國立陽明大學
NATIONAL YANG-MING UNIVERSITY
Honor Society of Nursing, Sigma Theta Tau International
24th International Nursing Research Congress
Prague, Czech Republic • 22-26 July 2013

Comparison of Nursing Practitioners' Professional Competencies Among Different Evaluation Approaches: Peer-Assessment, Supervisors-Assessment, and Self- Assessment

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Nursing school

Outline

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Nurse Practitioner (NP) System in Taiwan

1984
Chang Gung Hospital
PA

2000
NP Legislative

2005
training program of NP & instructors

2006
Licence examination

Figure 1. The Development of NP System in Taiwan

Nurse Practitioner (NP) System in Taiwan

- NPs play an independent and autonomous role in the USA healthcare systems (Alpert et al. 2002, ACNP 2007)
- In Taiwan, NPs major role is to provide a continuous and integrated medical and nursing care collaboratively with physicians.
- Nurse Practitioner who is an advanced nurse employed in an institution.

Background

- Nurses practitioner(NP) is an **expert of nurse** who is leading advanced nursing professional practice(Hoyt et al., 2010; Michaelene & Mirr Jansen, 2010).

- NPs' have **positive effects** in clinical practice such as **continuity of care**, **increasing patient satisfaction**, **shortening length of stay**, **reducing medical cost**, as well as **reducing readmission rate**(Hoffman, Tasota, Zullo, Scharfenberg, & Donahoe, 2005; Kleinpell, 2005; Kleinpell, Ely, & Grabenkort, 2008; Walsgrove & Fulbrook, 2005).

Background

- Quality of care is related to NPs' providers' **ability to practice**. Assess the NPs' professional competence is important to **ensure the quality of care** (Joint Commission Resources, 2007).

- The competence has been define as a **specific knowledge, skills, an individual attribute** (Axley, 2008; McGee, 2009; McMullan et al., 2003).

Background

- Competence is also defined as **functional adequacy and capacity to integrate knowledge and skills to specific contexts** (Meretoja & Koponen, 2012).

- Professional competence, associated with **job performance and requirement** bases on professional expectation (National Organization of Nurse Practitioner Faculties, NONPF, 2004).

Background

- **Assessment of competence** of practice has been identifies as crucially important in **maintaining professional standards** (Watson, Stimpson, Topping, & Porock, 2002; Yanhua & Watson, 2011).

- However, competence assessment method was current argument about **objectivity** and **comprehensive** for evaluations of competence in clinical practice (Nursing Council of New Zealand, 2011; Yanhua& Watson, 2011).

Background

- Different methods are recommendation to assessment competencies in nurse's include three dimensions, self-assessment, peer assessment, and supervisors assessment (Nursing Council of New Zealand, 2011).
- previous study used **self assessment** (Cowan, Wilson-Barnett & Norman, 2007; Franklin,Carr & Padden, 2008) peer-assessment (Dannefer et al., 2005)；**compare peer assessment and supervisors assessment** (John-Mazza,1997) compare **self-assessment and supervisors assessment** to evaluation nurse competencies (Bahreini et al., 2011；Meretoja & Leino-Kilpi, 2003；Meretoja & Koponen, 2012).

Background

- However, previous study **compare three method** self-assessment, peer-assessment and supervisor-assessment **research was limit**.

- There is also the **limited evidence** on nurses practitioners professional competencies assessment.

Aim of the study

- The aims of this study were to :
  - Investigate NPs professional competencies.
  - Compare the differences and similarities among different approaches.

Methods

Participants Recruitment and sampling

- Study design: a cross-sectional
- Three approaches from four different type of participants to evaluate NPs professional competencies.
  - Self-assessment by NPs
  - **Peer assessment by physician**
  - **Peer assessment by nurses**
  - Supervisors assessment by head nurse
- Sample size was estimate the effect size 0.2 and α.0.05 level of significance.
  - sample size should be 197.

Participants Recruitment and sampling

- The participants were recruited by using a purposive sampling method.

- Total of 211 valid samples were recruited with a response rate of 88% in this study, 31 physicians, 143 nurses, 23 NPs and 14 head nurse.

Instrument development

- **Self-development** questionnaire: based on Taiwan Nurses Practitioner Association guideline **contained five dimensions 45 items**
  - **NP role identity**
  - **Direct patient care**
  - Nursing and health teaching
  - Communication and collaboration
  - Monitoring quality of patient care
- The level of competence was measured using a five-point Likert scale. The higher scores indicating greater professional competencies.

Instrument Development

- **Validity**：Content Validity Index (CVI) was calculated in decide the CVI was 0.91.
  - Expert were invited to the content validity three certificate NP instructors
  - The expert rated the relevance and clarity of each item using a 4-point Likert scale.
- **Reliability**：assessed by Cronbach's alpha coefficients in the total scale were 0.93 indicating a good internal consistence.

Data collection and Data analysis

- Data collected from October 2011 to 2012 January, in a **teaching hospital in eastern Taiwan**
- Data were analyzed using SPSS (version 15.0) statistical software.
- Descriptive statistics were used included
  - frequency, percentage, mean and standard deviation.
  - One way ANOVA and Scheffes' post hoc analysis were used to comparing the professional competencies among three different approaches from four type of participants.

Result

Table1. General demography of the participants

Variable	Total (N=211)		Physician (n=31)		Nurses (n=143)		NPs (n=23)		Head nurse (n=14)	
	n	%	n	%	n	%	n	%	n	%
Gender										
Male	34	16.1%	28	90.3%	4	2.9%	2	8.7%	0	0%
Female	177	83.9%	3	9.7%	139	97.1%	21	91.3%	14	100%
Education										
college	117	55.5%	0	0%	96	67.1%	21	**91.3%**	0	0%
Bachelor	85	40.3%	22	71.0%	47	32.9%	2	8.7%	14	100%
Master	9	4.2%	9	29.0%	0	0%	0	0%	0	0%
Work unit										
medical	112	53.1%	17	54.8%	77	53.8%	10	43.5%	8	57.1%
Surgeon	52	24.6%	12	38.7%	28	19.6%	8	34.8%	4	28.6%
GYN &Ped	31	14.7%	2	6.5%	24	16.8%	3	13.0%	2	14.3%
ER	16	7.6%	0	.0%	14	9.8%	2	8.7%	0	0%

Result

Continuous Table 1

variable	Total (N=211)		physician (n=31)		Nurses (n=143)		NPs (n=23)		Head nurse (n=14)	
	n	%	n	%	n	%	n	%	n	%
Age										
20-25	25	11.8%	0	0%	25	17.5%	0	0%	0	0%
26-30	69	32.7%	7	22.6%	54	37.8%	8	34.8%	0	0%
31-35	64	30.3%	5	16.1%	43	30.0%	12	52.2%	4	28.6%
36-40	36	17.1%	8	25.8%	15	10.5%	3	13.0%	10	71.4%
41-45	9	4.3%	5	16.1%	4	2.8%	0	0%	0	0%
46-50	3	1.4%	2	6.5%	1	0.7%	0	0%	0	0%
≧51	5	2.4%	4	12.9%	1	0.7%	0	0%	0	0%
Work experience										
≦1years	41	20.8%	8	25.8%	31	21.7%	2	8.7%	0	.0%
2-5years	90	45.7%	12	38.7%	65	45.4%	13	56.5%	4	28.6%
6-10years	51	25.9%	7	22.6%	39	27.3%	6	26.1%	9	64.3%
11-15years	6	3.0%	0	0%	3	2.1%	2	8.7%	1	7.1%
≧15years	9	4.6%	4	12.9%	5	3.5%	0	0%	0	0%
Clinical ladder										
N	11	6.1%	0	0%	10	7.0%	1	4.5%	0	0%
N1	62	34.6%	0	0%	57	39.9%	5	22.7%	0	0%
N2	76	42.5%	0	0%	67	46.8%	9	40.9%	0	0%
N3	24	13.4%	0	0%	8	5.6%	7	31.8%	9	64.3%
N4	6	3.4%	0	0%	1	0.7%	0	0%	5	35.7%

Result

Table 2. NPs professional competencies

competence	NP $M \pm SD$	physician $M \pm SD$	nurse $M \pm SD$	head nurses $M \pm SD$	Total $M \pm SD$
NP role identity	3.13±.57	3.73±.53	3.31±.60	2.66±.86	3.34±.63
Direct patients care	3.65±.44	3.86±.52	3.48±.48	2.92±.75	Highest 3.55±.53
Communication & collaboration	Highest 3.73±.54	4.12±.60	3.37±.73	2.69±1.09	3.54±.77
Nursing & health teaching	3.49±.58	3.73±.64	3.35±.67	2.64±1.12	3.42±.69
Monitoring quality of patient care	3.51±.67	3.59±.72	3.24±.72	2.38±1.32	lowest 3.30±.82
Total	3.51±.49	Highest 3.83±.49	3.38±.55	lowest 2.64±.93	3.45±.59

Result

Table 3. Analysis of variance compare difference approach evaluations NPs competencies

Competence/ evaluations	1. NP $M \pm SD$	2.physician $M \pm SD$	3. nurse $M \pm SD$	4. head nurses $M \pm SD$	Total $M \pm SD$	F value	Scheffe'
NP role identity	3.13±.57	3.73±.53	3.31±.60	2.66±.86	3.34±.63	8.31***	2>1, 3, 4
Direct patients care	3.65±.44	3.86±.52	3.48±.48	2.92±.75	3.55±.53	9.43***	2>3, 4
Communication & collaboration	3.73±.54	4.12±.60	3.37±.73	2.69±1.09	3.54±.77	13.13***	2>3, 4
Nursing & health teaching	3.49±.58	3.73±.64	3.35±.67	2.64±1.12	3.42±.69	5.71**	1,2>4
Monitoring quality of patient care	3.51±.67	3.59±.72	3.24±.72	2.38±1.32	3.30±.82	5.33*	1, 2>4
Total	3.51±.49	3.83±.49	3.38±.55	2.64±.93	3.45±.59	10.07***	1, 2, 3>4

* p<.05.** p<.01.***p<.001.

1=self-assessment by NPs ; 2=Peer-assessment by physician
3=Peer-assessment by nurses; 4=Supervisors-assessment by head nurse

Discussion & Conclusion

- This study aimed to understanding NPs competencies and to compare the difference assessment and similarities among different approaches.
- As the result of different approaches from different participants to evaluation NPs professional competencies.
- NPs had moderate degree of professional competence, In direct patients care competencies was highest, and the lowest in monitoring quality of patient care.

Discussion & Conclusion

- Due to differences expectations in the NPs, evaluation professional competencies somewhat significantly (Sung, Yi, Kwon & Cho, 2008; Fang & Tung, 2010).
- Head nurse supervisors more expectation with NPs role in clinical practice, therefore, supervisor-assessment approach lowest other approaches.

Discussion & Conclusion

- Based on our finding, we suggests that evaluation by patients be considered as one of the evaluation methods
- multi-methods should be used to could be more the objectivity and comprehensively understand NPs' professional competencies.

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Thank you for your attention