The impact of teaching professional self-concept on clinical performance perception in nursing students

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Abstract: The nurses' self-concept can be defined as information and beliefs that nurse have about their roles, values, and behavior which help individuals function at a higher level and use their learning experiences optimally. This study aimed to determine the effect of professional self-concept teaching on clinical performance perception of senior nursing students. A preliminary study was conducted to confirm the validity and reliability of the nurse self-concept questionnaire (NSCQ) and 6-dimension scale of nurse performance (6-DSNP). The participants consisted of 72 senior nursing students, sixty of whom agreed to participate in the study and complete the questionnaires. Then, the students were randomly categorized into case (n=24) and control (n=36) groups. The case group participated in the professional self-concept workshops for two days. Immediately (T2) and three months after the intervention (T3), the questionnaires were filled by both groups. The 6-DSNP score of the participants attending the workshop was significantly higher than that of the subjects in the control group (p<0.0001). Therefore, professional self-concept teaching can significantly affect the clinical performance of nursing students. Therefore, incorporating professional self-concept teaching into the nursing program can be effective for their clinical performance, and help nursing students have positive attitudes towards their competencies.

1. Introduction

Self-concept as a dynamic structure is an important issue in the study, practice of education and psychology (Arthur and Randle, 2007). Self-concept defined as an organized entity of features, characteristics, feelings, images and abilities that the person attributes to himself or herself (Mlinar et al., 2009) and predict sequential behavior (Cowin et al., 2008). The association between self-concept and behavioral outcomes has its foundation in the expectancy values, which have direct and indirect relationships between self-concept and future plans or selections (Cowin et al., 2008; Mlinar et al., 2009), being used in a variety of contexts such as education and sport and among children, adolescents and adults. For example, athletes' self-concept contributed to achieving championship performance. Positive self-concept has been found to be related to following a healthy regimen by children suffering from asthma (Cowin et al., 2008).

Also, self-concept provides a basis for ones' professional self-concept (Kelly and Courts, 2007) Professional self-concept has been of interest to scholars from various disciplines for over 100 years; it impacts an individual's professional performance (Arthur and Randle, 2007). Its importance in the study of health care professionals has only recently begun to

be recognized (Takase et al., 2002) and has been the focus of nursing research (Arthur and Thorne, 1998). Nursing is a profession and developing a concept of oneself as a professional nurse is a critical issue in nursing education (Ware, 2008). Also, the self-concept of nurses is an important concept for managers and clinicians to consider in the progress of the profession (Arthur, 1992).The nurses' self-concept can be described as information and beliefs that nurses have about their duties, value, and behaviors (Takase et al., 2002) that help develop their professional values (Kelly and Courts, 2007).

Since people often make one profession more desirable, eligible or respectable than another, nurses have been concerned about their image for many years because they have been seen as obedient to medicine and the servants of the physician (Huffstutler et al., 1998). However, in such professions as nursing, which require working with a degree of equivalence and respect in health care settings, it is important that nurses have a professional self-concept which is compatible with that of other professionals (Arthur, 1992).

A positive self-concept can be acquired from positive self-evaluation, self respect, self-esteem and self acceptance (Arthur and Thorne, 1998) that help a person function at a higher level and utilize his/her

learning experiences in an optimal manner (Cowin and Hengstberger-Sims, 2006), control the effects of a stressful work environment, and influence on the patient care positively (Hensel and Stoelting-Gettelfinger, 2011). Also the nurses' self-concept has a stronger connection with their retention plans than job satisfaction (Cowin et al., 2008). For these reasons, there has been a considerable interest in defining and quantifying professional self-concept (Arthur an Thorne, 1998).

Clinical education is an essential part of nursing education and dynamic process, aiming at training competent professional nurses; it makes up half of the nurses educational period in training program (Salimi et al., 2005). Since empowering students can provide positive feeling in the professional activities, a serious mission of professional educational institutions is to prepare students (Kelly and Courts, 2007) and expected that they acquire professional abilities during their education because the quality of clinical performance provides credibility to nursing science (Hassani et al., 2008). But various studies have shown that although nursing graduates possess scientific and theoretical basic knowledge, inadequate efficiency and lack of skill is seen in the clinical environment (Banaderakhshan et al., 2005).

After graduation, these students experience problems in taking care of patients at the beginning of their work. They do not consider professional standards in clinical experience and frequently make errors (Ghalje et al., 2008). This adversely affects the quality of nursing services (Parsa Yekta et al., 2005). Nursing students are responsible for nursing care and patients' education (Parsa Yekta et al., 2007) but to the best of our knowledge an interventional study has not been so far conducted on professional self-concept. Environmental and communicative issues in the clinical setting have been studied by different researchers while the students' attitude has not been paid attention to. Therefore, the researcher aimed to conduct an interventional study to find out the effects of professional self-concept teaching on the perception of the senior nursing student's clinical performance in Shiraz University of Medical Sciences.

2. Material and Methods
2.1. Design and Procedure

This study employed an intervention, pre-post test follow up and control group design study aiming to investigate the effects of teaching professional self-concept on the perception of the senior nursing students' clinical performance in Shiraz University of Medical Sciences. The participants filled out the questionnaires before (T1), immediately (T2), and three months after the intervention (T3) in both experimental and control groups. Institutional Review Board (IRB) approval for the study was obtained from the Ethics Committee of Shiraz University of Medical Sciences (ECSUMS).

2.2. Participants

The study began with participants who were senior baccalaureate nursing students at a major university in Shiraz, Iran. The participants were recruited during a lecture in the last semester of their nursing studies. Each participant was given an information sheet explaining the purpose and process of the study and their voluntary participation. Issues regarding the participant's rights to confidentiality, anonymity and freedom to discontinue at any time were explained and it was clarified that the findings of the study would be shared with the participant if desired. Written consent was obtained from each student. Sixty out of 67 students agreed to participate in the study and complete the demographic details (age, gender and GPA average), self-concept and clinical performance survey at T1. Then, the students were randomly assigned to experimental (n=24) and control (n=36) groups. To ensure equivalent groups, demographic information and the mean score for professional self-concept and perception of the students' clinical performance were compared and there was no statistically significant difference. The students in the experimental group participated in the workshop of professional self-concept that was about self, self awareness, self-concept, professional self-concept, nursing self-concept and professional ethics for two days. Immediately (T2) and three months after the intervention (T3), the questionnaires were completed in both groups.

2.3. Instruments

The nurses' self-concept questionnaire (NSCQ, Cowin, 2001) and Six -Dimension Scale of Nursing Performance (6-DSNP, Schwarian, 1978) were utilized to collect attitudinal data on the senior student nurse's self-concept and their clinical performance for each period of data collection. The NSCQ is a 36-item scale that measures six subscales of nurse self-concept containing self-esteem, care, staff relations, communication, knowledge and leadership identified by Cowin (2001). The NSCQ aims to measure the development and stability of dimensions in self-concept that relate specifically to the work of a nurse. All items are positively worded and there are six items in each factor. An 8-point Likert type scale is utilized ranging from 1 (definitely false) to 8 (definitely true). The NSCQ has evidence of theoretical and construct validity; its reliability has been published.

The Six-Dimension Scale of Nursing Performance (6-D Scale), a self direct tool including

52 four-point rating-scale items evaluates the nursing performance. The items are grouped into six performance subscales of leadership, critical care, teaching/collaboration, planning/evaluation, interpersonal relations and communication, and professional development. The validity and reliability of this scale has been approved by the developer (Schwarian, 1978). In both questionnaires, higher scores show better results.

For this study, NSCQ and 6-DSNP questionnaires were translated into the Persian language by three professors of Nursing and Midwifery College in Shiraz University of Medical Sciences. Then, it was back-translated from Persian into English by two other instructors of Nursing and Midwifery College to ensure clarity and content validity. As the Persian version of both questionnaires had not been used in Iran, they were piloted in a small scale study for feasibility and cultural suitability. The translated tools were piloted on 30 students who answered the Persian version. The surveys took between 15 and 20 minutes to be completed. The data analysis of the pilot sample did not reveal any unexpected findings, nor suggested any modification.

The internal consistency of the NSCQ, as measured by Cronbach's Alpha showed a good internal consistency. Cronbach's alpha scores for all the scales were adequate, with an overall Cronbach's alpha of 0.96, and subscales ranging from .88-.97. The internal consistency of the 6-DSNP was again measured by Cronbach's Alpha. The reliability was confirmed with total Cronbach's alpha of 0.97 and subscales ranging from .83-.91(Table1).

2.4. Data analysis

All obtained questionnaires were allocated a code number (ranging from #1 to #60) that could be used to identify the responses for analyzing the pairing of T1, T2, and T3 results. Data relating to the two instruments were entered into SPSS version 11.5 (Statistic Package for the Social Sciences) and examined by descriptive statistics, independent t-test and repeated measurement multivariate test for measuring the nurses' self-concept and clinical performance in three different time periods. A significant P-value was set at 0.05.

3. Results

The age of the participants ranged from 20 to 24 years old with the mean of 21 years (SD 1.3). 57% (n = 34) were female and 43% male (n = 26), and the average GPA was reported 7% (n = 4) less than 13.99, 81% (n = 49) in the range of 14-16.99 and 12% (n = 7) more than 17.

Baseline characteristics of the experimental and control groups revealed that they were similar with respect to age, gender and average GPA. The majority of the participants were between the ages of 20 and 22 years (58.3% in the experimental group and 69.4% in the control group); most of them were female (62.5% in the experimental group and 52.8% in the control group), and had a grade point average between 14-16.99 (75% in the experimental group and 86.1% in the control group). There was no statistically significant difference in the demographic variables between the two groups (P>0.05).

As shown in Table 2, assessing the results before the intervention using independent t-test showed that the two groups were almost similar in nurse self-concept and clinical performance and there was no statistically significant difference between them before the intervention (P>0.05).

Table1.Cronbach's Alpha for NSCQ and 6-DSNP

scales	Cronbach's Alpha	N of Items
NSCQ (total scale)	0.97	36
NGSC	0.96	6
caring	0.88	6
staff relations	0.91	6
communication	0.92	6
leadership	0.94	6
knowledge	0.88	6
6-DSNP (total scale)	0.97	52
teaching/collaboration	0.86	11
planning/evaluation	0.88	7
critical care	0.90	7
interpersonal relations and communication	0.91	12
leadership	0.83	5
professional development	0.85	10

Table2. Comparison of NSCQ and 6-DSNP mean scores before the intervention in the two groups

Group Variable	Case		Control		p-value
	M	SD	M	SD	
Nurse self-concept	195.6	38	190.8	49.3	.685
Clinical performance	148.8	21.4	153.2	25.7	.493

Table 3 presents the mean and standard deviation of the total scores in groups before and after the intervention as measured by NSCQ and 6-DSNP. At baseline, the highest self concept scores were related to communication and the lowest scores to self-esteem. Also, the results showed that the experimental group demonstrated higher scores across all subscales of the questionnaires immediately and three months after the intervention.

The mutual effect of time and group was significant for total nurse self-concept; based on the results while the experimental group's scores had increased significantly, the control group's scores rose slightly (Figure 1).
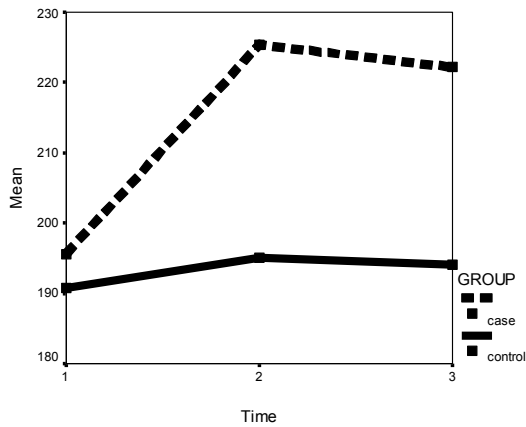
Figure 1. Graph of the Group by Time interaction effect for total nurse self-concept in both groups

Comparison of the mean scores of the nurses' self-concept from pre to post tests and follow up intervention in the groups as measured by NSCQ revealed four interaction effects from 6 self-concept subscales: self-esteem, care, knowledge, communication, while considering the mutual effect of time and group.

These results indicated that while the results of the self-esteem subscale for the experimental group had increased significantly, the results for the control group rose slightly.

The results regarding the mutual effect of time and group for care subscale showed a significant improvement in the experimental group and a reduction in the control group.

The results also revealed an interaction effect for the NSCQ subscale of knowledge, implicating that while the experimental group improved significantly from baseline to immediately after the intervention and then had a downward trend three months after the intervention but it did not reach the level before the intervention; the control group's results remained stable over time.

A significant group by time interaction effect was observed for communication. The findings revealed that while the experimental group'

communication increased over time, that of the control group decreased. Also, the mutual effect of time and group was significant for total clinical performance. The results showed a significant improvement in the experimental group and a reduction in the control group. (Figure2)
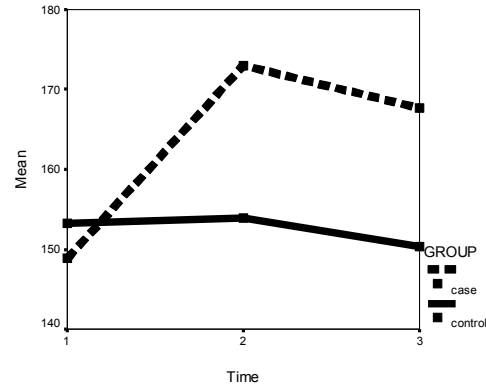

Figure 2. Graph of the Group by Time interaction effect for total clinical performance in both groups

At baseline, the highest clinical performance scores seen in interpersonal relations and communication and the lowest scores in teaching/collaboration.

Comparison of the mean scores of clinical performance before, immediately and three months after the intervention in groups as measured by 6-DSNP over time revealed an overall significant group by time interaction effect in all dimensions except critical care and leadership.

The results showed an interaction effect for teaching/collaboration, planning/evaluation, interpersonal relations and communication, professional development dimensions. It was indicated that while the experimental group's scores increased significantly immediately after the intervention (T2), decreased slightly after three months (T3), and has not still returned to the level of (T1), the control group remained stable over time.

Table3. Means scores of NSCQ and 6-DSNP subscales in groups at T1, T2 and T3 Scores

	time	T1		T2		T3		Time	Group	Time/Group
	mean group	M	SD	M	SD	M	SD		P	
NSCQ total	case	195.6	38	225.4	27.1	222.2	29.6	< .0001*	.018*	.005*
	control	190.8	49.3	195	41.6	194.1	30.5			
Nuese self -esteem	case	26.5	10	33.6	8.6	34.5	8.5	< .0001*	.161	.004*
	control	27.2	10.5	28.9	9.6	29.1	8.3			
caring	case	33.4	6.8	37.1	4.6	37	6	.012*	.071	.012*
	control	33.4	7.3	34	6.7	32.7	4.1			

staff relations	case	33.9	8	40	12.6	37.3	5.2	.028*	.002*	.122
	control	30.9	9.5	31.7	7.8	32.5	5.9			
communication	case	37.3	5.7	39.6	4.6	39.2	5.7	.682	.022*	.024*
	control	36.9	7.9	35.2	7.2	34	6.8			
knowledge	case	33.5	7.5	38.9	5.2	36.3	6.3	.022*	.118	.022*
	control	33.4	10	33.4	9.3	33.6	6.4			
leadership	case	30.9	10.4	36.2	7	37.7	5.3	< .0001*	.05	.282
	control	29	12.5	31.7	9	32.1	7.7			
6-DSNP total	case	148.8	21.4	173	21.9	167.7	17.4	< .0001*	.026	< .0001*
	control	153.2	25.7	154	23.7	150.4	19.1			
teaching/ collaboration	case	30	5.9	35.1	3.5	34.2	3.9	.001*	.02*	.003*
	control	30.5	5.6	31.3	6.3	30	4.2			
planning/ evaluation	case	19.3	3.5	22.2	3.1	22	2.8	.015*	.276	.008*
	control	20.3	4.6	20.3	4.7	20	3.3			
critical care	case	19.4	4	22.3	3.7	22.3	3.3	.078	.29	.088
	control	20.3	5	20.2	4.1	20.5	6.3			
interpersonal relations and communication	case	36.3	5.4	43.7	12.7	40.1	7.3	.025*	.002*	.005*
	control	36.8	7.5	36	5.5	34.5	5.3			
leadership	case	14.5	2.3	16.2	2.8	18.1	7.3	< .0001*	.006*	.001*
	control	14.5	3.5	15.2	2.4	16.3	5.3			
professional development	case	29.3	4.6	33.5	3.2	32.7	4.2	.010*	.231	.009*
	control	30.7	5.5	30.9	4.9	30.4	4.8			

4. Discussion

Nursing is not a desirable profession and nurse educators are responsible to provide the graduates with high professional self-concept and also high quality and safe patient care. The results indicated an increase in the clinical performance before and three months after the intervention; it verifies the effect of the intervention on clinical performance for the experimental group while slight changes were found in the control group.

What is remarkable about the NSCQ results was the lowest mean scale score for self-esteem subscale .The result is consistent with that of Edwards' study (2010), showed that self-esteem levels were lowest at the end of nursing education. However, in two studies (Cowin and Hengstberger-Sims, 2006; Hensel and Stoelting-Gettelfinger, 2011) the highest mean score was obtained for self-esteem; Sasat et al. (2002) in their research also reported that perception of own self-esteem in undergraduate student nurses was compatible to the normal ranges.

The lowest mean score for the self-esteem, might be due to the fact that nursing students at the beginning of clinical training realize that hospitals are strongly physician-centered and based on the routines that have restricted the nurses directly and indirectly, so nursing students feel that their capacities would not be used and they should only perform the physicians' orders, and could not do an intervention independently. This culture and structure as a hidden curriculum actually causes low self-esteem of nursing students. Also, Valizadeh et al. (2007) in their research reported that the feeling of worthlessness and lack of attention of the community to the status of nursing was apparent from the experiences of nursing students, leading to low self-esteem.

The mutual effect of time and group was significant to change in the scores of self-esteem and this effect was more in the experimental group. In Moshki's study (2008) on 144 students in Gonabad University of Medical Sciences aiming at evaluating the effectiveness of the training program by using self-esteem, it was shown that educational programs cause empowerment, partnership and improve self-esteem and ultimately the mental health of the students. Also, the results of Unal's study (2012) revealed the effect of a course on self-awareness and communication techniques on nursing students' self-esteem, indicating a significant difference between the students' self-esteem scores in pre-test and post-test measurements. Moreover, in Moattari's study (2005), it was revealed that teaching of problem solving has a significant effect on the nursing students' self-esteem.

The highest score observed in the communication subscale could be used to explain that even in nursing courses the principles of communication, barriers and ways to facilitate more constructive communication, are taught, so the students consider their abilities more valuable and the mutual effect of time group was significant, showed that professional self-concept teaching could be effective in the experimental group.

In knowledge self-concept and care self-concept dimensions, the results indicated that not only

we can prepare nursing students with greater emphasis on increasing their knowledge and nursing care, but professional self-concept training can also be effective in improving the students' theoretical and experimental skills.

However, in leadership and staff relations of nurses' self-concept, the mutual effect of time group was not significant, indicated that the students should be trained more basically and coherently to play leadership role and make relationship with colleagues; there is probably a need for longer term trainings than our workshop program and perhaps the actual clinical environment can help more.

An important result obtained was that the mutual effect of time group was significant in total clinical performance but because of the reduction seen three months later, retraining is also required. The results of this study is similar to those of Zeraat and Ghafourian (2009) who used case and control groups of 30 students of Computer Engineering in Shiraz University, indicated that training the students on problem-solving skills caused empowerment and promotion of their educational self-concept .

The intervention could be effective in most dimensions of clinical performance except critical care and leadership. When evaluating the effectiveness of the professional self-concept on clinical performance, the problem being considered is that the time of workshop was limited and too much time was spent on lecturing; on the other hand, too little time was allotted to group discussion and practicing technique. That may not have been sufficient enough to help students improve in leadership and critical care. Ensuring that baccalaureate nursing students obtain a measure of leadership proficiency is still a challenge for nurse educators; further studies are needed to focus on this issue.

Additionally, in critical care subscale, practical procedures and working with mechanical equipment have been evaluated, showed that specific training in this dimension could be more effective.

The lowest score for teaching/collaboration of clinical performance reflects inadequate preparation of nursing students for patient education.

This is the first interventional study to examine the effect of professional self-concept on clinical performance perception of senior nursing students. It provides the evidence to support the notion that teaching professional self-concept can significantly affect the clinical performance of nursing students. Thus, it is concluded that incorporating professional self-concept teaching into the nursing program can be effective for their clinical performance, and help nursing students have positive attitudes towards their competencies.

More studies are required to determine the best way to improve students' professional self-concept and designing better nursing curricula to increase clinical performance.

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References:
1. Arthur D, Randle J. The professional self-concept of nurses: a review of the literature from 1992-2006. Aust J Adv Nurs 2007;24(3):60-4.
2. Mlinar S, Tusak M, Karpljuk D. Self-concept in intensive care nurses and control group women. Nurs Ethics 2009;16(3):328-39.
3. Cowin LS, Johnson M, Craven RG, Marsh HW. Causal modeling of self-concept, job satisfaction, and retention of nurses. Int J Nurs Stud 2008;45(10):1449-59.
4. Kelly S, Courts N. The professional self-concept of new graduate nurses. Nurse education in practice 2007;7(5):332-7.
5. Takase M, Kershaw E, Burt L. Does public image of nurses matter? Journal of Professional Nursing 2002;18(4):196-205.
6. Arthur D, Thorne S. Professional self-concept of nurses: a comparative study of four strata of nursing students in a Canadian university. Nurse Educ Today 1998;18(5):380-8.
7. Ware SM. Developing a self-concept of nurse in baccalaureate nursing students. International Journal of Nursing Education Scholarship 2008;5(1):1-17.
8. Arthur D. Measuring the professional self-concept of nurses: a critical review. Journal of Advanced Nursing 1992;17(6):712-9.
9. Huffstutler SY, Stevenson SS, Mullins IL, Hackett DA, Lambert AW. The public's image of nursing as described to baccalaureate prenursing students. Journal of Professional Nursing 1998;14(1):7-13.

10. Cowin LS, Hengstberger-Sims C. New graduate nurse self-concept and retention: A longitudinal survey. Int J Nurs Stud 2006;43(1):59-70.

11. Hensel D, Stoelting-Gettelfinger W. Changes in stress and nurse self-concept among baccalaureate nursing students. The Journal of nursing education 2011;50(5):290.

12. Salimi T, Karimi H, Shahbazi L, Dehghanpour M, Hafezieh A, Parandeh K, et al. Evaluation of clinical skills of final year nursing students in critical care units Journal of shahid sadoughi university of Medical Science and health services 2005;13(3):60-6.

13. Hassani P, Cheraghi F, Yaghmaei F. Self-efficacy and self-regulated learning in clinical performance of nursing students: A qualitative research. Iranian Journal of Medical Education 2008;8(1):33-41.

14. Banaderakhshan H, Mehrabi Y, Yazdani S, Mortazavi F, Saedi N, Azizi F. Comparison of knowledge attitude and professional performance between nurses and senior student's of medical science of shahid beheshti. Journal of Research in Medical 2005;29(1):37-43.

15. Ghalje M, Ghaljaee F, Mazlum R. Survey Relationship clinical competency and patient satisfaction from nursing service. Journal of faculty Nurse Midwife shahid beheshti university of Medical Science 2008;18(63):12-9.

16. Parsa Yekta Z, Ahmadi F, Tabari R. Factors defined by nurses as influential upon the development of clinical competence. Journal of Gilan University of Medical Science 2005;14(54):9-22.

17. Parsa Yekta Z, Ramazani Badr F, Khatoni A. Nursing students' view points about their clinical competencies and it's achievement level. Iranian Journal of Nursing Research 2007;1(3):7-14.

18. Cowin L. Measuring nurses' self-concept. Western Journal of Nursing Research 2001;23(3):313-25.

19. Schwirian PM, Moloney MM. Professionalization of nursing: Current issues and trends: Lippincott; 1998. 4-8 p.

20. Edwards D, Burnard P, Bennett K, Hebden U. A longitudinal study of stress and self-esteem in student nurses. Nurse Educ Today 2010;30(1):78-84.

21. Sasat S, Burnard P, Edwards D, Naiyapatana W, Hebden U, Boonrod W, et al. Self-esteem and student nurses: a cross-cultural study of nursing students in Thailand and the UK. Nurs Health Sci 2002;4(1-2):9-14.

22. Valizadeh S, Abedi HA, Zamanzadeh V, Fathe azar S. The challenges of nursing students: a qualitative study. Iranian Journal of Medical Education 2007;7(2):397-407.

23. Moshki M, Ghofranipour F, Azad Fallah P, Haje Zadeh E. The effect of educational programs using self-esteem and health control beliefs on students' mental health. Journal of Feiz 2008;12(4):38-45.

24. Unal S. Evaluating the effect of self-awareness and communication techniques on nurses' assertiveness and self-esteem. Contemp Nurse 2012;22:22.

25. Moattari M, Soltani A, Mosavi nasab M, Ayatollahi A. The effect of problem solving training on self-concept of nursing students in Shiraz University of Medical Science. Iranian Journal of Medical Education 2005;5(2):157-65.

26. Zeraat Z, Ghafourian AR. Effectiveness of problem-solving skills training on students' educational self-concept. Journal of Learning Strategies 2009;2(1):23-6.

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