Comparison of Self-Esteem Among First to Fourth Year Nursing Students From Universities of Medical Sciences in Tehran

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Background: Self-esteem plays a critical role in promoting mental health and affects performance, development patterns, interaction with others and the mental health. Accordingly, improving the self-esteem of students, as future builders of the community, is very important.

Objectives: The purpose of this study was to determine and compare the self-esteem of nursing students in grades one to four of medical universities in Tehran.

Materials and Methods: In this analytical cross-sectional study, 400 students of the medical universities in Tehran were selected, using stratified sampling with proportional allocation. They filled a demographic information form and Coopersmith Self-esteem Inventory. Data for this study were collected during a semester in 2010.

Results: The results showed that the overall mean score of self-esteem (P = 0.3), and personal (P = 0.3), social (P = 0.5), parental self-esteem (P = 0.5) in the first and fourth year students did not differ statistically. The first and fourth year students presented the highest levels of social self-esteem. Fourth year students showed the highest academic and parental self-esteem compared to students in other academic years. In addition, the variables of grade point average (P = 0.02), residence (P = 0.003), family economic status (P = 0.001) and marital status (P = 0.04) had a statistically significant influence on students' self-esteem.

Conclusions: Given the undeniable relationship between self-esteem and interpersonal ability to interact, as an inseparable component of effective care process, assessing and identifying factors associated with nursing students is a valuable step in improving the quality of nursing care provided in a future career of this major segment of the community.

Keywords: Self-Concept; Students; Nursing; Coopersmith Self-Esteem Inventory

1. Background

Nursing is a job that requires mental health at desired levels. The results of the studies indicate that the mental health of nursing students, besides influencing studying and daily life, also has a profound effect on the quality of professional practice in the future, and the staying in the profession. Therefore, identifying factors that can affect mental health is of special importance (1).

Self-esteem is one of the most important factors in mental health that plays an important role in promotion of mental health (2, 3). Despite the undeniable impact of self-esteem on the mental health and lives of dignity, conducted surveys show that the self-esteem of students is not in a satisfactory condition (4). The results of a study on University of Leicester students conducted in 2004 showed that 23% of students suffer from anxiety disorders and 50% of students suffer from depression or mood disorders, while 49% showed low self-esteem and related problems (5).

Self-esteem is the level of approval, acceptance and self-worth in relation to self. Self-esteem, as defined by Coopersmith, includes four dimensions: personal self-esteem, social self-esteem, academic self-esteem and parental self-esteem. Personal self-esteem is a detailed understanding of the value of oneself. Social self-esteem is the perception of the quality of their relationships with others. Academic self-esteem is evaluation of one's self as a student. Parental self-esteem is determined based on the approval or acceptance by parents or family (6). Relevance of self-esteem and the ability to establish interpersonal relationships and quality of nursing care provided is undeniable (7, 8). In addition, think, feel, and performance of nurses providing care is affected by his their esteem (9). As Arthur showed in his study, nurses with high self-esteem were able to provide better care to patients (10). Nurses, who have a high self-esteem, feel more confidence in their own skills and this trust leads

to their effective dealing with challenging situations (11). Nursing is one of the stressful jobs in community (7, 12) and given the role of self-esteem as a moderator of stress, people having higher self-esteem in stressful situations have a higher sense of self-worth and self-efficacy that these consequences will function more effectively in these situations (13).

Self-esteem is known as one of the factors affecting learning outcomes. Persons who have higher self-esteem show greater success in their academic affairs (14). Self-esteem affects the person's motivation and can cause motivation or motivate students to learn from their learning environment (15). The multidimensional structure of self-esteem is dictated by one's beliefs about all their characteristics and can be affected by internal and external variables, including exposure to the educational process. During the process of professional socialization in nursing education, the student will obtain a sense of "self" as a nurse (16). A permanently important aspect of nursing education is the development of non-cognitive skills, such as self-esteem and self-concept, in college students. It is expected that the self-esteem of nurses partially shapes during nursing education. Therefore, with progression of students to higher education years, it is expected that changes occur in the level of their self-esteem. Sasat et al. in 2002, showed that self-esteem and its dimensions have no significant difference in nursing students in different years of study (6). In another longitudinal study by Edwards et al. the self-esteem of final year nursing students was at its lowest level (7). Conflicting results were obtained from different studies that investigated the effect of nursing education on self-esteem of students. The results of studies on various aspects of self-esteem, including social, personal and public self-esteem of nursing students differentiated by the school year, showed that there is a relationship between years of education and self-esteem (6).

2. Objectives

Given the variable results obtained from the previous studies and the lack of a similar study conducted in Iran, our study sought to determine and compare self-esteem among first to fourth year nursing students of Tehran, Iran and Shahid beheshti Universities of Medical Sciences, Tehran, Iran.

3. Materials and Methods

This study was an analytical cross-sectional study. The population of the study included all freshmen to fourth year undergraduate nursing students from Nursing and Midwifery Faculties of Tehran, Iran and Shahid Beheshti Universities of Medical Sciences, Tehran, Iran. In this regard, considering the fact that the study population consisted of three groups of nursing students of Shahid Beheshti University of Medical Sciences, Tehran University of Medical Sciences and Iran University of Medical Sciences,

samples were chosen by stratified random sampling and to divide the samples between the classes of society, accordingly, a stratified, proportional allocation methodology was used. In this method, the sample size for each class is allocated based on class size. The study sample size was determined at 400 subjects, which, based on the proportional allocation, was divided as 144, 111 and 145 students, for the three educational institutions in Tehran, Iran, in the first semester of the academic year 2010-2011, from the list, using a table of random selected numbers. The researcher explained the study and its objectives to the participants and also ensured that the acquired information remained confidential and participants can, at their sole discretion, cancel participation in the study, during any stage of the research. An informed consent form for participation in the study was completed by the researchers for each participant. Inclusion criteria were first to fourth year nursing student in undergraduate medical universities in Tehran, whereas exclusion criteria were being student at another university, known history of psychiatric disease, history of drug abuse, pregnancy, and totalizing a higher score than four credits (lie detector) in self-esteem inventory. This study was approved by the Ethics Committee of Tehran University of Medical Sciences, Tehran, Iran.

In this research, for collecting data, a demographic information form and Coopersmith Self-esteem Inventory (CSEI), designed in 1981 by Stanley Coppersmith, were used. The demographic information form consisted of 10 questions regarding demographic characteristics, such as gender, academic semester, the school, the grade point average, work experience of the student, residence, marital status, family economic status, family history of mental disorders and a history of drug use. Participants' responses to the last two questions of the survey were used to determine the exclusion criteria. The CSEI consists of 58 items and five subscales of social self-esteem, personal self-esteem, academic self-esteem, parental self-esteem and validity. Options for the scale items are "agreed" or "not agreed" and the score of each item is awarded one or zero. The inventory is scored from zero to 50, where a higher score indicates higher self-esteem. The credit subscale consists of eight items (items 6, 13, 20, 27, 34, 41, 48, and 55) and has no point indicating one's honesty in answering the questions. If more than four points are gained, indicating defensive responses while completing the inventory and this subscale score of validity would be low. It means that the scores of self-esteem of the person, not the actual scores and therefore these data were not entered in the analysis (17). It should be noted that, to describe the data, the mean score of students' self-esteem were assessed as the criteria for determining low and high self-esteem. Therefore, based on the average self-esteem scores of the subjects (mean = 37), less than or equal to the average score were considered as low self-esteem, while grades above the average were considered as high self-esteem.

The CSEI has been used extensively in previous studies and its high validity and reliability were mentioned. To

determine the scientific validity of the tools used in the present study, face validity and content validity methods were used. To determine the reliability of the data collection instruments, Cronbach's alpha correlation coefficient and test-retest methods were used. The Cronbach's alpha coefficient of self-esteem version was 0.86, which is an acceptable credit. In test-retest, the Pearson correlation coefficient for the self-esteem inventory was 0.85. Pearson correlation coefficients for each of the dimensions of self-concept inventory were also calculated, and the rate varied in the interval 0.81 – 0.91.

Finally, the raw data using descriptive statistics, frequency, frequency distribution, mean, standard deviation and inferential statistics through analysis of variance and independent t-test were analyzed using SPSS version 15.0 (SPSS Inc. Chicago, IL, USA).

4. Results

In this study, 400 nursing students participated, and data obtained from 68 cases were not analyzed due to grades higher than four on the subscale, indicating the validity of the CSEI. Results of the statistical analysis of data obtained from the 332 participants entered in the study showed that the majority of the samples were female (58.1%). Second semester students participating in this study represented the highest percentage (14.2%), Percentage of participants from different universities were Shahid Beheshti (38%), Iran (33%) and Tehran (29%).. Also, 73.6% of participants had a grade point average greater than 15, 59.3% were indigenous, mostly were single (92.2%) and 73.2% were in the average economic class. In examining the relationship between self-esteem and demographic variables, the results of the independent t-test showed a significant relationship between self-esteem and overall grade point average (P = 0.02 and t = 2.262), residence (P = 0.003 and t = 3.036) and marital status of students (P = 0.04 and t = 2.058). Accordingly, the average self-esteem of students with grade point average > 15, showed higher rates in comparison with students who earned a grade point average < 15 (37.2 ± 7 and 35.1 ± 7.7, respectively). Dormitory students showed higher mean of self-esteem compared to native students (38.1 ± 6.7 vs. 35.7 ± 7.3, respectively). The mean self-esteem in married students showed higher rates compared to singles (39.4 ± 5.8 vs. 36.4 ± 7.2, respectively). Analysis of variance test results showed that the average scores of self-esteem based on economic status for groups had statistically significant differences (P = 0.0001 and F = 7.529). Also, the Scheffe test set showed that between the self-esteem of the students with a good economic status, the self-esteem of students with moderate and low economic status, there were statistically significant differences. The results of analysis of variance showed that between the mean scores for self-esteem and variables, as well as the semester, the school had no significant association. The t-test between gender and work experience with students' self-esteem was not statistically significant (Table 1).

As one way variance test results in Table 2 show, the mean overall self-esteem score (F = 1.002 and P = 0.3) and the mean personal self-esteem scores (F = 1.053 and P = 0.3), social (F = 0.686 and P = 0.5), parental (F = 0.784 and P = 0.5) and academic (F = 0.954 and P = 0.4) in first to fourth year students, present no statistically significant differences. The highest levels of overall self-esteem were present in students in the fourth year (37.6 ± 7.3). Social self-esteem scores for freshmen and third (6.4 ± 1.5), parental self-esteem (6.3 ± 1.8), personal (19.3 ± 4.2) and educational self-esteem of fourth-year students (5.7 ± 1.6), had higher scores than others. Comparison of self-esteem of students indicated that they had higher social self-esteem than the other dimensions (79.3 ± 19.4). It should be noted in order comparison of self-esteem dimensions, at first, each of the dimension was taken to the base 100.

Table 1. Frequency Distribution of Demographic Variables in the First to Fourth Year Nursing Students [a]

Variable	Self Esteem Mean and Standard Deviation	P-Value
Gender		0.82
Female	36.7 ± 7.8	
Male	36.6 ± 6	
Academic semester		0.6
First	36.8 ± 6.4	
Second	37.2 ± 6.4	
Third	35.1 ± 7.7	
Forth	36.4 ± 8.3	
Fifth	36.3 ± 6.6	
Sixth	36.4 ± 7.3	
Seventh	36.6 ± 8.5	
Eighth	38.5 ± 5.9	
University of Medical Sciences		0.38
Iran	37.4 ± 7.6	
Tehran	36.2 ± 6.7	
Shahid Beheshti	36.4 ± 7.2	
Grade point average		0.02 [b]
Lower than 15	35.1 ± 7.7	
Higher or equal 15	37.2 ± 7	
Student work experience		0.3
Yes	37.4 ± 7.4	
No	36.5 ± 7.1	
Place of residence		0.003 [b]
Native Tehran	35.7 ± 7.3	
Hostel	38.1 ± 6.7	
Marital status		0.04 [b]
Single	36.4 ± 7.2	
Married	39.4 ± 5.8	
Family economic Status		0.001 [b]
Poor	33.2 ± 6.3 [c]	
Average	36.2 ± 7.3 [c]	
Good	39.2 ± 6 [c]	

[a] Data are presented as Mean ± SD.
[b] Correlation is significant at P < 0.05.
[c] Scheffe test showed that self-esteem of students with good family economic status was higher that of students' with average and poor family economic status.

Table 2. Comparison of Self-Esteem and Its Dimensions in Undergraduate Nursing Students in First and Forth Years [a]

Self-Esteem	Educational Year				Results Of ANOVA [b,c]
	First	**Second**	**Third**	**Fourth**	
Overall self-esteem	36.9 ± 6.4	35.7 ± 8	36.4 ± 6.9	37.6 ± 7.3	0.3
Personal self-esteem	19.1 ± 3.5	18.3 ± 4.6	18.6 ± 4	19.3 ± 4.2	0.3
Social self-esteem	6.4 ± 1.5	6.1 ± 1.7	6.4 ± 1.5	6.3 ± 1.5	0.5
Parental self-esteem	5.9 ± 1.9	6.1 ± 1.8	6 ± 1.9	6.3 ± 1.8	0.5
Academic self-esteem	5.5 ± 1.8	5.2 ± 1.8	5.4 ± 1.7	5.7 ± 1.6	0.4

[a] Data are presented as Mean ± SD.
[b] ANOVA, analysis of variance.
[c] P value

5. Discussion

This study was aimed to determine and compare the self-esteem of first year to fourth year nursing students. This study showed that the overall mean score and the mean scores of personal, social, parental and academic self-esteem, for first to fourth year, students did not differ statistically. Fourth year students showed the highest levels of overall self-esteem. Average scores for freshmen and third year students, dimensions of social, personal, parental and academic self-esteem of fourth year students, were higher than for others. The results of this study confirm the findings of the 2002 study of Sasat et al. who showed that the self-esteem and its dimensions have no significant difference in nursing students in different years of study (6).

On the other hand, the results of this study are different from the results of the study conducted by Cowin et al. Their study showed that students' self-esteem and confidence have a significant relationship with the academic year. As self-confidence and self-esteem of students is higher, with the beginning of nursing education and addition of each educational year it will get lower (18). Randle showed in his study that students' self-esteem decreases with increasing academic year (19). Lees and Ellis, in their studies, also showed that levels of self-esteem are higher in nursing students at the start and decreases gradually afterwards, with each passing year (20). During a longitudinal study, Edwards et al. found similar results in this respect. They indicated that the self-esteem of final year nursing students is at its lowest level (7).

The results of the study of Arthur and Thorne, on 127 Canadian students, showed that self-concept and self-esteem improve with each passing year of university education (21). Brown et al. also quotes Begley and writes in his study that, near the end of the course, students' self-esteem increases (22). The conflicting results of these studies may be due to different recruitment and selection tools and differ among their communities. Different findings from these studies reveal the need for further research in this area.

Based on the results of our study, it seems that student exposure in nursing education does not make a difference in their self-esteem. According to the expectations, the educational system would increase the self-esteem of students, by increasing academic year following the academic and social skills, as capabilities. According to the results of the present study, the role of the education system in improving such skills for nursing students is challenged. The educational system may be weak in enhancing the ability of students in the theory and clinical skills, which are important factors in students' self-esteem. It seems that students who seek higher education are facing new issues, such as lack of interest in the field of education, poor social skills, a sense of a learning disability, being forced to accept the training regulations and concerns about career that can affect their performance and the secondary educational system makes it difficult to achieve such goals.

The findings of this study showed that the social self-esteem of students is higher in comparison to other dimensions. These findings were aligned with the results of the study of Sasat et al. His research showed that on average, social self-esteem in comparison with other aspects, has a higher rate (6). These findings are also consistent with the results of the study of Burnard et al. His study showed that 46.5% of students had high levels of social self-esteem (23). This finding could be due to the impact on students of different social groups at the university, as an important site of socialization with other students. Among the limitations of this study, one can argue emotional and mental conditions, while completing the questionnaire that could affect the response of the subjects and was out of control of the researcher. Another limitation was the possibility of non-reported history of mental problems and the lack of real economic condition reported by respondents which in turn could affect the results.

The multidimensional structure of self-esteem can be affected by internal and external variables, such as the position in the educational system. Given the undeniable relationship between self-esteem and interpersonal ability to interact, as an integral component of the care process, evaluation of self-esteem of nursing students and identifying related factors, can be a valuable step in

improving the mental health of this important segment of the society and improving the quality of nursing care provided in their future career.

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Authors' Contributions

SG carried out the design and coordinated the study, participated in most of the experiments and prepared the manuscript. HP, MI and SS provided assistance in the design of the study, coordinated and carried out all the experiments and participated in manuscript preparation. FR provided assistance for all experiments. All authors have read and approved the content of the manuscript.

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