

A Relationship between Teaching Self-efficiency and Cultivating Ability of Core Competency for Clinical Nursing Preceptors

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Abstract

Nursing clinical internship should be focused on cultivation of core competencies to learn clinical skills. Clinical nursing preceptors play a key element to apply self-efficiency in student effective learning. Purposes of this study are to investigate teaching self-efficiency of clinical nursing preceptors and the relationship between teaching self-efficiency and cultivating ability of core competencies. A cross-sectional survey was conducted for nursing preceptors employed by nursing universities and junior high school in 2016. A self-compiled structured questionnaire was developed after literatures' review. Content validity and reliability were established. Data were collected by hard copies and on-line questionnaires respectively. A total of 206 questionnaires returned effectively. Descriptive statistics, correlations and multiple stepwise regressions were used to analyze data. Results showed that the mean score of teaching self-efficiency of clinical nursing preceptors was 4.40, and the mean score of cultivating ability of core competency was 4.43. Communication, method and strategy, evaluation, leaning assistance and creating teaching environment of teaching self-efficiency were significantly predictive impact factors to predict the cultivating ability of core competencies. Results of this study can provide references for programs of educational trainings for clinical nursing preceptors and the reform of clinical nursing education.

Keywords: Clinical nursing preceptor, Teaching self-efficiency, Cultivating ability of core competency

Introduction

Knowledge and experiences of nursing caring for patients need to be continuously updated and changed for the rapid transformation of medical technology, social environment and disease patterns. Caregivers are required to make and a complete care plan and implement relative activities to solve difficult and complex disease problems in accordance with patient needs [1]. Nursing care is a special profession that connected with clinical practice skills, and clinical practice internship has always been an important core course of nursing education. It helps students combine theory with practice, increase the ability of critical thinking and clinical decision-making, finally to make commitments to the nursing specialty [2-3]. Clinical practice internship can also stimulate

enthusiasm for care, experience the importance and value of life, extend to emotional exchanges of the families of patients and peer support to jointly complete the care work of patients. Although the academic system of nursing education is different, they all have clinical practice internships in various clinical departments as the preparation of nursing students before they graduate to reduce the realistic impact after entering the work workplace, so that they can become excellent members of the medical team in the future [4]. The clinical nursing preceptor plays the most important role in the teaching of clinical practice internship, which can provide direct and real-time help for the learning needs of nursing students, in addition to improving the independent judgment of nursing students and the ability of technical operation, and also make contributions to the clinical adaptation of nursing students and the socialization of professional roles [5-7]. Professional skill, teaching knowledge, teaching attitude of clinical nursing preceptor are important keys to the effectiveness of internship learning. Teachers' teaching belief will affect their teaching behavior, and teaching behavior will affect teaching effectiveness, and the effectiveness will affect students' learning achievement [8-10]. Most of the current clinical nursing preceptors are transferred from clinical institutes or part-time teachers in the summer and winter break. The quality of teaching effectiveness is different from these clinical nursing preceptors because that they did not receive complete teaching educations and trainings, although they are full of enthusiasms. In order to achieve learning goals of nursing students, clinical nursing preceptors should recognize their teaching beliefs of self-efficacy to improve their teaching abilities. Purposes of this study are to investigate teaching self-efficiency of clinical nursing preceptors and the relationship between teaching self-efficiency and cultivating ability of core competencies.

Literature Review

A. Teaching self-efficiency

The self-efficacy is a person's belief in his or her ability to complete performance in a particular situation. These beliefs are determinants of how people think and behave [11-12]. The self-efficacy can have an impact on motivation and behavior. The belief in our own ability to succeed plays a role in how we think, how we act, and how we feel. Teaching self-efficacy determines what teaching goals we choose to pursue, how we

teach about accomplishing those goals, and how we reflect upon our own cultivating ability. Teachers with good self-efficacy to achieve high-performance can stimulate effective learning and help students to get more confidence and less anxious for learning [13-14]. In this study, we define teaching self-efficiency as self-efficacy which is the belief that nursing clinical nursing preceptor has the teaching ability to influence the student's performance, and applies the ability on teaching to evaluate the level of achieving the teaching goal.

B. Cultivating ability of core competencies

The focus of clinical nursing education is to guide students to get meaningful learning experience, to appreciate the value of nursing care, to learn the ability to solve problems, to respect the value of life, and to become a responsible nursing caregiver. Taiwan Nursing Accreditation Council (TNAC) recognizes required core competencies, which include basic biomedical science knowledge, critical thinking and reasoning, general clinical skills, communication and team work capability, accountability, caring, ethics, and life-long learning, to be standards for evaluating nursing students' clinical learning [15-17]. Through a variety of curriculum with a perfect practice environment and a good leading guide of clinical nursing preceptors, nursing students can be promoted in the internship to achieve the goal of practice, to develop a positive identity for nursing, and to apply the theory in clinical practice. In the process of nursing students' internship, the clinical nursing preceptor plays a very important role to demonstrate and guide nursing students practicing the care skills repeatedly, and constantly revise the mistakes and bad techniques in order to achieve standards of practices. In our study, we use these eight core competencies from TNAC to evaluate cultivating ability of clinical nursing preceptors.

Methods

A. Samples

Clinical nursing preceptors employed by nursing departments of junior high school and University were our study population. The study project was approved by National Cheng Kung University Governance Framework for Human Research Ethics to protect rights of subjects. Preceptors from 12 schools were agreed to participate in our study. Data were collected by hard copies and online questionnaires. A total recovery rate was 53.92%, as shown in Table I.

Table I
 A demonstration of questionnaires collected

Questionnaire From	Distributed number	Collected number	Valid number	Returned rate
Hard copy	175	155	152	86.85%
Online	207	58	54	26.08%
Total	382	213	206	53.92%

B. Measurement

A cross-sectional survey was used to investigate teaching self-efficiency and cultivating ability of core competencies. Teaching self-efficiency was measured by teaching preparation, teaching method and strategy, evaluation, professional accountability, creating teaching environment, communication,

and leaning assistance. Self-evaluations of cultivating ability concludes core competencies with basic biomedical science knowledge, critical thinking and reasoning, general clinical skills, communication and team work capability, accountability, caring, ethics, and life-long learning. Research variables were listed in the Table II. Items of variables were evaluated by 5 point Likert scale. The content validity was established by Content Validity Index (CVI) = 1.00. Cronbach's α was 0.95 for self-efficiency and Cronbach's α was 0.94 for cultivating ability of core competencies.

Table II
 A list of research variables

Teaching self-efficiency (T)	Cultivating ability of core competencies (C)
T1. Preparation	C1. Basic biomedical science knowledge
T2. Method and strategy	C2. Critical thinking and reasoning
T3. Evaluation	C3. General clinical skills
T4. Professional accountability	C4. Communication and team work capability
T5. Creating teaching environment	C5. Accountability
T6. Communication	C6. Caring
T7. Learning assistance	C7. Ethics
—	C8. Life-long learning

C. Statistical Analysis

Data was analyzed by the SPSS 22.0 statistical software after collection. Descriptive Statistics was used to describe distributions of demographic characteristics. Pearson correlation was used to explore the relationship between teaching self-efficiency and cultivating ability of core competencies. A multiple stepwise regression was used to predict impact factors of cultivating ability of core competencies.

Results

Most clinical nursing preceptors were female (97.6%), under 40 years old (58.3%), with undergraduate degree (57.3%), with clinical teaching experience over 10 years (31.6%), with nursing clinical working experience 5-9 years (31.6%). Most respondents replied on the average number of students supervised per time was over 8 students (60.2%) and supervised students in one location (58.7%). Details were shown in Table III.

Table III
 Distributions of demographic variables

Variables	Group	Number	Percentage(%)
Gender	Female	201	97.6
	Male	5	2.4
Age	≥ 40 yrs	86	41.7
	< 40 yrs	120	58.3
Nursing education	Undergraduate	118	57.3
	Graduate	88	42.7
Clinical teaching experience	< 3 yrs	44	21.4
	3~5 yrs	53	25.7
	6~10 yrs	44	21.4

	>10 yrs	65	31.6
	1~4 yrs	47	22.8
Nursing clinical working experience	5~9 yrs	65	31.6
	10~14 yrs	46	22.3
	>15 yrs	48	23.3
Average number of students supervised per time	6~7	82	39.8
	≥8	124	60.2
Stability of internship supervision locations	One place	121	58.7
	Rotation in 2 places	68	33.0
	Rotation ≥ 3 places	17	8.3

Mean scores of teaching self-efficiency were demonstrated in Table IV. The best belief of teaching self-efficiency was the professional accountability (mean=4.49), and the worst belief of teaching self-efficiency was communication. A mean score of total teaching belief was 4.40.

TABLE IV
 Scores of Teaching Self-efficiency

Teaching Self-efficiency (T)	Mean	S.D.
T1. Preparation	4.47	0.51
T2. Method and strategy	4.40	0.43
T3. Evaluation	4.42	0.49
T4. Professional accountability	4.49	0.50
T5. Creating teaching environment	4.47	0.56
T6. Communication	4.08	0.56
T7. Leaning assistance	4.48	0.47
A total score of teaching self-efficiency	4.40	0.43

Mean scores of cultivating ability of core competencies were showed in Table V. The best cultivating ability of core competencies was general clinical skills (mean=4.60), and the worst cultivating ability of core competencies was life-long learning (mean=4.32). A mean score of total cultivating ability of core competencies was 4.43.

TABLE V
 Scores of Cultivating Ability of Core Competencies

Cultivating ability of core competencies (P)	Mean	S.D.
P1. Basic biomedical science knowledge	4.35	0.52
P2. Critical thinking and reasoning	4.43	0.51
P3. General clinical skills	4.60	0.49
P4. Communication and team work capability	4.45	0.52
P5. Accountability	4.45	0.56
P6. Caring	4.53	0.52
P7. Ethics	4.38	0.58
P8. Life-long learning	4.32	0.53
A total score of cultivating ability of core competencies	4.43	0.51

Pearson correlation coefficients of all variables were

significant. The Teaching self-efficiency and the cultivating ability of core competencies were highly correlated ($r=0.851$). Teaching self-efficiency about preparation, method and strategy, evaluation, professional accountability, and leaning assistance were highly correlated with the cultivating ability of core competencies ($r>0.7$).

TABLE VI
 Relationships between teaching self-efficiency and cultivating ability of core competencies

Variables	T1	T2	T3	T4	T5	T6	T7	T(Total)
C1	.688**	.701**	.709**	.672**	.540**	.538**	.701**	.783**
C2	.666**	.735**	.728**	.676**	.545**	.560**	.724**	.799**
C3	.515**	.540**	.576**	.570**	.458**	.407**	.606**	.626**
C4	.638**	.661**	.699**	.650**	.554**	.603**	.730**	.776**
C5	.597**	.617**	.617**	.569**	.557**	.552**	.672**	.712**
C6	.590**	.629**	.609**	.600**	.567**	.490**	.653**	.704**
C7	.537**	.576**	.596**	.496**	.526**	.530**	.572**	.654**
C8	.517**	.553**	.558**	.533**	.420**	.485**	.542**	.621**
C(Total)	.713**	.752**	.764**	.717**	.624**	.620**	.781**	.851**

Table VII showed results of the stepwise multiple regression analysis. Communication, method and strategy, evaluation, leaning assistance and creating teaching environment of teaching self-efficiency were significantly predictive impact factors of cultivating ability of core competencies.

Table VII
 A stepwise multiple regression analysis of predictors of cultivating ability of core competencies

Independent variable	B	s.e.	t	p	VIF
Constant	.446	.167	2.678	.008	
T6. Communication	.363	.049	7.359	.000	2.190
T2. Method and strategy	.193	.064	3.028	.003	3.701
T3. Evaluation	.177	.063	2.806	.006	3.925
T7. Leaning assistance	.092	.037	2.492	.013	1.708
T5. Creating teaching environment	.083	.038	2.197	.029	1.779

B: regression coefficient

Independent variable: Cultivating ability of core competency

$R^2=0.747$, $F=117.905$, $p=0.000$

Conclusions and Suggestions

Results of this study showed that communication, method and strategy, evaluation, leaning assistance and creating teaching environment of teaching self-efficiency were significantly predictive impact factors of cultivating ability of core competencies. The effectiveness of internships should be aimed at clinical nursing preceptors' beliefs to implement communication, method and strategy, evaluation, leaning assistance and creating teaching environment in the internship curriculum. Clinical nursing preceptors should be flexible to use different strategies and methods, construct the clinical curriculum of creative thinking, and provide teamwork opportunities to reach standards. Training program of clinical nursing preceptors should include sharing of teaching and practical experience looking teaching resources to develop abilities and skills for

creating teaching environment and communication. Clinical teaching should be improved for nursing internship to teach students combining theories and skills in the process of practice, and to increase students' critical thinking and clinical decision-making.

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