

Effects of Self-Achievement and Academic Self-Efficacy on Professional Self-Concept Targeting Nursing Students

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Abstract: This study investigated the influence factors on professional self-concept of nursing students focused in self-factors such as self-achievement, academic self-efficacy. Data collection was conducted through self-report questionnaires from September 7, 2015 to October 30, 2015. The subjects were 169 nursing students using convenient sampling method. Data were analyzed using stepwise multiple regression analysis. The results showed that self-achievement ($\beta = 0.407$, $p < 0.001$), academic self-efficacy ($\beta = 0.267$, $p < 0.001$) and satisfaction on major ($\beta = 0.220$, $p = 0.001$) were significant factors in the professional self-concept. These variables accounted for 53.8% of professional self-concept. It is meaningful that self-achievement and academic self-efficacy affects professional self-concept of nursing students. Therefore, to facilitate professional self-concept of nursing students, self-achievement and academic self-efficacy should be increased by efficient management and intervention.

Key words: Self-achievement, academic self-efficacy, professional self-concept, nursing, student, satisfaction

INTRODUCTION

It is difficult to recruit nurses in conditions lack of staff. This situation may reduce the quality of health care and may further affect patient safety (Duffield *et al.*, 2012). Therefore, it is important to maintain and manage the nursing staff for the stability and development of health nursing. As the reasons for the nurse's departure are physical and economic aspects but the psychological and social environment is also very important (Li *et al.*, 2010), it is necessary for the nurses to clearly demonstrate their role and to appropriately support them so that they can do their best in the workplace (Duffield *et al.*, 2012). In other words, if the role of the nurse is unclear or there is a dispute about the role, the nurse is more likely to leave the job (O'Brien-Pallas *et al.*, 2010). Especially, new nurses may be more vulnerable to this situation because they are immature in their research.

People with a healthy professional self-concept are not only highly productive but also highly satisfied with their job, since, professional self-concept is the faith that individuals possess the competencies eligible for the roles and anticipations of the specialized job (Cowin *et al.*, 2008). According to previous studies, professional self-concept was deeply related to career decision making of nursing students (Badiyepeyma *et al.*, 2014) and it was

one of the reasons why nurses were to leave the job (Kelly and Courts, 2007). Thus, it is essential to steadily develop the professional self-concept from nursing students.

Looking at the previous literature, professional self-concept is affected academic system, educational provision and support, professional advancement (Kelly and Courts, 2007) as external factors while evaluation, respect, esteem, acceptance to myself (Arthur and Thorne, 1998) as internal factors. But, there were little studies on correlation of self-achievement, academic self-efficacy and professional self-concept targeting nursing students focused on self-factors.

Therefore, this study establishes a foundation for improving nursing professional values of nursing students by investigating the relations between self-achievement, academic self-efficacy and professional self-concept focused on self-factors. The concrete goals of this study are as follows: grasp level of subject's self-achievement, academic self-efficacy, professional self-concept, explore self-achievement, academic self-efficacy, professional self-concept depending on subject's general characteristics, verify relation of subject's self-achievement, academic self-efficacy and professional self-concept, identify key factors in the subject's professional self-concept.

MATERIALS AND METHODS

Study design: A descriptive and cross-sectional methods design was used in this study.

Participants: The study sample was 169 university students. When the G*Power program was used, specifying $p < 0.05$, power of 0.95, effect size 0.15 (medium) by linear multiple regression, a sample size of 166 was required. Thus, the sample of 169 offered enough power to confirm significant effects with a linear multiple regression. We informed the aims and means of this study minutely and gave an account of the side-effects on this study. In addition, the subjects completely were notified that they could quit the tests anytime. We got the informed consent on the research from participants.

Instruments

Self-achievement: The self-achievement rating scale is comprised of aggregate 17 items by 5-point Likert scale (Moon, 2010). The bounds of sum are 17~85 points. The internal consistency coefficient of self-achievement was Cronbach's $\alpha = 0.869$.

Academic self-efficacy: Academic self-efficacy is a self-report scale (Kim and Park, 2001). This scale is made up of 28 details which is scored from 1 point to 6 points. The bounds of sum are 28~168 points. The internal consistency coefficient of academic self-efficacy was Cronbach's $\alpha = 0.739$.

Professional self-concept: This questionnaire used a 4-point Likert scale (1~4) (Arthur, 1990; Sohng and Noh, 1996). Questions comprised 27 items. The internal consistency coefficient of professional self-concept was Cronbach's $\alpha = 0.756$.

Data analysis: Data analysis was handled by SPSS 23.0 statistical program. The correlations among variables such as self-achievement, academic self-efficacy and professional self-concept were analyzed by Pearson's correlation coefficient. The relations between categorical variables and outcome variables were analyzed via independent t-test, one-way ANOVA and Scheffe's test. To verify the factors that influence professional self-concept, stepwise multiple regression was utilized.

RESULTS AND DISCUSSION

General and circle activity characteristics of subjects: The sample included 169 nursing students as seen in

Table 1: General and circle activity properties (N = 169)

| Characteristics/Categories | n (%) or M±SD |
|--|---------------|
| Age (years)/Religion | 22.07±1.09 |
| Yes | 75 (44.4) |
| No | 94 (55.6) |
| Health status | |
| Good | 104 (61.5) |
| Common | 63 (37.3) |
| Bad | 2 (1.2) |
| Interpersonal relationships | |
| Good | 106 (62.7) |
| Common | 62 (36.7) |
| Bad | 1 (0.6) |
| Entrance motive | |
| High employment rate | 47 (27.8) |
| Recommendation by parent and teacher | 39 (23.1) |
| Appropriate aptitude | 37 (21.9) |
| Good image and experience on nurse | 15 (8.9) |
| High school record | 14 (8.3) |
| Have a service job | 6 (3.6) |
| Others | 11 (6.4) |
| Satisfaction on university life | |
| Common | 64 (37.9) |
| A little unsatisfied | 21 (12.4) |
| Very unsatisfied | 4 (2.3) |
| Very satisfied | 18 (10.7) |
| A little satisfied | 62 (36.7) |
| Satisfaction on major | |
| Common | 50 (29.6) |
| A little unsatisfied | 15 (8.9) |
| Very unsatisfied | 2 (1.1) |
| Circle activity | |
| Up to date | 29 (17.2) |
| Before | 119 (70.4) |
| Not at all | 21 (12.4) |
| Contents | |
| Service | 82 (55.4) |
| Study | 22 (14.9) |
| Hobby | 12 (8.1) |
| Culture or art | 10 (6.8) |
| Sports | 10 (6.8) |
| Religion | 8 (5.4) |
| Others | 4 (2.6) |

Table 1. The average age of subjects was 22.07 years. The majority of subjects was no religion (n = 94, 55.6%), good health status (n = 104, 61.5%), good interpersonal relationships (n = 106, 62.7%), entrance because of high employment rate (n = 47, 27.8%), common satisfaction on university life (n = 64, 37.9%), a little satisfaction on major (n = 66, 39.1%). The majority of subject's circle activity was before (n = 119, 70.4%), social service (n = 82, 55.4%).

Level of self-achievement, academic self-efficacy and professional self-concept: The level of self-achievement, academic self-efficacy and professional self-concept in nursing students was equal to Table 2. The scores of self-achievement, academic self-efficacy and professional self-concept were 3.81 points out of 5, 3.78 points out of 6 and 2.86 points out of 4, respectively.

Table 2: Self-achievement, academic self-efficacy, professional self-concept according to general and circle activity characteristics (N = 169)

| Variables/Categories | Self-achievement | | Academic self-efficacy | | Professional self-concept | |
|--|------------------|-------------------|------------------------|-------------------|---------------------------|-------------------|
| | Mean±SD | t or F(p) Scheffe | Mean±SD | t or F(p) Scheffe | Mean±SD | t or F(p) Scheffe |
| Religion | | | | | | |
| Yes | 3.90±0.42 | 2.588 | 3.83±0.57 | 0.962 | 2.92±0.28 | 2.484 |
| No | 3.73±0.44 | (0.011) | 3.75±0.57 | (0.337) | 2.81±0.31 | (0.014) |
| Good ^a | 3.89±0.40 | 5.529 | 3.87±0.54 | | 2.91±0.30 | 5.111 |
| Health status | | | | | | |
| Common ^b | 3.67±0.46 | (0.005) | 3.66±0.58 | 4.143 | 2.77±0.30 | (0.007) |
| Bad ^c | 3.62±0.29 | a>b | 3.14±0.35 | (0.018) | 2.57±0.03 | a>b |
| Good | 3.90±0.39 | | 3.95±0.57 | | 2.94±0.28 | |
| Interpersonal relationships | | | | | | |
| Common | 3.67±0.46 | 7.631 | 3.51±0.43 | 14.819 | 2.71±0.29 | 13.117 |
| Bad | 2.94±0.00 | (0.001) | 3.04±0.00 | (<0.001) | 2.56±0.00 | (<0.001) |
| High employment rate | 3.71±0.49 | | 3.72±0.56 | | 2.81±0.27 | |
| Recommendation | | | | | | |
| by parent and teacher | 3.77±0.43 | | 3.80±0.56 | | 2.79±0.31 | |
| Appropriate aptitude | 4.01±0.34 | 2.502 | 3.86±0.53 | 1.540 | 2.98±0.27 | 4.392 |
| Entrance motive | | | | | | |
| Good image and | | | | | | |
| experience on nurse | 4.00±0.38 | (0.011) | 4.15±0.66 | (0.138) | 3.07±0.31 | (<0.001) |
| High school record | 3.58±0.31 | | 3.56±0.47 | | 2.67±0.22 | |
| Have a service job | 3.97±0.44 | | 3.63±0.36 | | 2.98±0.07 | |
| Others | 3.62±0.38 | | 3.76±0.67 | | 2.76±0.34 | |
| Very satisfied ^a | 4.02±0.46 | | 4.13±0.49 | | 2.97±0.33 | |
| A little satisfied ^b | 3.97±0.35 | 8.074 | 3.91±0.51 | 6.216 | 2.98±0.27 | 8.071 |
| Satisfaction on university life | | | | | | |
| Common ^a | 3.69±0.44 | (<0.001) | 3.71±0.59 | (<0.001) | 2.79±0.29 | (<0.001) |
| A little unsatisfied ^d | 3.53±0.37 | a>d | 3.38±0.39 | a,b>d | 2.64±0.24 | a>d |
| Very unsatisfied ^a | 3.56±0.40 | b>c,d | 3.61±0.77 | | 2.66±0.22 | b>c,d |
| Very satisfied ^b | 4.14±0.38 | | 4.17±0.37 | | 3.09±0.28 | |
| A little satisfied ^b | 3.87±0.36 | 15.622 | 3.84±0.61 | 10.187 | 2.93±0.25 | 21.129 |
| Satisfaction on major | | | | | | |
| Common ^a | 3.60±0.39 | (<0.001) | 3.57±0.48 | (<0.001) | 2.69±0.22 | (<0.001) |
| A little unsatisfied ^d | 3.53±0.42 | a>b>c,d,e | 3.44±0.42 | a>b,c,d | 2.54±0.27 | a,b>c,d |
| Very unsatisfied ^a | 3.00±0.00 | | 3.05±0.68 | | 2.54±0.13 | |
| Up to date | 3.85±0.41 | | 3.82±0.44 | | 2.87±0.28 | |
| Circle activity | | | | | | |
| Before | 3.83±0.42 | 1.781 | 3.80±0.57 | 1.155 | 2.86±0.30 | 0.278 |
| Not at all | 3.64±0.56 | (0.172) | 3.61±0.70 | (0.318) | 2.81±0.37 | (0.757) |
| Service | 3.77±0.38 | | 3.77±0.49 | | 2.84±0.27 | |
| Study | 4.01±0.43 | | 4.08±0.68 | | 3.03±0.33 | |
| Hobby | 3.67±0.47 | | 3.57±0.61 | | 2.71±0.33 | |
| Contents | | | | | | |
| Culture or art | 3.96±0.52 | 1.527 | 3.86±0.52 | 1.396 | 2.83±0.34 | 2.169 |
| Sports | 3.83±0.47 | (0.163) | 3.90±0.51 | (0.212) | 2.96±0.31 | (0.040) |
| Religion | 4.02±0.26 | | 3.74±0.50 | | 2.89±0.20 | |
| Others | 3.82±0.41 | | 3.54±0.64 | | 2.59±0.16 | |
| Total | 3.81±0.44 | | 3.78±0.57 | | 2.86±0.30 | |

**Significant values

Level of self-achievement, academic self-efficacy and professional self-concept: There was a significant difference depending on the religion ($t = 2.588, p = 0.011$), health status ($F = 5.529, p = 0.005$) interpersonal relationships ($F = 7.631, p = 0.001$), entrance motive ($F = 2.502, p = 0.011$), satisfaction on university life ($F = 8.074, p < 0.001$), satisfaction on major ($F = 15.622, p < 0.001$) in self-achievement of subjects. There was a statistically significant difference depending on the health status ($F = 4.143, p = 0.018$) interpersonal relationships ($F = 14.819, p < 0.001$), satisfaction on university life ($F = 6.216, p < 0.001$), satisfaction on major ($F = 10.187, p < 0.001$) in academic self-efficacy.

There was a significant difference according to the religion ($t = 2.484, p = 0.014$), health status ($F = 5.111, p = 0.007$) interpersonal relationships ($F = 13.117, p < 0.001$), entrance motive ($F = 4.392, p < 0.011$), satisfaction on university life ($F = 8.071, p < 0.001$), satisfaction on major ($F = 21.129, p < 0.001$), contents of circle activity ($F = 2.169, p = 0.040$) in professional self-concept of subjects as seen in Table 2.

Correlation among self-achievement, academic self-efficacy, professional self-concept: The correlation of self-achievement, academic self-efficacy and professional self-concept in nursing students was equal to Table 3.

Table 3: Correlation among self-achievement, academic self-efficacy, professional self-concept (N = 169)

| Variables | Self-achievement | Academic self-efficacy | Professional self-concept |
|---------------------------|------------------|------------------------|---------------------------|
| Self-achievement | 1 | | |
| Academic self-efficacy | 0.617(<0.001) | 1 | |
| Professional self-concept | 0.666(<0.001) | 0.612(<0.001) | 1 |

Table 4: Factors influencing on professional self-concept (N = 169)

| Variables | B | β | SE | t-values | p-values |
|------------------------|-------|---------|-------|----------|----------|
| Self-achievement | 0.281 | 0.407 | 0.052 | 5.368 | <0.001 |
| Academic self-efficacy | 0.142 | 0.267 | 0.039 | 3.647 | <0.001 |
| Satisfaction on major | 0.072 | 0.220 | 0.022 | 3.284 | 0.001 |

Constant = 0.972, F(p) = 52.060 (<0.001), R² = 0.538

The academic self-efficacy represented a statistically significant relation with academic achievement ($r = 0.617$, $p < 0.001$). The professional self-concept represented a statistically significant relation with academic achievement ($r = 0.666$, $p < 0.001$) and academic self-efficacy ($r = 0.612$, $p < 0.001$).

Factors of professional self-concept: To identify the factors of professional self-concept on nursing students, the general and circle activity variables which affected professional self-concept (religion, health status interpersonal relationships, entrance motive, satisfaction on university life, satisfaction on major, contents of circle activity) and academic achievement, academic self-efficacy which represented a statistically significant relation with professional self-concept were performed by regression analysis. Stepwise multiple regression analysis revealed self-achievement ($\beta = 0.407$, $p < 0.001$), academic self-efficacy ($\beta = 0.267$, $p < 0.001$) and satisfaction on major ($\beta = 0.220$, $p = 0.001$) to be significant predictors of professional self-concept in nursing students. These variables accounted for 53.8% of professional self-concept as seen in Table 4.

This study was intended to establish an educational program that aimed at promoting professional self-concept by identifying the relationship of self-achievement, academic self-efficacy, professional self-concept and verifying factors that affect professional self-concept targeting nursing students.

The mean scores for self-achievement, academic self-efficacy, professional self-concept were above the average with the value of 3.81, 3.78 and 2.86. Particularly, the professional self-concept of nursing students on this study was lower than nurses with the value of 3.07 (Badiyepyma *et al.*, 2014) and was similar to Iran nursing students with the value of 2.73 (Poorgholami *et al.*, 2016). Thus, efforts should be made to plan and apply various programs such as capstone courses internship as well as clinical practice, so that, nursing students experience the situation on the field. In addition as new nurses are more likely to leave if they lack experience in the workplace

(Lavoie-Tremblay *et al.*, 2008), persistent effort is needed for promoting professional self-concept to nurses utilizing a variety of education programs by hospitals or nursing agencies in order to don't change jobs.

There was a significant difference depending on religion, health status interpersonal relationships, entrance motive, satisfaction on university life, satisfaction on major, contents of circle activity in professional self-concept of nursing students. In previous literatures, it was similar to results as religion (Sohng and Noh, 1996), health status interpersonal relationships (Hensel, 2011). And it is meaningful that contents of circle activity affect professional self-concept in nursing students. As a result of Scheffe' test, there was no difference among the groups according to the contents of the circle activities. But nursing students who are engaged in study, sports, religious and service circle activities have high professional self-concepts, so, nursing students need to be encouraged to continue these activities. I think, we should provide alternative opportunities for new nurses to promote professional self-concept through club activities in the workplace like nursing student's circles. And in order to compare with the results of this study, further studies to clarify the relation of circle activity and professional self-concept should be repeatedly performed.

The data of this study showed significant links between nursing student's self-achievement, academic self-efficacy and professional self-concept. It is uncommon to find study which confirm the direct relations of academic achievement, academic self-efficacy, professional self-concept. But as self-concept played key role to influence individual behaviors (Wang *et al.*, 2011), the results of this study are in agreement with the opinion that self-enhancing ego awareness was positively involved in achievement and self-views (Skaalvik, 1997). Therefore, nursing students should be provided with a variety of experiences and situations to improve self-achievement such as classes assignments, presentations, clinical practice and circle activities. Eventually, this opportunity of acquisition on self-achievement will improve the professional self-concept. Also, self-efficacy is a perceived evaluation of individual capabilities which conduct a prospective fulfillment by past executions (Bong and Clark, 1999) and as previously stated, professional self-concept is concerned with self-evaluation, self-respect and self-esteem (Arthur and Thorne, 1998). Judging from these findings, the significant correlation between self-academic self-efficacy and professional self-concept of nursing students in this study is similar to context of the previous literature. In other words, if the academic self-efficacy is improved, the professional self-concept can be improved.

Thus, it is necessary to activate the autonomous study group activities so as to improve the academic self-efficacy of nursing students. The significant predictors of professional self-concept of nursing students were self-achievement, academic self-efficacy and satisfaction on major. These factors accounted for 53.8% of professional self-concept. The direction of nursing education should include curriculum and strategies that can lead to changes in values, attitudes and the self-views as well as nursing student's knowledge and skills (Arthur, 1995). A variety of clinical experiences can influence nursing student's perceptions and formation on nursing self-concept (O'Brien *et al.*, 2008). So, to develop professional self-concept of nursing students, self-achievement and academic self-efficacy have to be increased by efficient academic system and continuous intervention.

CONCLUSION

This study explored the relationship of nursing student's self-achievement, academic self-efficacy, professional self-concept and investigated factors that affect professional self-concept. Results highlighted important effect self-achievement and academic self-efficacy on professional self-concept.

RECOMMENDATIONS

Future studies must be extended based on these findings by: clarifying the correlations between nursing student's circle activity and professional self-concept, verifying other self-factors influencing on professional self-concept.

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