants in individual interviews and focus groups were small. However, the intent of the qualitative method is to probe for the detailed perspectives of a small number of persons.[16] Second, predictive or concurrent criterion-related validity was not performed because no comparable existing scale was available for comparison.

Implications for Nursing Practice

The result of this study is that the new Competency Assessment Scale for Head Nurses in Community Hospitals demonstrates credibility of psychometric properties testing using a structural framework and a theory-based approach to construct a measurement scale. It provides a framework for evaluating the competency of head nurses in community hospitals which is important to ensure quality care and effective nursing management. This new scale can be applied by head nurses for their own self-assessment to improve the quality of their practices. Nurse executives can utilize this scale to plan the development of, and

prepare staff nurses for, head nurse positions. Nurse instructors can use the components in this scale to develop an effective educational programs for professional nurses.

Acknowledgements

The authors would like to express gratitude to the Thailand Nursing and Midwifery Council for partially funding support of this study. Importantly, deep thanks are given to experts who contributed to scale development and, of course, to the participants in this study.

References

1. Bureau of Nursing. Major responsibility and nurse competency document. Policy and strategy group, Bureau of Nursing: Nonthaburi, 2005.[in Thai].
2. Aiken LH, Sloane DM, Clarke S, Poghosyan L, Cho E, You L, Finlayson M, Kanai-Pak M, Aungsuroch Y. Importance of work environments on hospital outcomes in nine countries. J Quality in Healthcare. 2011; 23 (4):357-364.
3. Germain P, Cummings G. The influence of nursing leadership on nurse performance: A systematic literature review. J Nurs Manage. 2010; 18: 425-439.
4. Newhouse RP. Exploring nursing issues in rural hospitals. J Nurs Admin. 2005; 35(7/8): 350-358.
5. Bureau of Health Administration, Ministry of Public Health. Improving the health care system in the region. 2012 [cited 2012 May 19]. Available from http://pmsn.hss.moph.go.th/uploadFiles/document/D00000000637_24336.pdf. [in Thai].
6. Wibulpolprasert S.editors. Thailand health profile 2008-2010. Ministry of Public Health: Nonthaburi, 2011. [in Thai].
7. Administration System Development Office. Reporting the performance of government in 2010. Ministry of Public Health: Nonthaburi,2010.[in Thai].
8. Paliadelis PS. Rural nursing unit managers: Education and support for the role. J Rural Remote Health. 2005; 5(1): 1-8.
9. Bureau of Nursing. Public health policy and health promotion: Nursing administrator role in community hospital and taking the policy to practice. Bureau of Nursing: Nonthaburi, 2011. [in Thai].
10. Thailand Nursing and Midwifery Council. Competency of nurse administrators. Thailand Nursing and Midwifery Council: Nonthaburi, 2013.[in Thai].
11. The Policy and Planning of the Secretariat. Strategic plan for nursing and midwifery council in 2012-2016. Thailand Nursing and Midwifery Council: Bangkok,2011. [in Thai].
12. Bushy A. Nursing in rural and frontier areas: Issues, challenges, and opportunities. Harvard Health Policy Review. 2006; 7(1): 17-27.
13. Meretoja R, Eriksson Em, Leino-Kilpi H. Indicators for competent Nursing practice. J Nurs Manage. 2002; 10:95-102.
14. Spencer LM, Spencer SM. Competence at work: Models for superior performance. New York: John Wiley & Sons, inc., 1993.
15. Roussel L, Swansburg R. Management and leadership for nurses administrators. (5th ed.). Sudbury, Mass: Jones and Bartlett Publishers; 2009.
16. Biron AD, Richer MC, Ezer H. A conceptual framework contributing to nursing administration and research. J Nurs Manage. 2007; 15: 188-196.
17. Cathcart EB, Greenspan M, Quin M. The making of a nurse manager: The role of experiential learning in leadership development. J Nurs Manage. 2010; 18: 440-447.
18. Surakka T. The nurse manager's work in the hospital environment during the 1990s and 2000s: Responsibility, accountability and expertise in nursing leadership. J Nurs Manage. 2008; 16(5): 525-534. doi: 10.1111/j.1365-2834.2008.00901.x
19. Eldridge C, Judkins S. Rural nurse administrators: Essentials for practice. J Rural Nursing and Health Care. 2003; 3(2): 9-16.
20. Aphinyanon S. The desirable leader characteristics of head nurses by A.D. 2016. [Thesis]. Faculty of Graduate studies: Chulalongkorn University,Thailand; 2006. [in Thai].
21. Promsorn U. Desired for competencies for head nurses in regional medical center hospitals of the Ministry of Public Health by the year 2007-2016. [Thesis]. Faculty of Graduate studies: Chulalongkorn University, Thailand; 2007. [in Thai].
22. DeVellis RF. Scale development: Theory and applications. (3rd ed.). Newbury Park: Sage, 2012.
23. Waltz CF, Strickland OL, Lenz ER. Measurement in nursing research. (3rd ed.). New York: Springer Publishing Company, Inc., 2005.

24. Elo S, Kyngas H. The qualitative content analysis process. J Adv Nurs. 2008; 62(1): 107-115.
25. Munhall P. Ethical Considerations in Qualitative Research. West J Nurs Res. 1988; 10(2): 150-62.
26. Hair JF, Black WC, Babin BJ, Anderson RE. Multivariate data analysis. (7th ed.). Upper Saddle River, N.J.: Pearson Education, 2014.
27. Nunnally JC, Bernstein IH. Psychometric theory. (3rd ed.). New York: McGraw-Hill, 1994.
28. Heinrich-Heine University. G* Power 3 program. 2006 [cited 2013 Jan 12]. Available from http://www.psycho.uni-duesseldorf.de/abteilungen/aap/gpower3/download-and-register.
29. Polit DF, Beck CT. Essentials of nursing research: Appraising evidence for nursing practice. (8th ed.). Philadelphia: Lippincott Williams & Wilkins,2014.
30. DiStefano C, Zhu M, Mindrila D. Understanding and using factor scores: considerations for the applied researcher. Practical Assessment, Research and Evaluation. 2009; 14(20): 1-11.
31. Dent RL. A successful transition. Nurse Leader. 2006; 23-36. doi:10.1016/j.mnl.2005.11.003
32. Lin LM, Wu JH, White LP. Managerial activities and skills of nurse managers: An exploratory study.Hospital Topics. 2005;83: 2-9.
33. Healthcare Professional. A practical guide to finance and budgeting. 2008 [cited 2012 Jan 1]. Available from http:// www.StrategiesforNurseManagers.com.
34. The Healthcare Leadership Alliance. Overview of the HLA competency directory.2010 [cited 2012 Jan 1]. Available from http://www.healthcareleadershipalliance.org/Overview%20of%20the%20HLA%20Competency%20Directory.
35. McCarthy G, Fitzpatrick JJ. Development of a competency framework for nurse managers in Ireland. J Contin Educ Nurs. 2009; 40(8): 346-350.
36. Chase LK. Nurse manager competencies. 2010[cited 2012 Jan 1]. Available from http://ir.uiowa.edu/etd/2681.
37. Reid UV, Weller B. Nursing human resources planning and management competencies. 2010 [cited 2012 Feb 12]. Available from http://www.icn.ch/publications/free-publications/eProviders
38. Faramnuayphol P, Ekachampaka P, Wattanamano N. In S. Wibulpolprasert (Eds.), Thailand health profile 2008-2010 (pp. 233-309). WVO office of printing mill, War Veterans organization of Thailand: Bangkok, 2011. [in Thai].
39. Sherman RO, Bishop M, Eggenberger T, Karden R. Development of a leadership competency model. J Nurs Admin. 2007; 37(2): 85-94.
40. The American Nurse Association. Recognition of a nursing specialty, approval of a specialty nursing scope of practice statement, and acknowledgment of specialty nursing standards of practice. 2010 [cited 2012 Jan10]. Available from http://www.nursingworld.org/MainMenuCategories/Tools/3-S-Booklet.pdf.

การพัฒนาแบบประเมินสมรรถนะสำหรับหัวหน้าหอผู้ป่วยในโรงพยาบาลชุมชน

กาญจนาณัฐ ทองเมืองธัญเทพ วิภาดา คุณาวิกติกุล เรมวล นันท์ศุภวัฒน์ ฐิติณัฏฐ์ อัคคะเดชอนันต์

บทคัดย่อ : หัวหน้าหอผู้ป่วยที่มีสมรรถนะมีความสำคัญต่อความสำเร็จในการพัฒนาคุณภาพการบริการสุขภาพ ซึ่งโรงพยาบาลชุมชนในประเทศไทยยังไม่มีแบบประเมินสมรรถนะตามหน้าที่สำหรับหัวหน้าหอผู้ป่วย การศึกษานี้มีวัตถุประสงค์เพื่อพัฒนาและประเมินคุณภาพแบบประเมินสมรรถนะสำหรับหัวหน้าหอผู้ป่วยในโรงพยาบาลชุมชน โดยใช้กรอบสมรรถนะหัวหน้าหอผู้ป่วยของสภาการพยาบาลแห่งประเทศไทยปีพ.ศ. 2556 นำมาพัฒนาข้อคำถามสมรรถนะจำนวน 125 ข้อตรวจสอบความเที่ยงตรงเชิงเนื้อหาโดยผู้เชี่ยวชาญ 6 ท่าน ได้ค่าดัชนีความเที่ยงตรงเชิงเนื้อหาทั้งฉบับเท่ากับ .94 และได้แบบประเมินสมรรถนะที่ประกอบด้วยสมรรถนะ 55 ข้อ นำไปหาค่าความเชื่อมั่นกับหัวหน้าหอผู้ป่วยจำนวน 30 คน ได้ค่าสัมประสิทธิ์แอลฟาครอนบาคเท่ากับ .99 แล้วจึงนำไปทดสอบคุณสมบัติการวัดของเครื่องมือกับหัวหน้าหอผู้ป่วยที่ปฏิบัติงานในโรงพยาบาลชุมชนประเทศไทยที่ได้รับการสุ่ม จำนวน 614ราย

จากการวิเคราะห์องค์ประกอบเชิงสำรวจแบบประเมินสมรรถนะสำหรับหัวหน้าหอผู้ป่วยในโรงพยาบาลชุมชน ประกอบด้วย 5 องค์ประกอบ จำนวน52 ข้อคำถาม ได้แก่ 1) ด้านภาวะผู้นำ 2) ด้านการจัดการสิ่งแวดล้อมของการบริการสุขภาพ 3) ด้านการนำนโยบายสู่การปฏิบัติและการสื่อสาร 4) ด้านการจัดการ 5) ด้านจริยธรรมของวิชาชีพ แต่ละองค์ประกอบคิดเป็นร้อยละมากกว่า 60 ของความแปรปรวนทั้งหมด และมีค่าสัมประสิทธิ์แอลฟาของครอนบาค ตั้งแต่ .93 ถึง .96 การทดสอบเครื่องมือโดยวิธีการใช้กลุ่มแตกต่าง 2 กลุ่มระหว่างพยาบาลที่จบใหม่และหัวหน้าหอผู้ป่วย พบว่า มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติ แบบประเมินที่ได้รับการพัฒนามานี้แสดงถึงคุณสมบัติที่มีความเชื่อมั่น ความเที่ยงตรงเชิงเนื้อหา และความเที่ยงตรงเชิงโครงสร้างอยู่ในระดับที่ยอมรับได้ ดังนั้นสามารถนำไปใช้เป็นแบบประเมินสมรรถนะหน้าหอผู้ป่วยในโรงพยาบาลชุมชนในประเทศไทย

Pacific Rim Int J Nurs Res 2015; 19(2) 122-134

คำสำคัญ : โรงพยาบาลชุมชน สมรรถนะ หัวหน้าหอผู้ป่วย การพยาบาลภาวะผู้นำ การทดสอบคุณสมบัติการวัด

***ติดต่อที่ :กาญจนาณัฐ ทองเมืองธัญเทพ**, RN, PhD (Candidate) คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ 160/85 หมู่ 10 ถนนรังสิโยทัย ตำบลวัดไทร อำเภอเมือง จังหวัดนครสวรรค์ 60000 **E-mail:** taknack@yahoo.com*

***วิภาดา คุณาวิกติกุล**, RN, PhD. ศาสตราจารย์, คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ 110 ถนนอินทวโรรส, อำเภอเมือง จังหวัดเชียงใหม่ 50200*
***E-mail:** wipada.ku@cmu.ac.th*

***เรมวล นันท์ศุภวัฒน์**, RN, PhD. รองศาสตราจารย์, คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ 110 ถนนอินทวโรรส, อำเภอเมือง จังหวัดเชียงใหม่ 50200*
***E-mail:** raymouln@yahoo.com*

***ฐิติณัฏฐ์ อัคคะเดชอนันต์**, RN, PhD. ผู้ช่วยศาสตราจารย์, คณะพยาบาลศาสตร์ มหาวิทยาลัยเชียงใหม่ 110 ถนนอินทวโรรส, อำเภอเมือง จังหวัดเชียงใหม่ 50200*
***E-mail:** thitinut.a@cmu.ac.th*